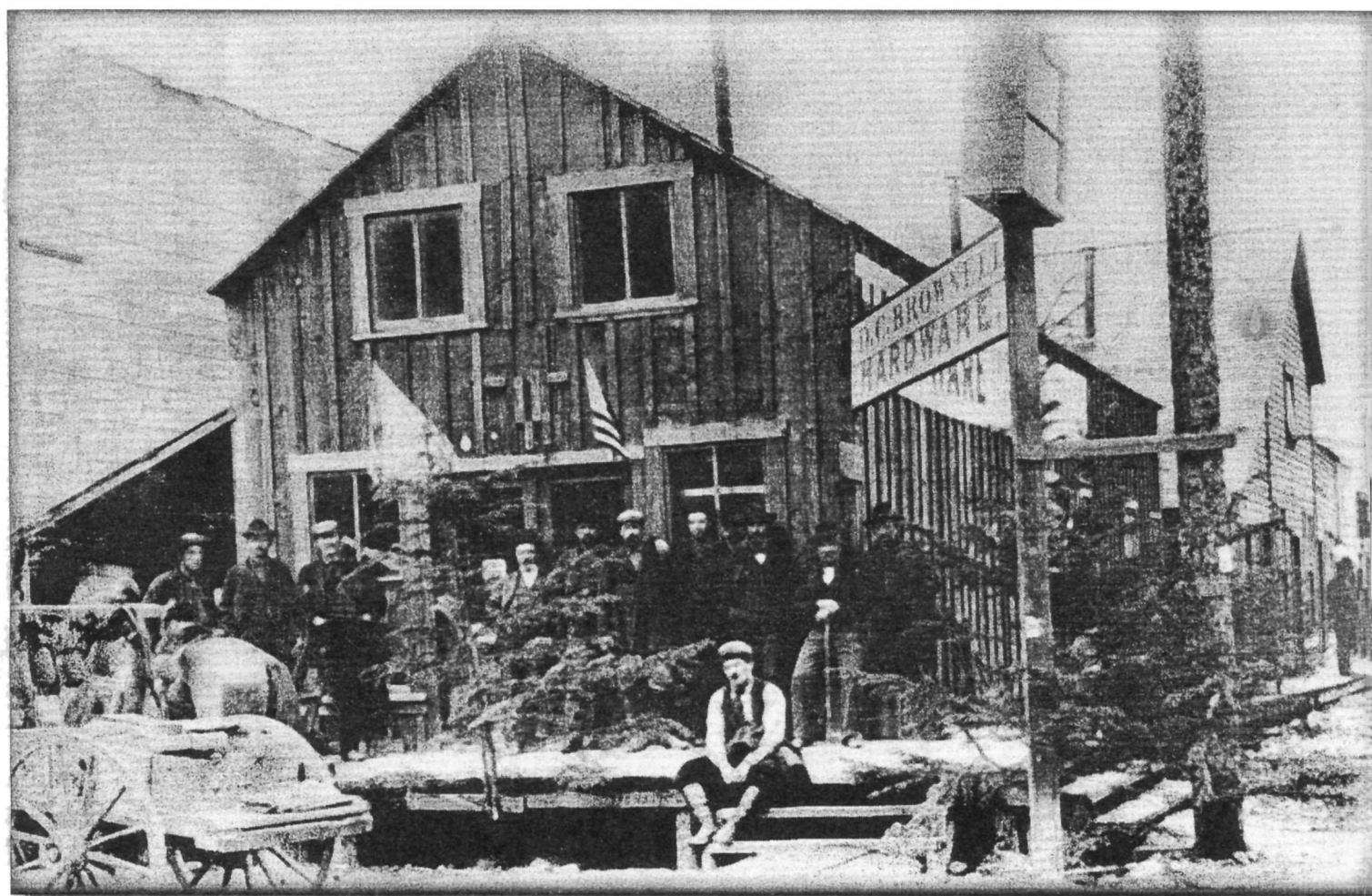


ARCHEOLOGICAL INVESTIGATIONS
IN SKAGWAY, ALASKA
VOLUME 9

EXCAVATIONS AT THE PANTHEON SALOON COMPLEX



2002
Tim A. Kardatzke
Klondike Gold Rush National Historical Park
Skagway, Alaska

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Front cover:

July 4, 1898, D.C. Brownell's Hardware Store. Fasel Building is on the left, and the Hotel Seattle is on the right. *Skagway City Museum, PC93.01.739*. The Brownell Building later became the Pantheon Saloon.

Back cover:

Pantheon Saloon during restoration, 1998.

ARCHEOLOGICAL INVESTIGATIONS IN SKAGWAY, ALASKA
VOLUME 9

EXCAVATIONS
AT THE
PANTHEON SALOON
COMPLEX

By
Tim A. Kardatzke
Klondike Gold Rush National Historical Park
Skagway, Alaska

With contributions by
Catherine Holder Spude
Thomas Wake, Ph.D.
Linda Scott Cummings and Thomas E. Moutoux
Steve L. Martin and Virginia S. Popper

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Tim Kardatzke
April 2002

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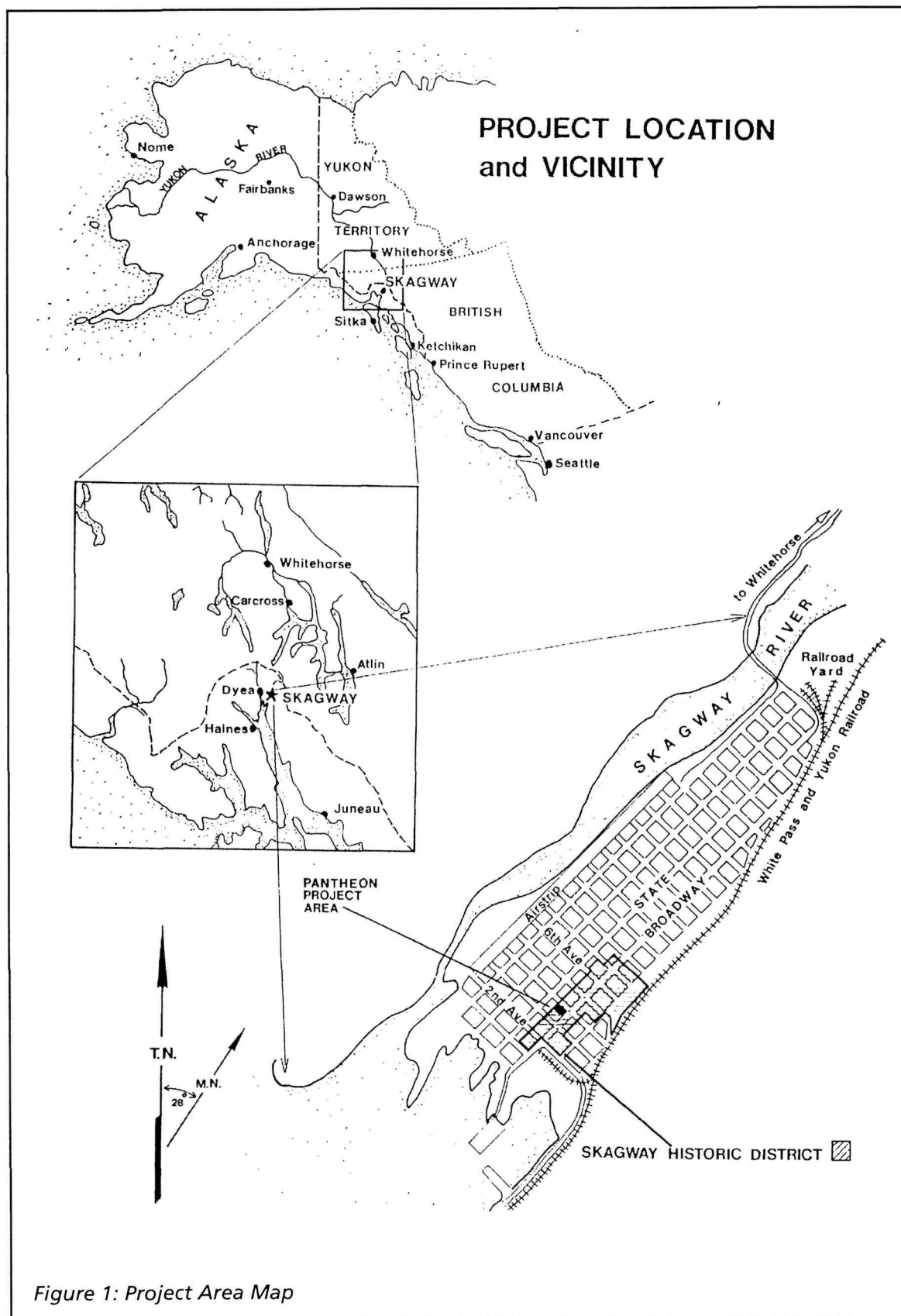
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CHAPTER 1: INTRODUCTION

This report constitutes the ninth volume in a series of reports on archeological investigations in Skagway, Alaska. It covers the Pantheon Saloon Complex located in the Klondike Gold Rush National Historical Park. The reconstruction and restoration of the Pantheon Saloon Complex marks the last large-scale project for the Klondike Gold Rush Park, which has restored 15 buildings in 20 years. All the buildings are in the Skagway and White Pass District National Historic Landmark. The restored gold rush buildings are in the Skagway Historic District (figure 1). All archeology conducted in the Skagway and White Pass District National Historic Landmark was done in compliance with section 106 of the National Historic Preservation Act. Figure 2 is the base archeological map for Skagway. Before restoration could begin, it was the job of Park Service archeologists to research, plan testing operations, and if necessary mitigate the impacts to the archeological record that would be caused by restoration.

Klondike Gold Rush National Historical Park was authorized by Congress in 1976 to commemorate the Klondike Gold Rush of 1897-1898. Skagway was (and still is) a transportation hub into the interior of Canada and Alaska. By 1900, a narrow gauge rail line was completed to Whitehorse, Yukon Territory, Canada. Whitehorse is located slightly more than 100 miles to the north. Once in Whitehorse, riverboats transported miners and equipment to the gold-fields of Dawson, Fairbanks, and then Nome by way of the Yukon River.

The Klondike Gold Rush was a worldwide event and made Skagway, for a short time, very

cosmopolitan. Skagway boomed for about four years until late 1901 or early 1902. After the rush, the population sharply declined from a peak of 8,000 to 10,000 and except during World War II never rose to much more than 800 people. The economy of Skagway has been based on two industries, railroads and tourism. After the rush, the railroad moved mining materials and ore, however, on a much smaller scale. Tourism played a small role in the economy of Skagway until the introduction of the National Park Service. The tourist industry now dominates the Skagway economy, perhaps in a much larger way than the railroad ever did.

Although the Pantheon Saloon Complex was not on the original park list of buildings to acquire, it was preserved for several reasons (Norris 1996:165). The eastern facade of the Pantheon Saloon is one of only two examples of an idiosyncratic architectural style that uses locally abundant material, driftwood and cobblestones, and incorporates them into the facade. The original structure was also built in the earliest days of the gold rush, and the facade provides an opportunity to save some of that legacy. Finally, the building is distinctive because it was never moved from its original location, unlike so many other buildings in Skagway. The implication for the archeologist is that potentially intact deposits would be found at the site.

General background information regarding the geography, geology, flora, fauna, human

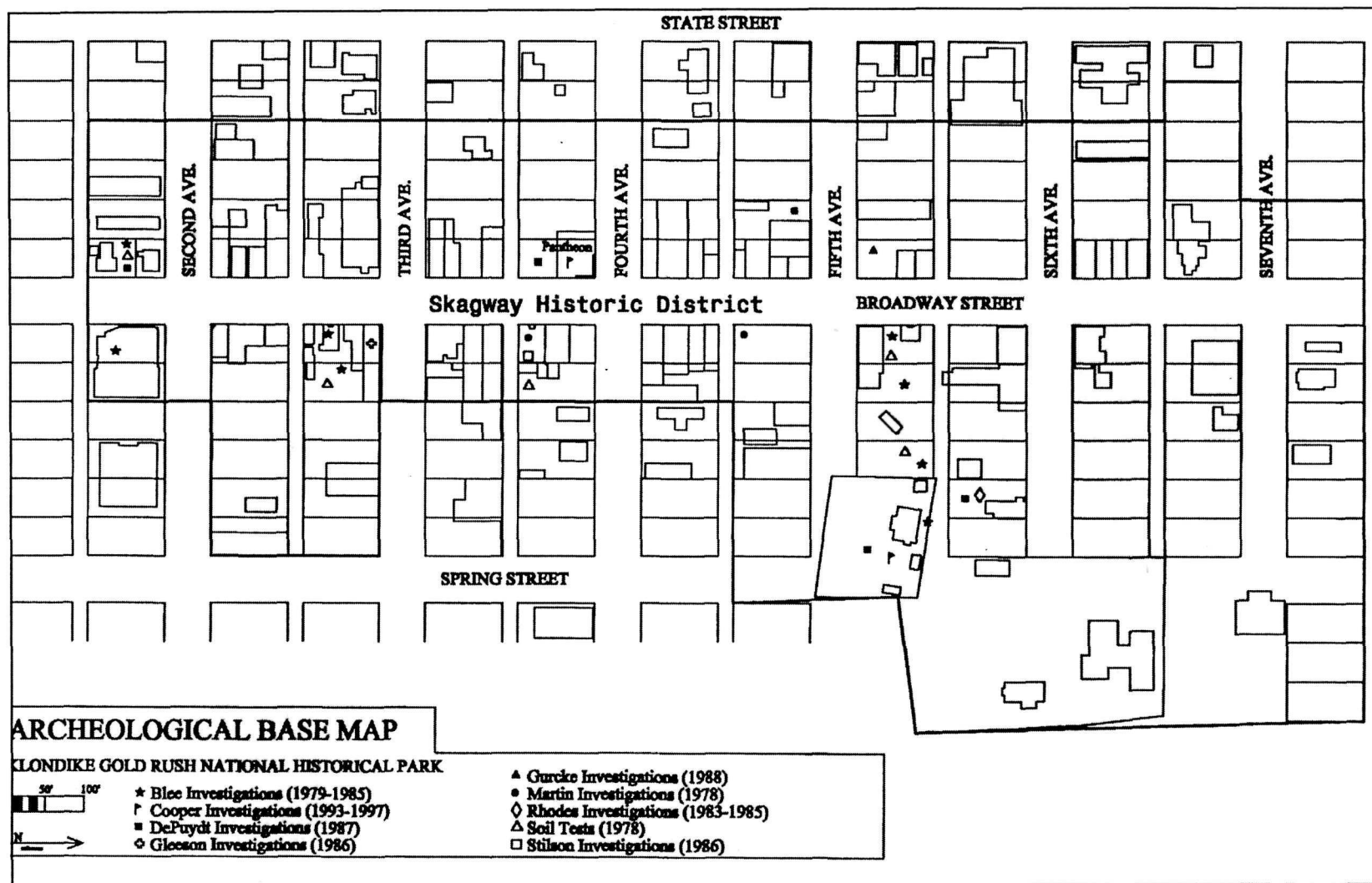


Figure 2: Skagway Archeological Base Map (Drawn by T. Kardatzke)

prehistory, and history can be found in Adams and Brauner (1991), Blee (1983, 1988), and Rhodes (1988). In-depth treatment of the history of the Pantheon will be given in the next chapter. Studies were conducted for the faunal, macrobotanical, and pollen material. Each report is included as an appendix and is on file with Klondike Gold Rush Park.

Project Background

The Pantheon Saloon Complex is composed of two buildings. The building on the north is referred to as the Pantheon Saloon, and the building to the south is referred to simply as the Wood Shop as it served that function from the early 1980s until 1996. Once the Pantheon Complex is restored, it will serve two purposes. The second floor is designated as curatorial storage and offices for the curator and staff. The first floor will be leased back to the public for retail business. The Pantheon Saloon is being restored to its appearance of 1905-1907. The plans for the Wood Shop called for its total removal for several reasons. The building was not historically significant, was poorly constructed, and was not commercially viable. The new building will be constructed in the style of the former gold rush era building.

The major construction impact to the archeological resource was from the installation of foundations under both buildings and the excavation of a utility corridor in order to install new sewer and water lines. Although preliminary testing was started in 1987, it was limited to four excavation units around the perimeter of the building. A comprehensive plan for testing and removal of endangered deposits was completed in early 1995 (Kardatzke 1995). Intensive testing started in 1995 in the parking lot south of the Pantheon and under the floor of the

Pantheon. Significant remains were found and removed. In 1996, the utility corridor was excavated as well as below the floor of the Wood Shop building. Restoration of the Pantheon and removal of the Wood Shop started in 1997, and during the monitoring process more significant remains were found and removed.

Research Goals

A large portion of the archeology completed in Skagway was done to comply with section 106 of the National Historic Preservation Act. Section 106 is designed to protect the cultural resources from modern development and to have archeological issues recognized in the beginning stages of construction. Unfortunately, this type of work is rarely research driven. The research goals or themes for this project are derived from the archeological assessment of Skagway completed by Adams and Brauner (1991). The National Park Service developed a set of 34 themes that encompassed all of American history (Adams and Brauner 1991:41). Of these, only 17 relate to Skagway (Bearss 1970). From the original seventeen, Adams and Brauner (1991) developed 12 archeological research themes for Skagway. Not all of these were pertinent for the Pantheon Complex, but six of the themes were found broad enough for the collected data set. The six themes are as follows:

1. Compare the material remains with those from other archeological investigations in order to increase our knowledge and understanding of the social interaction and economic similarities and differences in early twentieth century Skagway.
2. Examine and characterize how the material remains increase our knowledge and understanding of the similarities and differences between gender roles and ethnic

- groups during and after the gold rush.
3. Examine and characterize how the material remains increase our knowledge and understanding of the level of interaction between Skagway and world markets.
 4. Increase our knowledge and understanding of environmental change in Skagway before, during, and after the gold rush by examining floral and faunal remains recovered from general excavations and privy or dump sites.
 5. Increase our knowledge and understanding of the diet and general health of the people in Skagway during and after the gold rush.
 6. Use the material remains to aid the park interpretive staff in describing to the general public everyday life during and after the gold rush period.

These themes provide the context for organizing and discussing the collected data. How the data are classified and categorized is determined in large part by the implied questions from the themes.

CHAPTER 2: SITE HISTORY

Introduction

The Pantheon Saloon Complex is on Block 27, Lot 1 in the town of Skagway, Alaska. It is in the Skagway Historic District, which is encompassed by the Skagway and White Pass District National Historic Landmark. A brief lot history and architectural study of the Pantheon Saloon Complex is in the Historic Structures Report: Ten Buildings (HSR) (Blee et al. 1984). Figure 1, in chapter 1, shows the location of the Pantheon Saloon Complex in Skagway.

The Skagway townsite was platted by Frank Reid in early August 1897. The town is divided into blocks 300 feet x 220 feet on a side. The blocks are subdivided into 12 equal-sized lots (100 feet north-south and 50 feet east-west), divided by a 20-foot wide alley running east-west through the center of each block. Lots 1 and 2 of Block 27 were located or claimed early in the gold rush. Lot 1 was located by Dr. Emil Pohl on August 10, 1897 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1897), and Lot 2 by Lance Burdon on the same day (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1897) (table A-1).

Lot 1: 1897-1902 (north half of the north half)

Hotel Rosalie

In August 1897, the Hotel Rosalie was constructed on the northeast corner of Lot

1 (the north half of the north half of Lot 1) (figure 3). The hotel was a “flop house,” a one- to two-night stopover for miners on their way to the goldfields in Dawson. A historic photograph shows a wooden sign with the hotel name hung over the front door projecting out over the boardwalk (figure 4). The hotel measured roughly 18 feet x 30 feet and was built directly on the ground without a substantial foundation or pier supports. The hotel most likely had only one stove in the center of the structure (Blee et al. 1984, figure 4). Various pieces of the north roofline and wall are preserved in the present-day structure. During the restoration of the roof, the hole for the stovepipe was found where historic photographs showed it to be. The walls were constructed with vertical boards and battens. On the north wall was one window and possibly one door or another window. On the east wall were double doors in the center with four sets of windows. Figure 5, a later photograph from 1898 or 1899, shows the east facade as it would have appeared during the Hotel Rosalie occupation.

By examining the extant portions of the original roofline and later incorporated construction, it was possible to make a cut-away drawing showing the interior construction of the building (figure 6). Each set of rafters had one cross-brace, attached high in the apex of the roofline. In documenting the building prior to restoration, nails were found on the interior sides of the rafters and cross-braces. This is an indication that some kind of sheathing was used, possibly to help insulate the room. No indications were found that the space

had been subdivided into individual rooms by partition walls. The ceiling at its highest measured roughly 14 feet. Considering how the bracing in the roof is attached, it would have been difficult to create rooms without wasting valuable space. An advertisement for the hotel appeared in the *Skaguay News* on October 15, 1897. The advertisement noted that the hotel had “Comfortable rooms; First-class meals, and lady cooks.” (*Skaguay News* 15 October 1897 1:1). Perhaps the hotel was divided into rooms using sheets hung on rope, thereby leaving no substantial evidence. The hotel business, but not the structure, was moved soon thereafter to a barge near the beach.

It is unknown if Dr. Pohl was the owner and operator of the Hotel Rosalie. Although it is not certain, the owner of the Hotel Rosalie probably leased the land and/or building from Dr. Pohl. No deed record exists regarding the sale of any portion of Lot 1, by Dr. Pohl. However, in late 1898, Mrs. Annie Clayson sold the hotel portion of land on Lot 1 to Ann L. Beveridge (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1898). Perhaps the deed transaction involving Dr. Pohl and Mrs. Clayson was not recorded. Unfortunately, other sources of information that could be used to straighten out the deed mess, such as tax records, were not kept until 1900 (appendixes A and B).

F. H. Clayson & Co. Clothier

The Hotel Rosalie was replaced by the clothing outfitter, F. H. Clayson & Co. sometime in late 1897 (figure 7). It is thought that during this time Mrs. Annie Clayson owned the land if not the structure (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1898). An 18-foot x 20-foot addition was added to the western side. This addition conformed to the front portion of the building. After the extension

was added, the building measured 18 feet x 50 feet. A painted canvas sign replaced the wooden sign of the Hotel Rosalie (figure 8). Information regarding the interior of the building has not been found. A photograph from the winter of 1897-1898 shows a small shed or a large privy and a tent structure on the southwest corner of Lot 1 (figure 8). The structures appeared to face the Clayson Building. It is assumed that without other substantial buildings in Lot 1, Clayson & Company might have used the privy and tent structure. The Clayson Clothier business remained on Lot 1 through early 1898, although the land was sold to Ann L. Beveridge in October of 1898 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1898).

D.C. Brownell's Hardware Store

Don Carlos (D.C.) Brownell and his wife, Ada, arrived in Skagway in late 1897. The deed recording their purchase of the Clayson Clothier building was never located. A deed transaction record did exist whereby Mrs. Annie Clayson (widow) sold the Clayson property to Ann L. Beveridge in October of 1898. This information suggests that the Brownells leased the building during their stay in Skagway. The only time the Brownells appear in the deed book regarding the lot was in January 1898, when they sold to Mrs. Elwood Fasel the southern half of the north half of Lot 1 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1898). Not surprising, no records exist to support the Brownells' ownership of the deed that was sold to Mrs. Fasel.

It is thought that the store was vacant for a short time before D.C. Brownell opened his hardware store. A photograph from that period shows the building without a sign perhaps indicative of a vacancy (figure 9). When Brownell's hardware store first

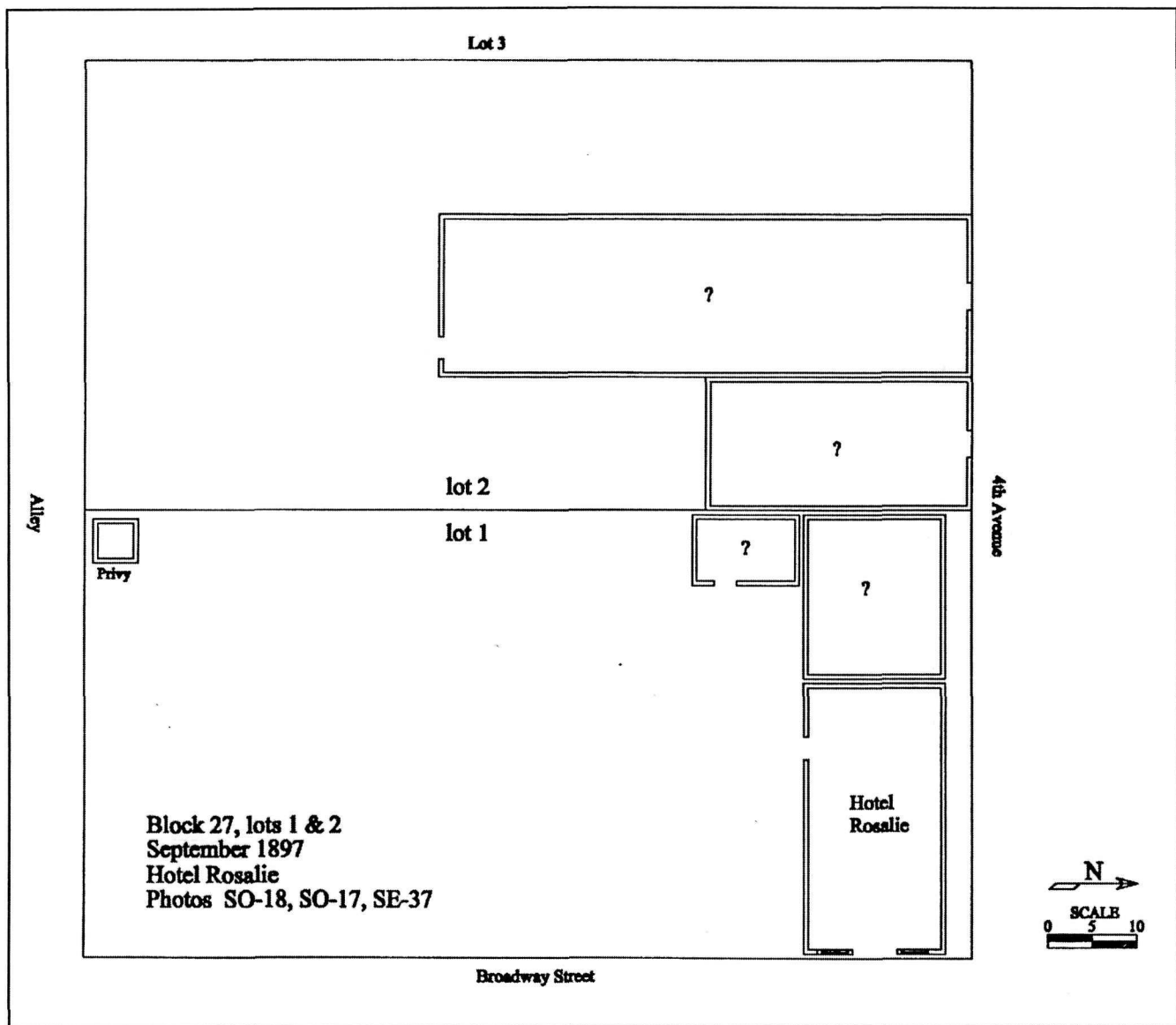


Figure 3: Building Configuration in September 1897 (Drawn by T. Kardatzke)

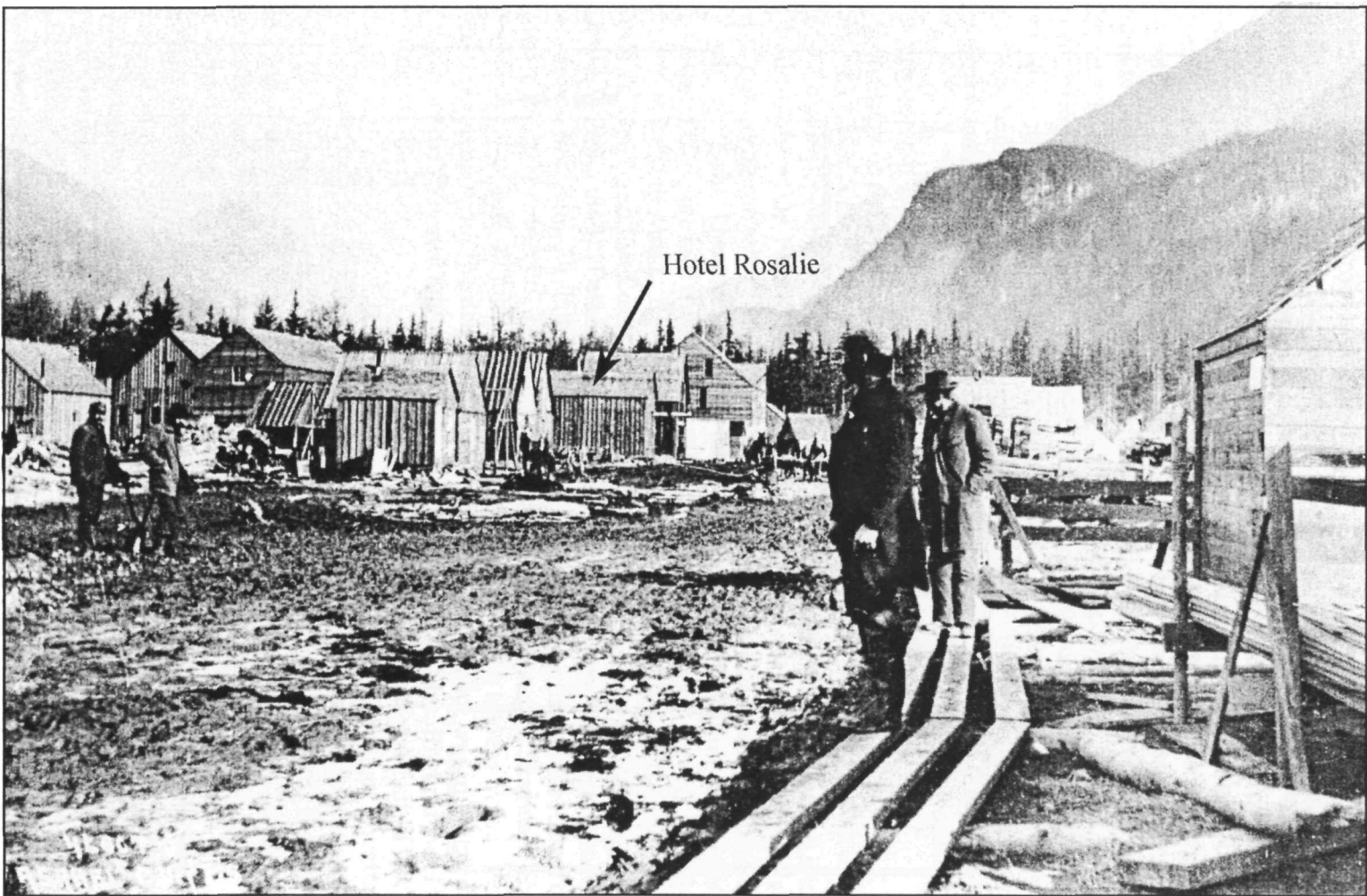


Figure 4: Skagway in Late 1897. (KLGO SE-37/881) Washington State Historical Society, Curtis #46007

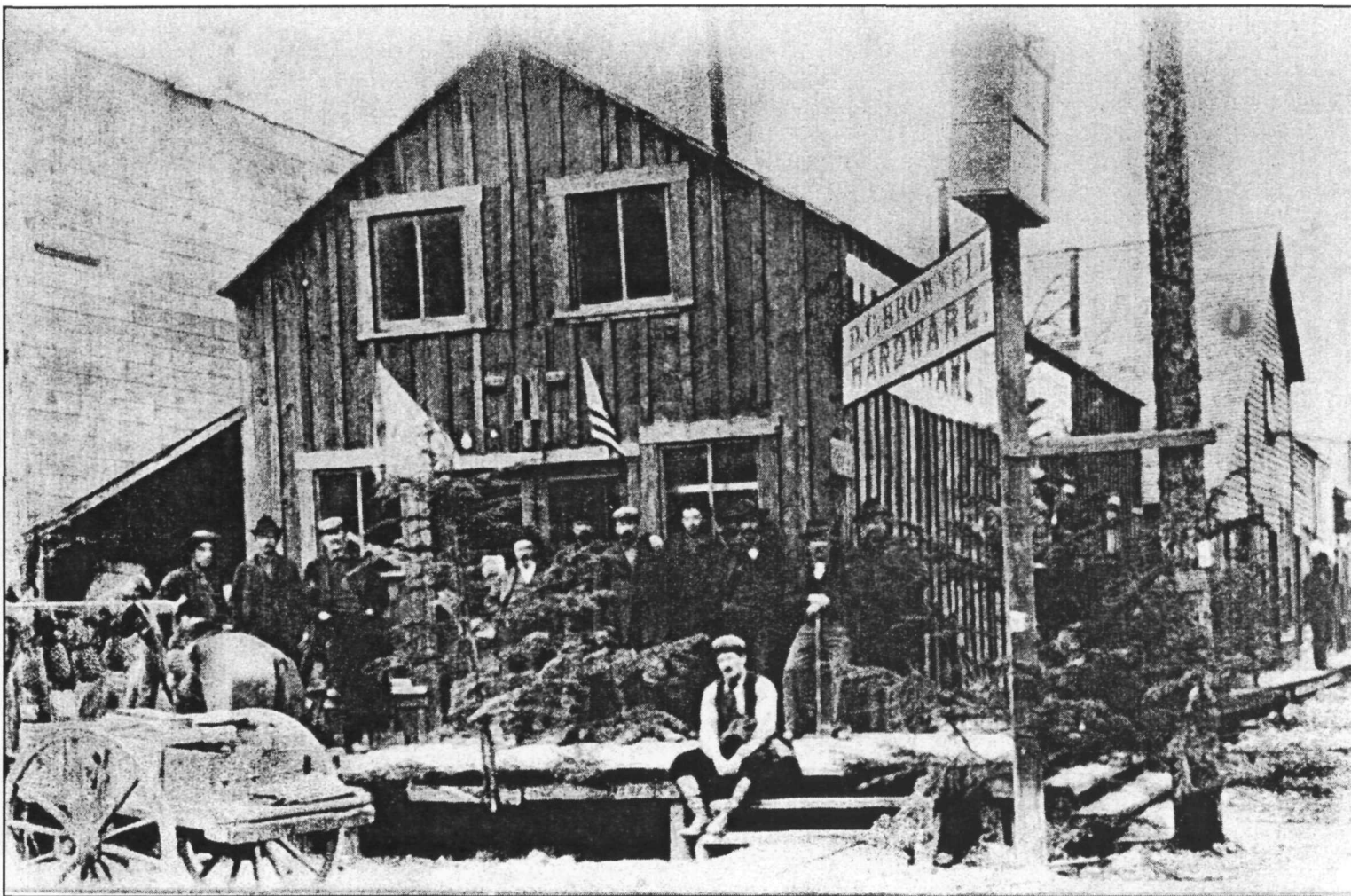


Figure 5: July 4, 1898, D.C. Brownell's Hardware Store. Fasel Building is on the left, and the Hotel Seattle is on the right. Skagway City Museum, PC93.01.739

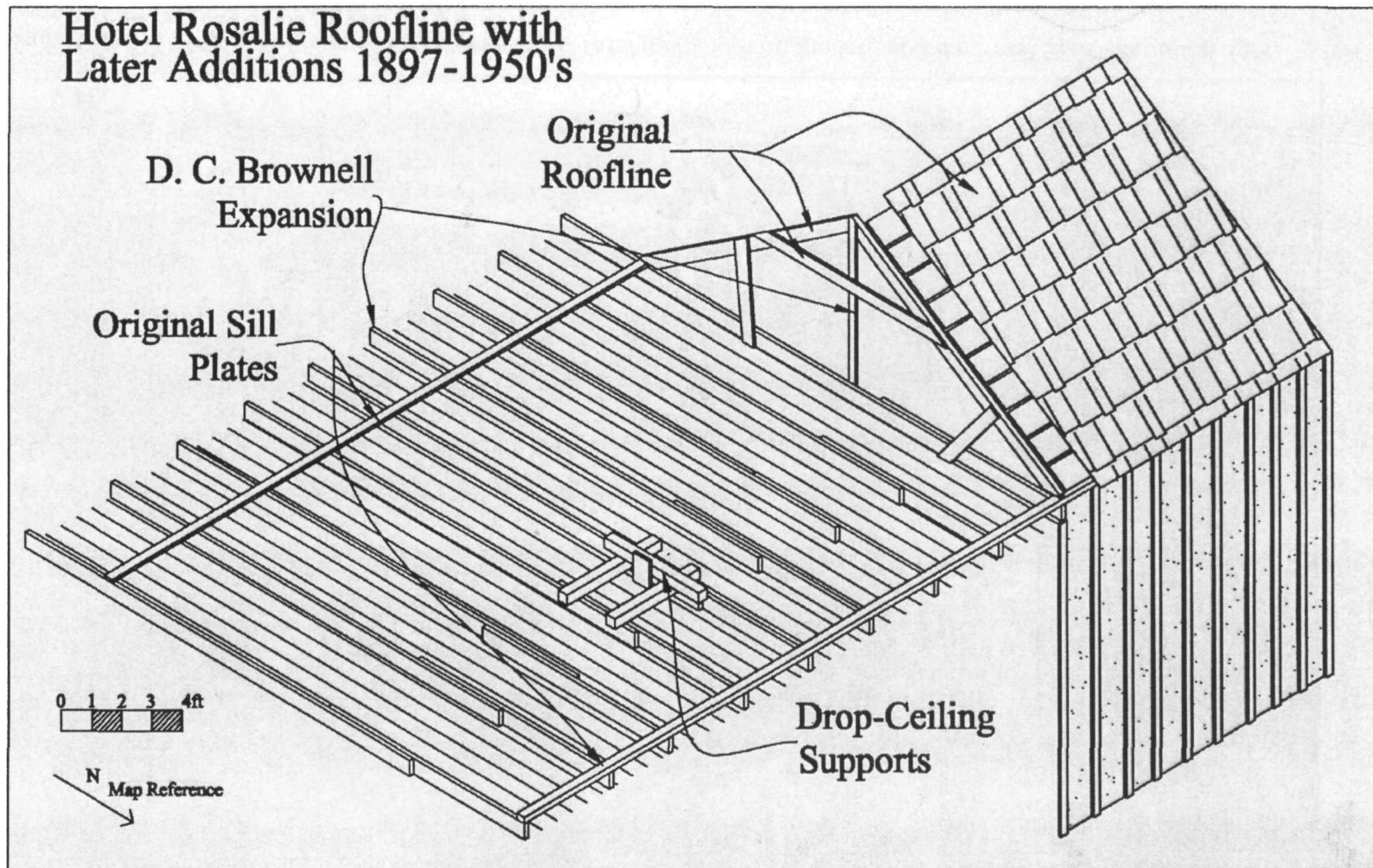


Figure 6: Rosalie Hotel Roof Cut-Away (Drawn by T. Kardatzke)

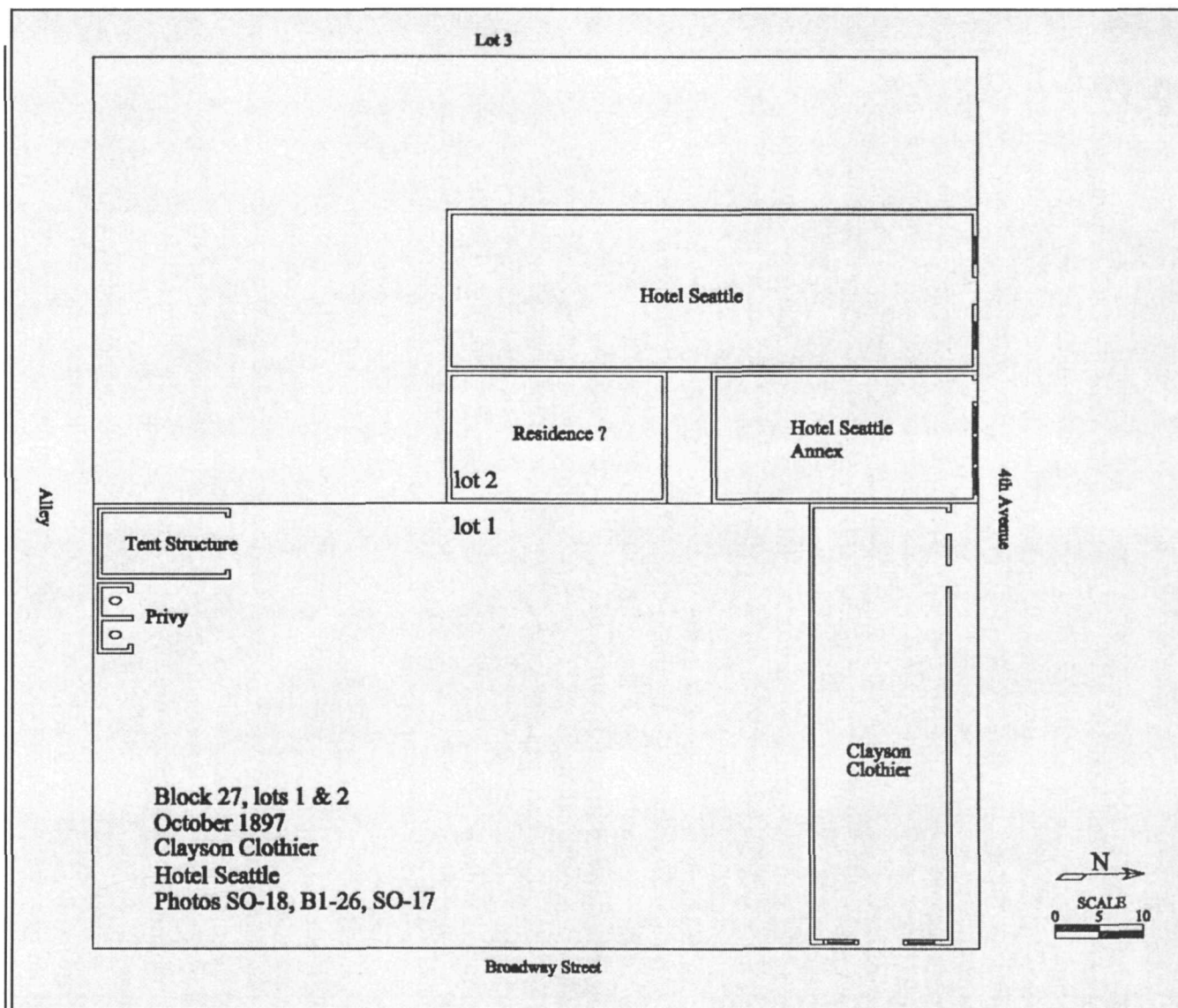


Figure 7: Building Configuration in October 1897 (Drawn by T. Kardatzke)

opened, no apparent changes were made to the exterior facade (figure 10). By the spring of 1898, a covered lean-to was on the south side of the building, possibly for extra hardware stock (figure 5).

Around September 1898, Brownell expanded and remodeled his store. The newspaper stated that the building “looks as neat and attractive as a cream chocolate booth at a church fair” (*Skaguay News* 16 September 1898 3:1). The south wall was either removed or moved back flush against the north wall of the Pioneer store. In order to create the ceiling joists, two 2-inch x 6-inch rough-cut boards were nailed and lag-bolted together to make the new building width (figure 6). Observations from the remaining roof show that the sill plate from the former south wall was left in place to rest on top of the ceiling joists. From the apex of the hardware store extending over to the apex of the Pioneer store a new roofline was created. Shiplap planking was cut for bracing the ceiling joists to the rafters of the hardware store. From the inner apex of the old roofline 1-inch x 3-inch boards were extended straight down as additional braces for the ceiling joists. These boards resembled the battens used for the exterior walls. Tongue-and-groove flooring was nailed to the bottom of the ceiling joists to create the new ceiling.

The main entrance was a double door entryway on the northeast corner of the building (figure 11). Large plate glass windows were added on each side of the entry doors. The board and batten exterior was covered by shiplap siding. A door on the south side of the east facade was added for access into the area that was covered by the renovation.

Four months later the newspaper mentioned that Brownell was again expand-

ing. In the style typical for the time, the newspaper described the remodeling as follows, “As grows and flourishes the green bay tree, likewise also grows and flourishes the hardware business of D.C. Brownell...” (*Skaguay News* 13 January 1899 5:2). The exact nature of the flourishing is unknown. It is possible that the changes made in September occurred in two phases instead of just one.

During the time that D.C. Brownell and his wife, Ada, were in town, they were very active in the community. Mrs. Brownell was a member of the Christian Endeavor Society as well as the Y.M.C.A. camera club (*Daily Alaskan* 6 February 1901 1:3). She was a frequent traveler to their former home in San Francisco. Their son D.C. Brownell Jr., usually accompanied her (*Daily Alaskan* 23 December 1898 3:1, 30 May 1899 4:2, 21 June 1902 1:6). She had several paragraphs devoted to one trip she made that covered 6,000 miles in 28 days. She visited the Buffalo exposition in New York state and several universities in Illinois (*Daily Alaskan* 26 June 1901 4:3).

D.C. Brownell supported the fire department with donations on several occasions (*Daily Alaskan* 4 February 1900 3:1, *Skaguay News* 6 January 1899 5:5). He was involved in purchasing new fire hoses and paying for the installation of a fire hydrant on the corner of 4th Avenue and Broadway (*Skaguay News* 23 September 1898 4:2, 18 November 1898 2:1). In early 1899, the newspaper published an excerpt from a letter that Brownell wrote for a trade publication, “Iron Age of New York.” The letter sang the praises of Skagway especially as an outfitter for the new Atlin Mining District. He described Skagway as having “...two daily and one weekly newspaper, 5000 people and no policemen, one church, an empty jail and about 40 or 50 saloons (*Skaguay*

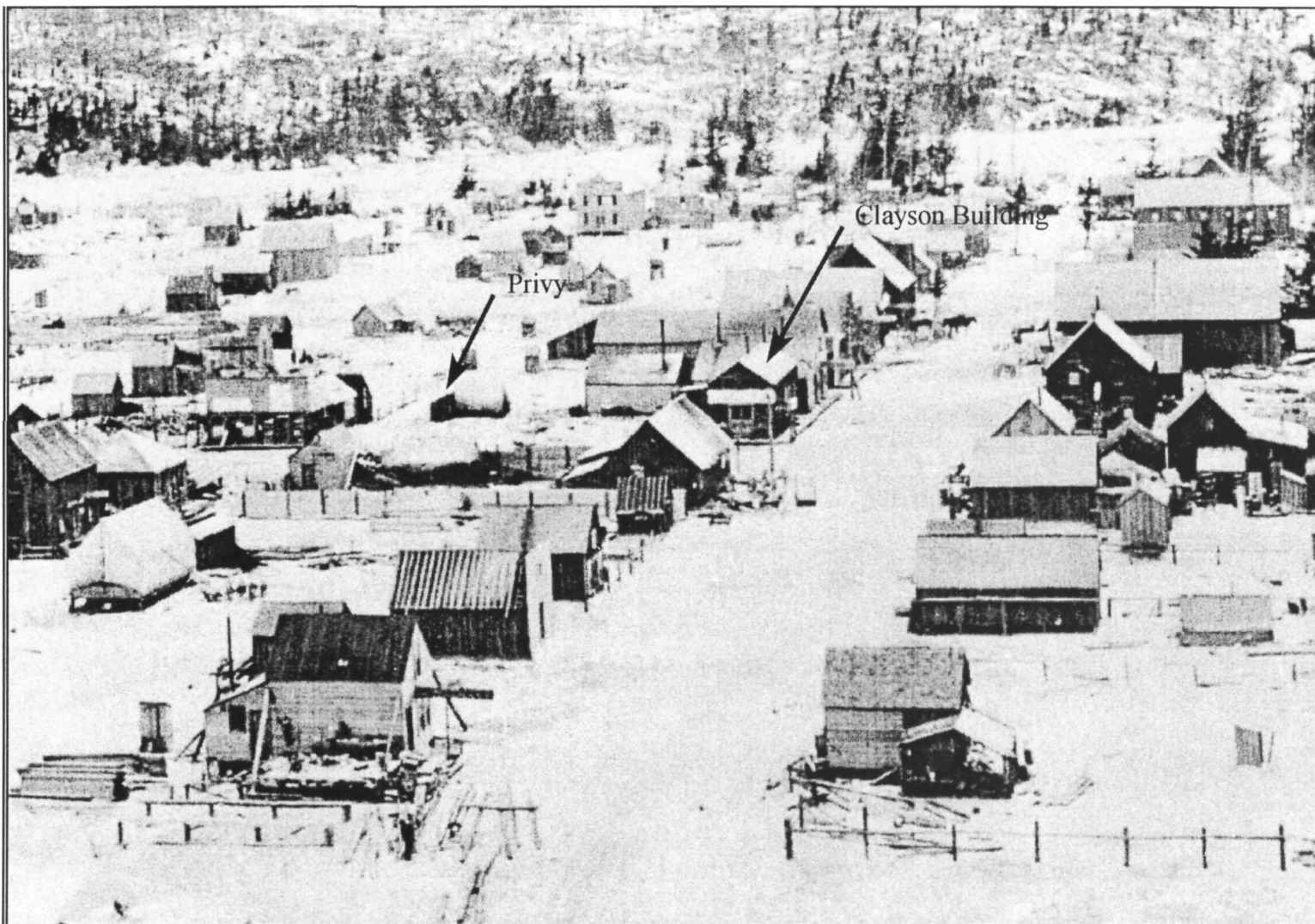


Figure 8: Early Skagway Overview, looking east. Clayson Building is in the center. (KLGO SO-18/2537). Yukon Archives, E.A. Hegg Collection (University of Washington), #2653

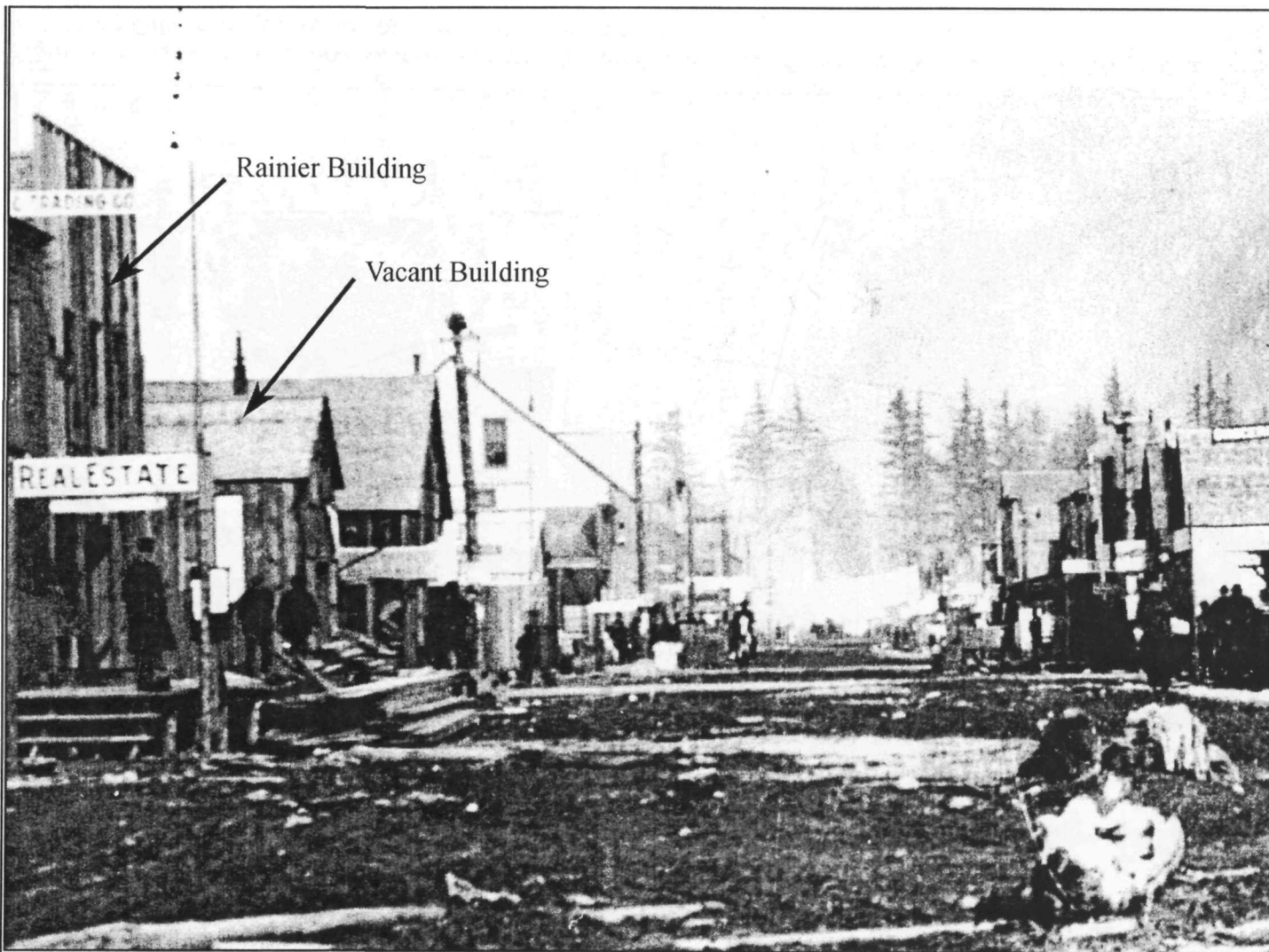


Figure 9: Skagway, January-February 1898. Rainier and Clayson Buildings are to the left. (KLGO B1-121/223).
Dedman's Photo Shop, Skagway, Alaska



Figure 10: Skagway Overview, June 1898. (KLGO SO-10/4) Alaska and Polar Regions Department, Rasmuson Library, University of Alaska Fairbanks, Barr Collection, Accession #76-151-40



Figure 11: Brownell Hardware Store after Remodeling. (KLGO 4th-13/2658) Yukon Archives, H. C. Barley Collection, #5073

News 20 January 1899 3:1). He also dabbled in politics. He wrote an article supporting McKinley in the 1900 election (*Daily Alaskan* 1 November 1900 1:3,4). His son continued the tradition and served as mayor of Seward for nine years and was a senator in the third division for several terms (*Anchor-age Daily Times*, 2 July 1952 1:2). In October 1902, the newspaper reported that D.C. Brownell had left Skagway for Valdez, and his wife would follow as soon as the store and household were packed (Blee et al, 1983:374; *Daily Alaskan* 23 October 1902 3:1).

Lot 1: 1897-1911, 1916 (south half of the north half)

Fasel's Paint and Wallpaper Store

Directly to the south of Brownell's hardware store, Elwood Fasel started construction of the Pioneer Paint and Wallpaper Co. in January 1898. The building was two stories and measured roughly 30 feet on a side (figure 12). A historic photograph dated September 10, 1898, shows a passenger train with all of Block 27 behind. Directly above the coal car is a painted sign with the name "A.C. Fasel" (figure 13). Figure 14 is an outline drawing of the building footprints in Lots 1 and 2 for that period.

The Red Front General Merchandise Store

Mrs. Fasel sold the deed to the land including the Pioneer Paint and Wallpaper store to Mrs. Katherine Moyer in the middle of 1902 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1902). The Moyers sold general merchandise and possibly hardware. The façade facing Broadway Street was painted red. A new sign "THE RED FRONT," proclaiming the new name for the business, sat at the very top of the false front. Three signs

were placed on the second story of the façade. The left sign read, "MOYER WANTS YOUR TRADE," the center sign read "FOR QUICK SALES - SMALL PROFITS - GIVE US A TRIAL - WE WILL SAVE YOU MONEY," and the right sign read "MOYER GIVES A _____ DEAL" (figure 15). An awning covered the entire lower façade.

Sometime between 1905 and 1910, the Red Front went through a small facade change. The giant sign on top of the facade was removed, along with the three signs on the second story and the awning. A sign projecting over the boardwalk from the front wall was attached to a post that was just beyond the boardwalk. The sign read "DEPARTMENT STORE" and underneath that "HARDWARE" (figure 16). The Red Front was still in business, but perhaps this reflected the general worsening of the Skagway economy. In April 1911, Mr. and Mrs. Moyer sold the Red Front and all of Lot 2 to J. Anderson (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1911). Tax records corroborate the transfer of property (Skagway City Tax Records).

Picture Palace Movies

In 1916 a newspaper article stated that the Red Front was being renovated for the future home of the "Picture Palace Movies" (*Daily Alaskan* 27 April 1916 4:1). Another article stated that George Mowl was proprietor of the Palace Movies Theater. It went on to say that Mr. Mowl had been in the theater business in Skagway for over two years (*Daily Alaskan* 23 September 1916 1:4).

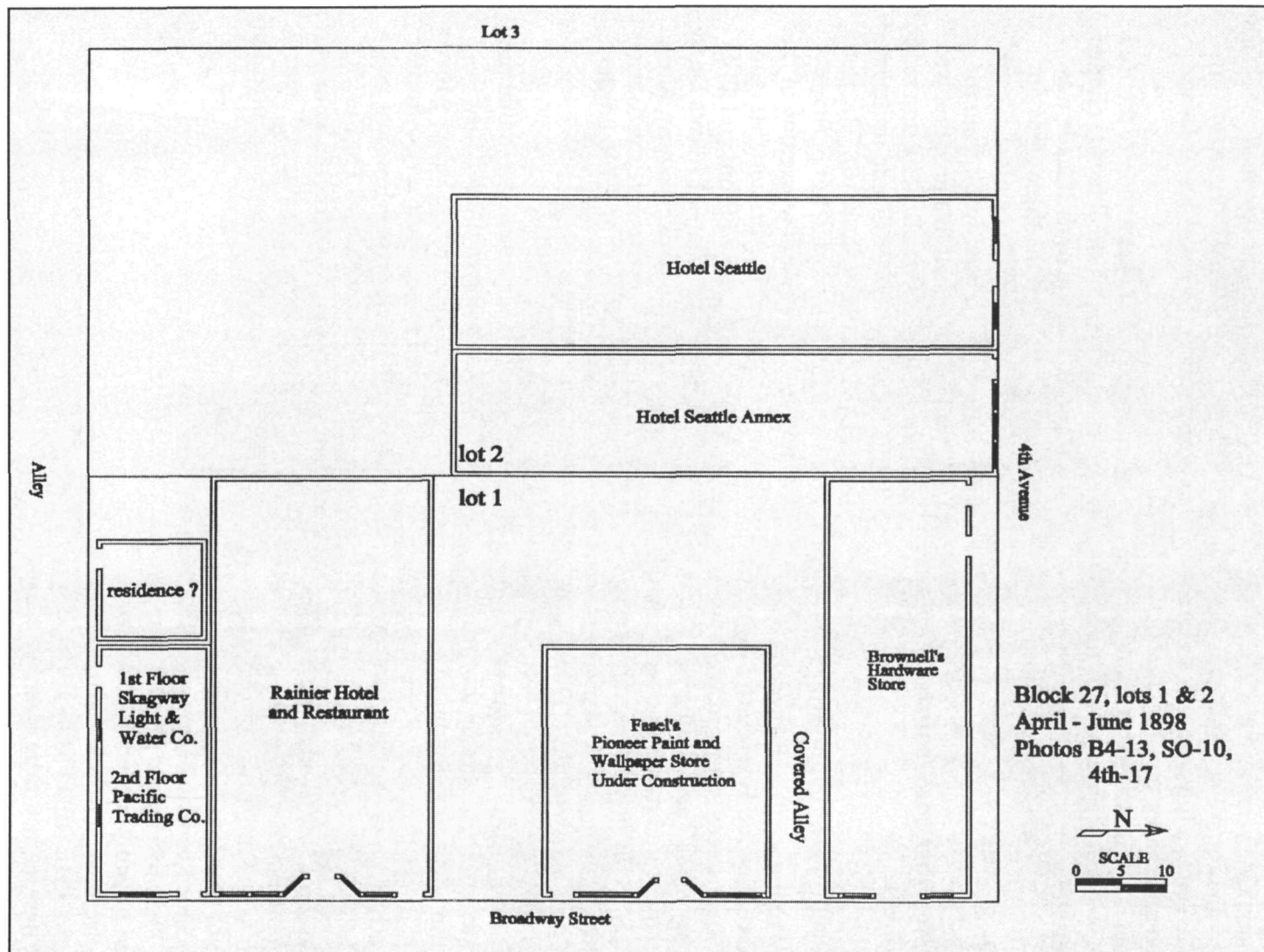


Figure 12: Building Configuration from April to June 1898 (Drawn by T. Kardatzke)

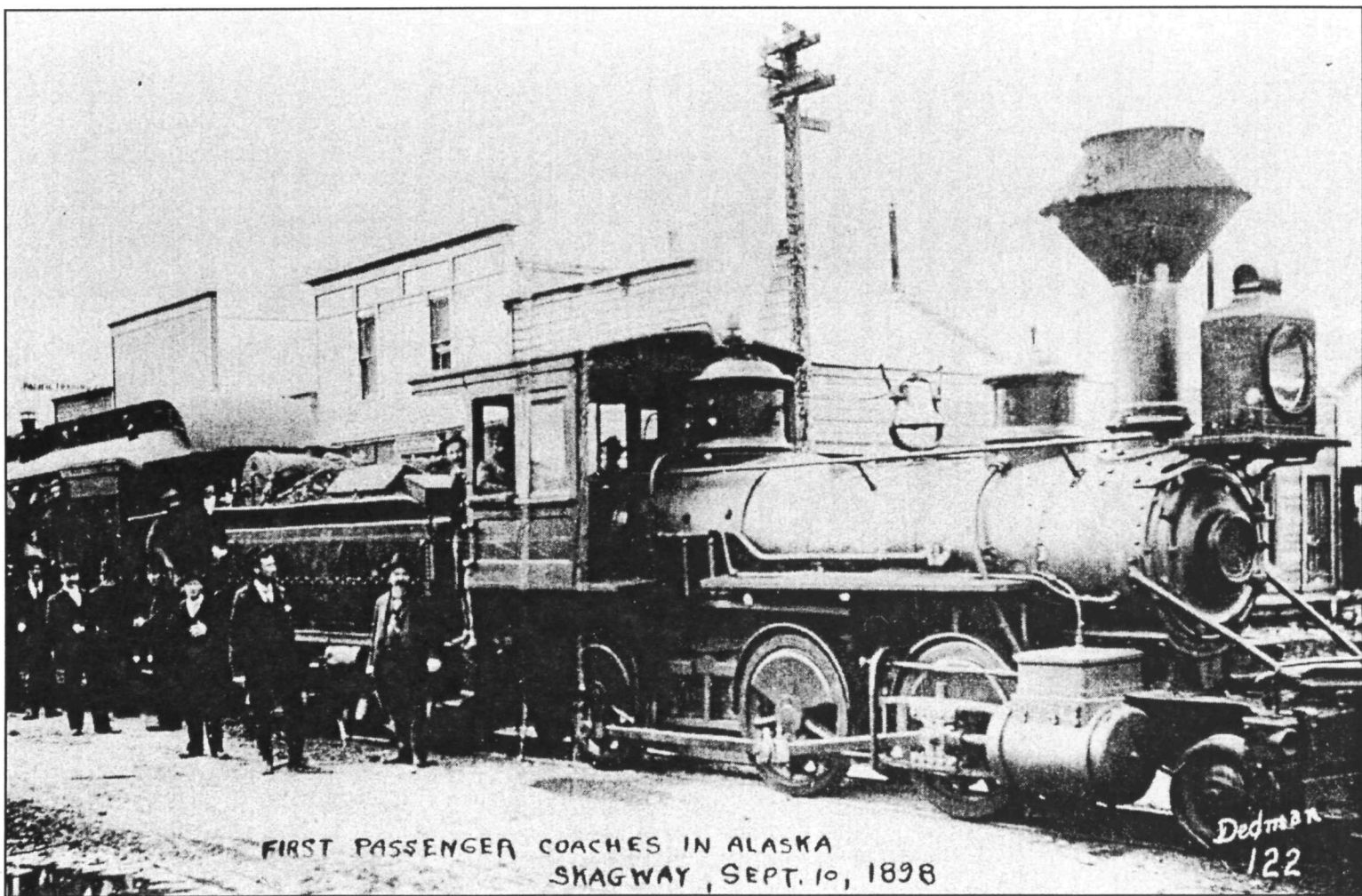


Figure 13: Skagway, September 10, 1898. (KLGO B1-68/960) Vancouver Public Library Photograph Number 9799

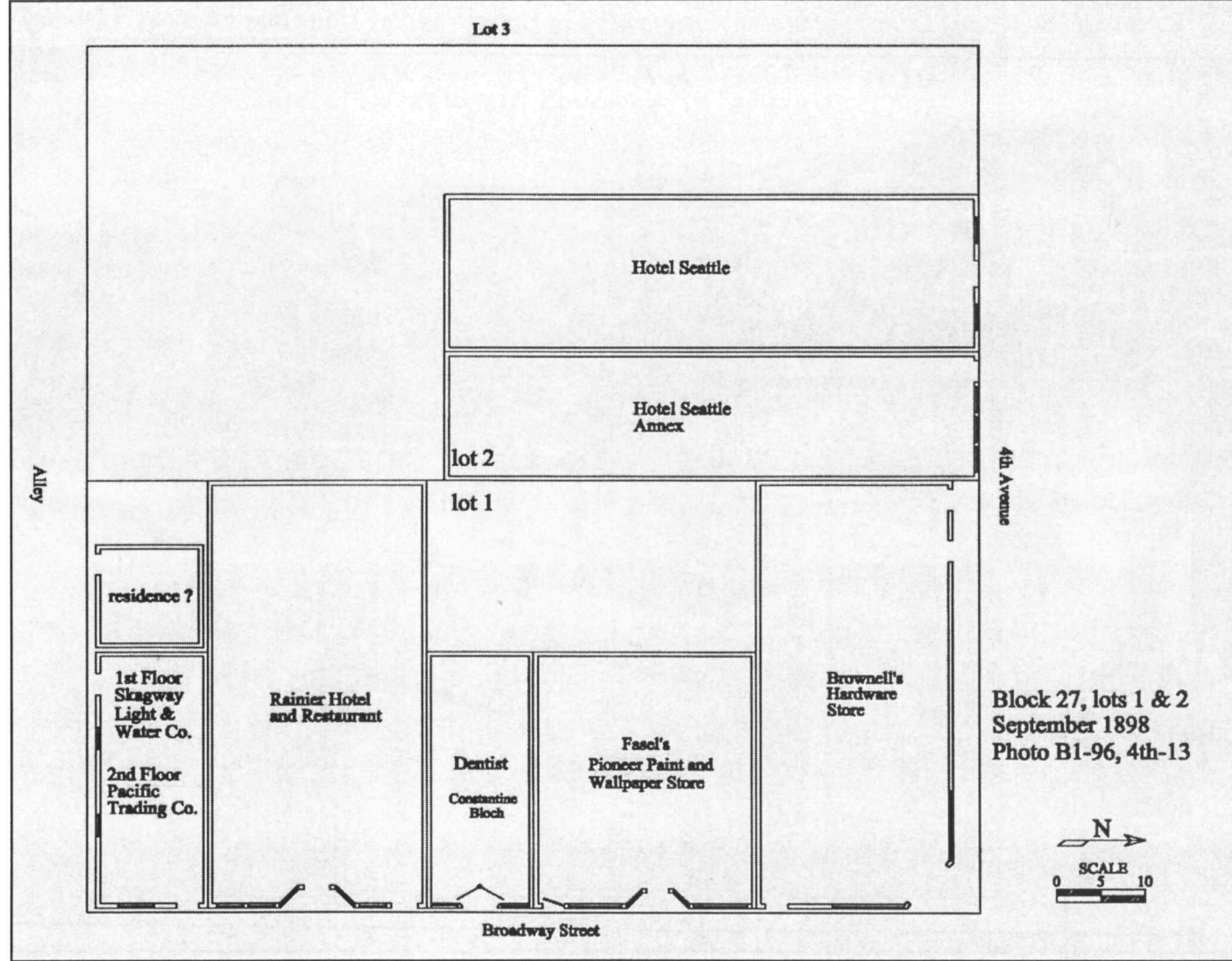


Figure 14: Building Configuration in September 1898 (Drawn by T. Kardatzke)

Lot 1: 1902-1917 (north half of the north half)

Pantheon Saloon

J.F. Anderson purchased the deed for the north half of the north half of Lot 1 from the Alaska & Northwest Territories Trading Company in July 1903 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1902). The company originally supported the founder, Captain William Moore and his son Ben, during the 1880s before the rush. The company was also partners in the suit against the people of Skagway for trespassing on the Moores' claim. The Moores and the trading company won their claim and were awarded 25 percent of the assessed value of the land taken from them. Mrs. Ann Beveridge, who previously owned the land, most likely turned it over rather than pay the 25 percent. L. Beveridge was on record from 1900 to 1902 as paying taxes on the Brownell portion of Lot 1 (table B-1). J.F. Anderson took over the taxes starting in 1903.

In late May 1903, Anderson began to remodel the former hardware store for business as the Pantheon Saloon. Anderson received help from Charles Walker (who created the driftwood facade of the A.B. Hall a block south) in creating a unique design for the Pantheon exterior. Smooth cobbles were set in mortar to a height of about three feet from the ground. Two driftwood logs and numerous smaller pieces were used to finish the design of the eastern facade. The corner entry was removed and double doors were put on the east. In the interior of the building, the bar occupied nearly the entire south wall, and slot machines lined the north wall. A small gem display was near the northeast corner by the door. An eight-foot partition was constructed on the west side of the

saloon in order to create a semi-secluded back room. The partition did not go all the way to the ceiling and was topped by ornamental trim. A door to Fourth Avenue was cut in the western side of the north wall. This allowed reputable women to enter the back room and not be seen by the regular patrons, however, a woman seen in the main room of a saloon was considered a prostitute. The back room also served as a card room for gambling (Blee et al. 1984).

In June 1903, Anderson applied for a liquor license and the Pantheon Saloon had its official opening on July 3, 1903 (Blee et al. 1984:368; *Daily Alaskan* 5 June 1903 1:3, 27 June 1903 1:6, 3 July 1903 4:1, *Alaska Daily Guide* 24 October 1903). The newspaper article that announced the opening also stated that the proprietors were Jack Peterson & Co. and Harry 'Tuck' Flaherty (*Daily Alaskan* 3 July 1903 4:1). On July 13, 1903, J. Anderson received the deed for the Pantheon from the Alaska & Northwest Territories Trading Company (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1902). In September 1904, George Sullivan bought Jack Peterson's interest in the Pantheon Saloon, and Harry Flaherty retained his interest in the saloon (*Daily Alaskan* 9 Sept. 1904 1:5). By April 1905 the Pantheon Saloon was near bankruptcy and was bought by John Gage & Co. (*Alaska Daily Guide* 25 April 1905 1:3). He remained proprietor only until June when he severed his connections with the Pantheon (*Daily Alaskan* 13 June 1905 1:6). A photograph of the Pantheon Saloon sometime in 1905 showed the sign with a small shingle underneath that read "J. ANDERSON PROP." The shingle could have been put up after John Gage pulled out of the saloon (figure 15).

In September 1907, J.F. Anderson made extensive changes to the Pantheon Saloon



Figure 15: 1905 Photograph of Lot 1. (KLGO B1-132/5040) Archives, Alaska and Polar Regions Department Rasmuson Library, University of Alaska Fairbanks, Southeast Tours Collection, Accession #86-021-08N

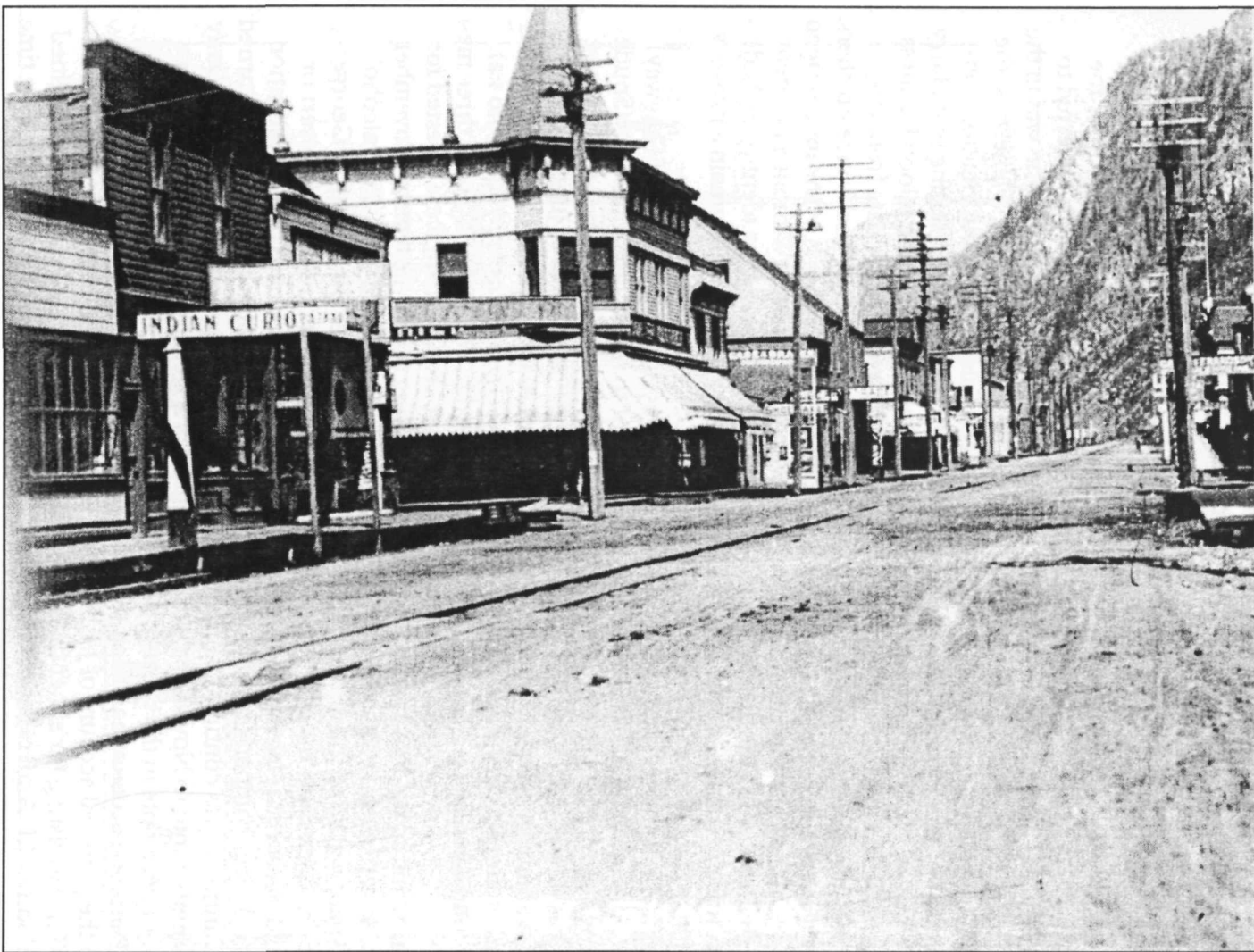


Figure 16: Pre-1910 Photograph of Broadway. Pantheon and Red Front are on the left. (KLGO B1-98/1185)
Yukon Archives, H.C. Barley Collection, #5011

(*Daily Alaskan* 6 September 1907 4:1). The changes he made were unknown, but most likely the 20-foot wide (E-W) by 23-foot long (N-S) second story was added to the west side of the building. The addition was allegedly used as a residence for Anderson except when his wife infrequently visited town. When Anderson was away, the room was used as a “gentlemen’s club room or card room.” (Blee et al. 1984) It is not known if the term gentlemen’s club room was a euphemism for prostitution since wall shadows in the second story indicated that the space was divided into at least two small rooms, perhaps more. The first layers of wallpaper were very elaborate with bright colors, bordering on garish. The common practice of the time must have been to turn a blind eye to the laws that barred women from saloons as long as the violations were not flagrant. This explains the semi-enclosed partition and a separate entrance that concealed the identity of persons coming in the rear door. The stairway leading to the second floor was placed directly in front of the rear door and glass lights were placed in the stairs in order to view patrons coming and going. Presumably this was done for security. With the available evidence, it can be assumed that some kind of illegal activity was occurring on the second floor.

Anderson acquired the Red Front building from the Moyers in early 1911, and presumably, the space was used for storage. The 1914 Sanborn does show the expanded Red Front building, and it is labeled as storage (figure 17). Power company records show that the Pantheon was continuously listed from December 1910 to November 1916. In December 1916, a note in the records states that the Pantheon account had been transferred to the personal account of J.F. Anderson. The last listing for either the Pantheon Saloon or J.F. Anderson was October

15, 1917 (Skagway City Records). Figure 17 shows the configuration of the buildings as they appeared in the 1914 Sanborn Insurance map of Skagway.

In September 1915, the *Daily Alaskan* reported that Jack Anderson had struck it rich in Iditarod (*Daily Alaskan* 21 September 1915 4:4). The article stated that Anderson and his partner, Frank Finn, made over \$30,000 in five years of mining. Finn worked as a janitor for the local railroad. Anderson was referred to as an old-timer of Skagway, who was in the liquor business with ‘Flick’ Flaherty at the Pantheon Saloon. This information conflicts with earlier articles stating that Harry ‘Tuck’ Flaherty was in the saloon business with Anderson. Census data from 1910 shows that ‘Flick’ and ‘Tuck’ were brothers. Neither brother appears in the 1900 or 1920 census (U.S. Census). Without a different corroborating source the identity of Anderson’s saloon partner will remain a mystery.

On May 25, 1916, the citizens of Skagway voted not to renew liquor licenses (Spude et al. 1993:92). The town was to go dry by late August 1916. Later in June 1916, the people of Alaska voted for the prohibition of alcohol (*Daily Alaskan* 7 June 1916 1:2). On Saturday, November 25, 1916, three men including J.F. Anderson were arrested for bootlegging (*Daily Alaskan* 27 November 1916 1:2). The charge was selling alcohol without a license. Special agent George Naud, under the direction of Governor J.F.A. Strong, conducted the investigation. After a short deliberation the jury returned guilty verdicts against the three men (*Daily Alaskan* 4 December 1916 1:2). Anderson accepted a bargain whereby he would change his plea to guilty and in exchange the charges would be dropped (*Daily Alaskan* 5 December 1916 1:2). The judge fined Anderson \$800 because he was a long time

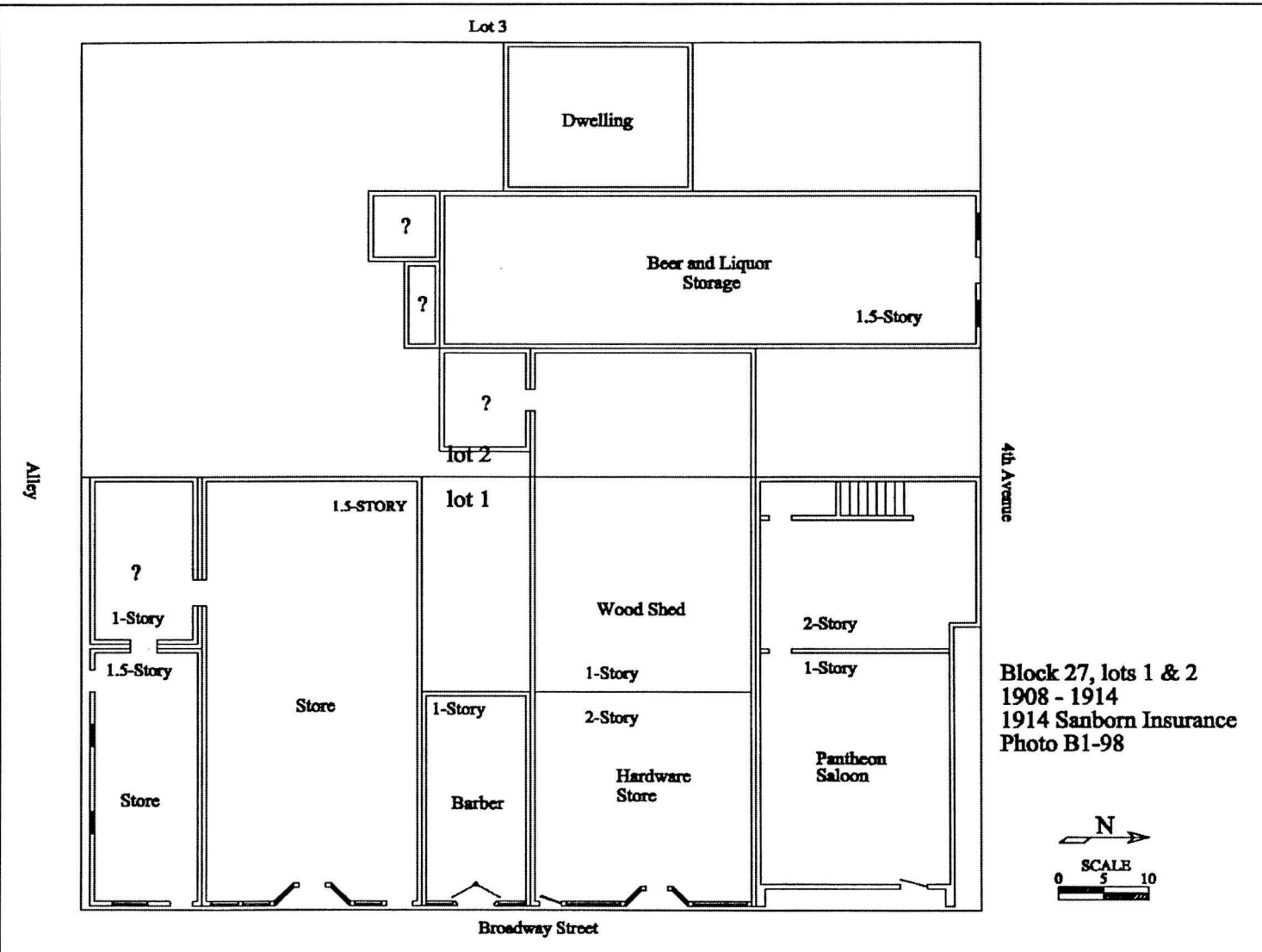


Figure 17: 1908-1914 Building Configurations. (Adapted from 1914 Sanborn Insurance Map & photograph B1-98)

saloonkeeper who was well aware of the law (*Daily Alaskan* 6 December 1916 1:2).

Sometime after the trial, Anderson installed large plate glass windows on the front side of the building hoping to convert the Pantheon Saloon into a more attractive building for business (*Daily Alaskan* 27 September 1917 1:5). The lack of information after prohibition indicates that Anderson's efforts to stay in business were unsuccessful. In the mid-1920s, Anderson rented the saloon building to George and Louis Rapuzzi (Blee et al. 1983:370). The Rapuzzis removed all the saloon furniture and installed museum type materials in order to attract more tourist traffic. The museum was open for an unknown length of time.

Lot 1 (north half) and Lot 2: 1917-1945

In October 1940, Mrs. H.C. Lee went before the city tax assessor and requested that her taxes for the north 1/2 of Lot 1 be substantially reduced (Skagway City Minutes 28 October 1940). Unfortunately deed records do not exist for either sale or purchase of the land and improvements to Mrs. Lee, although the minutes clearly stated that Mrs. Lee had recently purchased the property. If the request was based on a change in the land improvements, which the minutes suggest, then it can be assumed that the Fasel/Red Front building had been demolished. Taxes were paid by Archie Lee in 1941 for the previous year's amount, but Anderson is on record as paying taxes for the north 1/2 of Lot 1 for the next two years. In 1942 Anderson paid the lesser amount of taxes that was requested by Mrs. Lee back in 1940 (Skagway City Tax Records 1940).

The exact fate of the Fasel/Red Front building has always been unclear. The tax information indicated that sometime before 1940 the building was demolished. A comparison of three photographs taken roughly 10 years apart provides some visual evidence of the demolition. One photograph was taken before 1926, and it shows all five buildings on Lot 1 (figure 18). The second photograph was taken after 1926 from roughly the same angle. When compared to the first photograph, the false front of the Fasel/Red Front is missing (figure 19). The third photograph taken in 1934 is an overview from an airplane (figure 20). This photograph also shows a dark shadow where the Fasel/Red Front building should have been. There was a period of roughly 16 years from 1926 to 1942 when the tax records show no improvements to the land. After such a long period, it is doubtful that any useful portion of the Red Front building would have been left to incorporate into the new building.

Skagway was inundated with soldiers during World War II. In May 1943, John Anderson sold the north half of Lot 1 and all of Lot 2 to Louis Rappuzzi (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1914). Rappuzzi immediately rented or leased to a saloon man from Juneau who reopened the Pantheon for the influx of army personnel. A 50-foot x 21-foot shed was added to the south of the Pantheon, where Fasel's building formerly sat. This addition was perhaps as tall as 1 1/2 stories in order to match the height of the Pantheon.

A 10-foot x 46-foot shed was attached to the west side for liquor storage and gambling purposes (Blee et al. 1984:370-371).

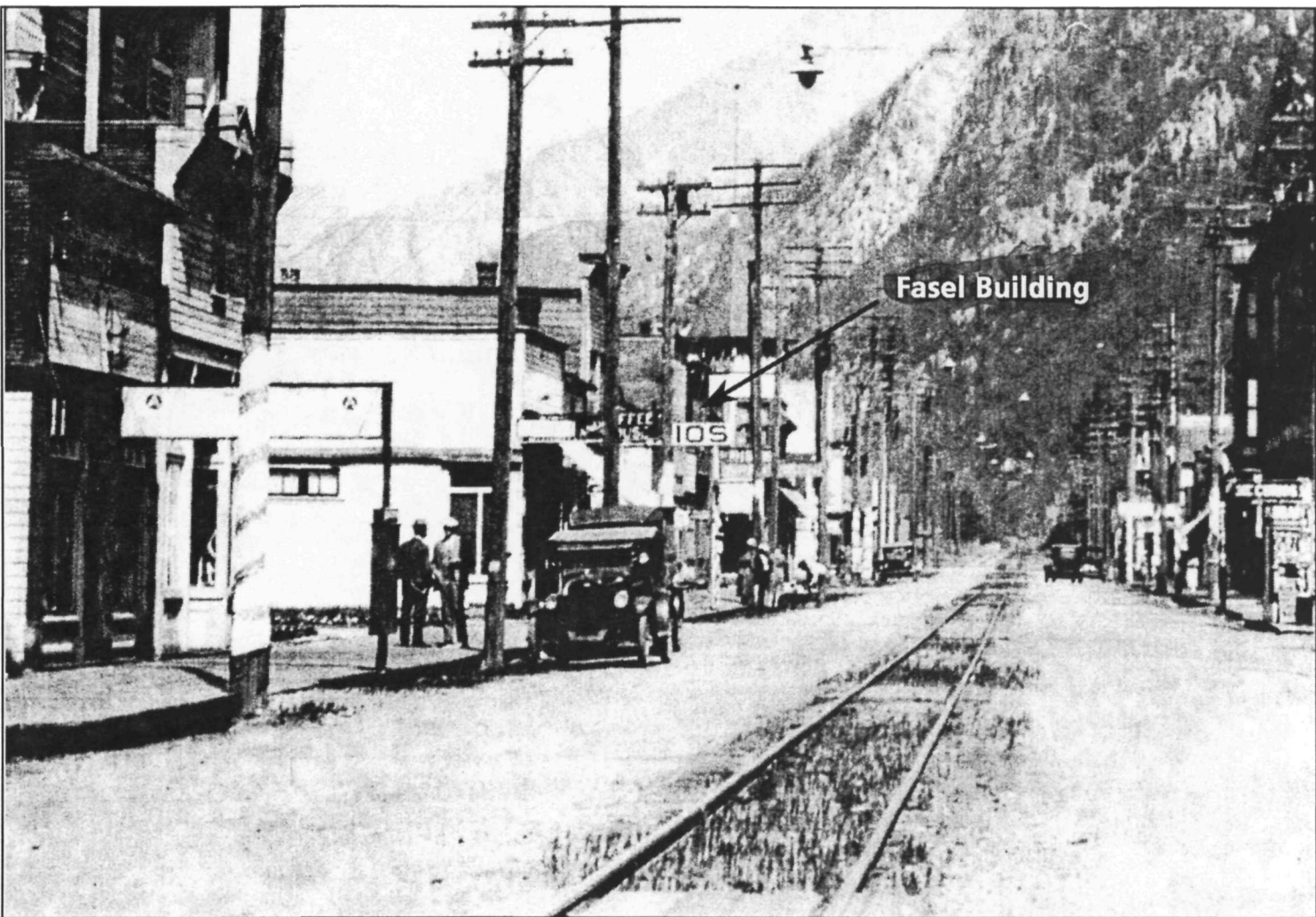


Figure 18: Pre-1926 View of Broadway. Arrow points to Fasel/Red Front Dedman's Photo Shop, Skagway, Alaska. (KLGO B1-69/946)



Figure 19: Post-1926 View of Broadway. Arrow points to vacant area. (KLGO B1-35/147) Yukon Archives, Sleinne Collection



Figure 20: Aerial Photograph of Skagway in 1934. Arrow points to vacant area. (KLGO SO-138/5472). National Archives, Accession #18-AA-9-17

The west shed was small; the roof slanted down toward the west and was less than one full story tall (figure 21). Figure 22 is a 1948 Sanborn insurance map of Skagway, which shows the arrangement of buildings after the war.

Lot 1 (north half) and Lot 2: 1945-present

After the war, the business in Skagway again dried up. Louis Rappuzzi and his wife sold the expanded Pantheon property and all of Lot 2 to James Patterson (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1914). Patterson removed the bar paraphernalia and installed a kitchen, tables and booths for the Brown Derby Restaurant (Blee et al. 1984:370). When Patterson's health began to fail, he sold the restaurant to Joe and Felicia Braun in 1957 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1914). The Brauns owned a bakery in Petersburg, Alaska, either before or during their venture in Skagway. This information came from receipts found in the attic. The Brown Derby was renamed Brownie's Bakery (figure 23). A concrete pad was installed in the south addition for a bakery oven. Two bathrooms were installed, one underneath the stairwell and the other above in the second story of the west addition. The two-story west addition was turned entirely into living quarters, and over the south addition a second story was added for living quarters (Blee et al. 1984:371).

In 1962, the Brauns purchased the south half of Lot 1 from Robert Behnke and Sally Skinner. The Brauns now owned all of Lots 1 and 2 of Block 27 (State of Alaska Deed and Lot Locator Records, Skagway,

Alaska 1915). Mr. Braun's health started to fail in 1973. The bakery was rented out to Reno Zack and Elsie Ketchum, who continued the business. At this time murals of the gold rush era were painted on the interior of the north and west walls (Blee et al. 1984:371).

In August 1974, the Brauns sold Lots 1 and 2 and a mobile home to Jack and Marjorie Brown (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1977). The Browns reopened the bakery after remodeling was complete. In the south addition a false ceiling and a counter were installed, dividing the space into a west baking area and an east serving area. A door providing access into the south addition was cut into the eastern end of the dividing wall (Blee et al. 1984:371). The cafe in the Pantheon portion of the building was remodeled with the addition of a drop ceiling. Holes were cut in the old tongue and groove planks on the ceiling to allow the shiplap siding to drop down. The shiplap siding was used to support the 2-inch x 4-inch framework of the new ceiling (figure 6). The cafe remained open two years and at that point the cafe and bakery were removed and the "Other Red Onion Curio Shop" was opened in its place (Blee et al. 1984:372) (figure 24).

On July 19, 1977, Lots 1 and 2 were sold to Marie Allen Kallstrom (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1977). Six days later on July 25, the property was sold to the National Park Service (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1977). In the south addition, the Park Service removed the bakery oven and false ceiling. Double doors were installed in the south wall of the south addition, and the roof was patched and/or repaired as necessary.

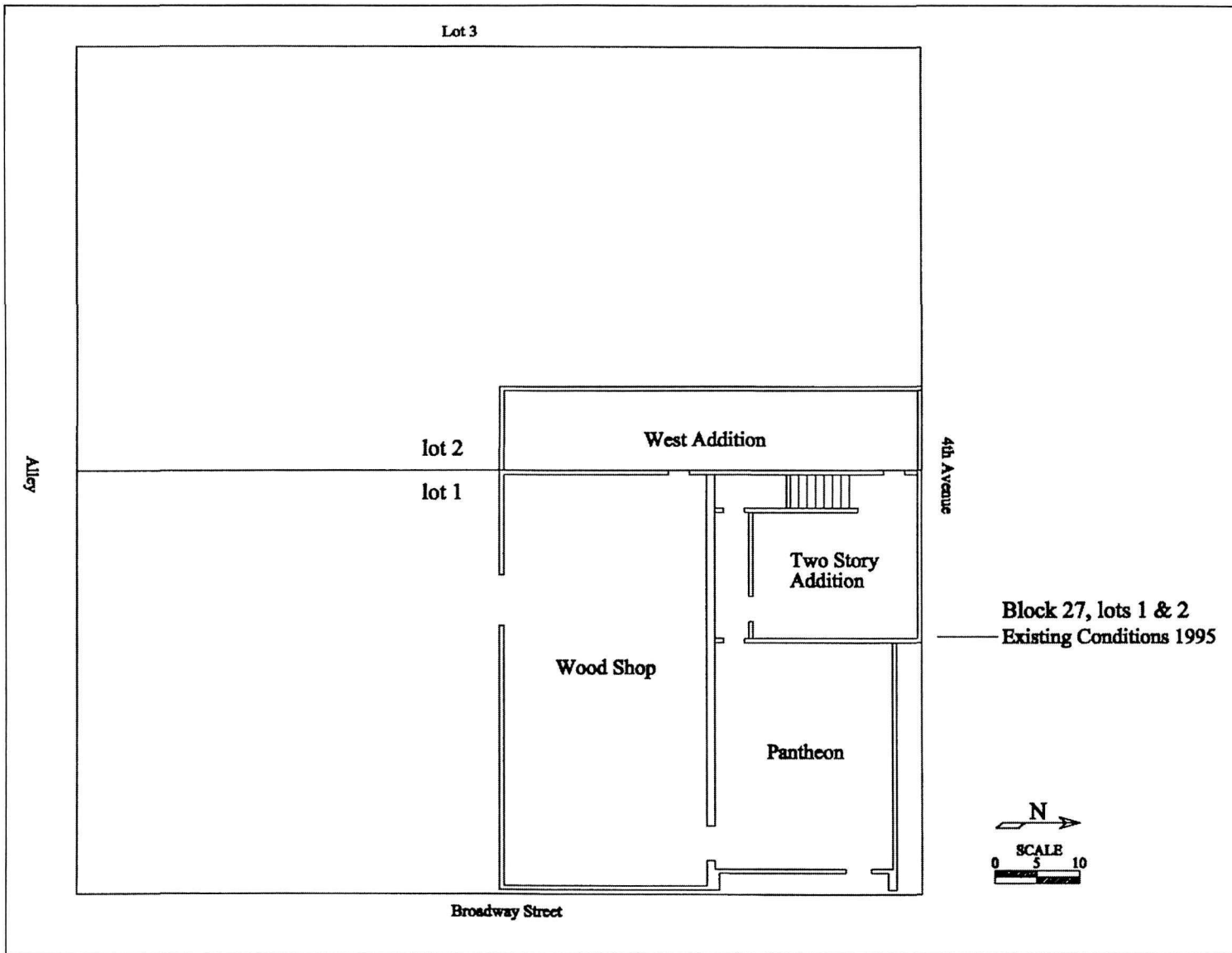


Figure 21: Existing 1995 Building Configuration (Drawn by T. Kardatzke)

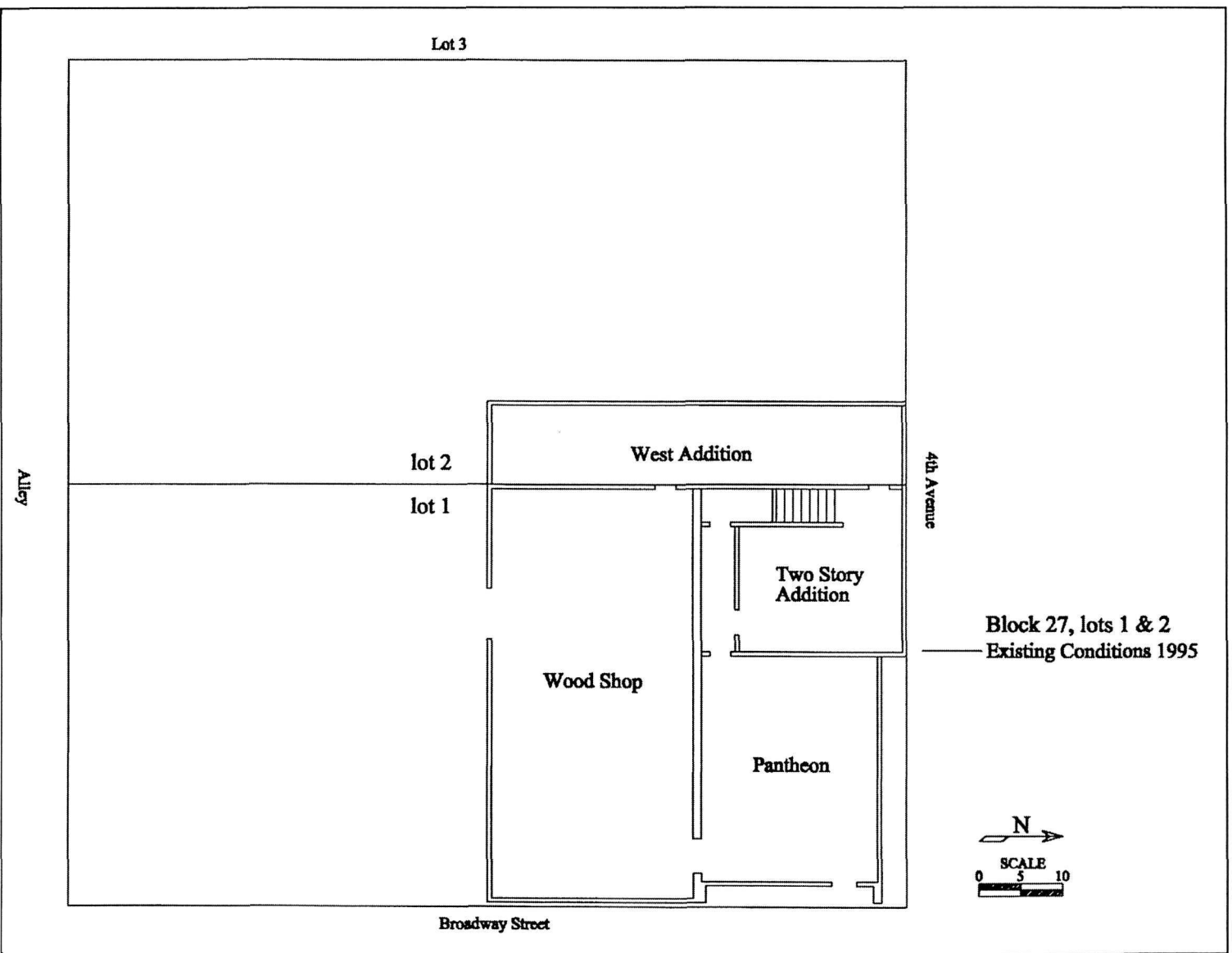


Figure 22: 1948 Sanborn Insurance Map (on file at KLGO)



Figure 23: East View of Brownie's Bakery. (KLGO B1-168/6129) National Park Service

Lot 1: South half, 1897-1911

Pacific Trading Company

Photographs taken during the winter 1897/1898 show two completed buildings on the south end of Lot 1 (figure 25). The most southern building for Lot 1 abutted the public alleyway and measured roughly 25-30 feet on that side. On the east, it faced Broadway and was 12 feet wide. The building was an A-frame construction with a false front on the east side and was two stories tall. On the upper floor was the Pacific Trading Company, and on the bottom floor was a real estate agent. The sign for the Pacific Trading Co. was at the top of the false front and projecting over the boardwalk. The real estate sign also projected over the boardwalk but was located just over the first story windows. Another sign hung just below the real estate sign and advertised

“LUMBER – SHINGLES.” There were three words below this, but they were illegible on the photograph (figure 25).

Rainier Hotel and Restaurant

The adjacent Rainier Hotel filled the entire 50-foot width (east-west) of the lot. It was 25 feet wide and was placed in the center of the south half of Lot 1 (figure 12). The building was a full two stories with a peaked roof. The eastern side was covered with a false front. Figure 9 shows the Rainier Hotel under construction, and figure 25 shows the completed building. Soon after its completion, a restaurant was opened in the bottom floor. There was a large pile of crates and barrels located approximately where the Fasel building would stand. By the fall of 1898 the real estate agent was replaced by the Skagway Light & Power Company (figures 15 and 26).



Figure 24: Pantheon Building in 1977. (KLGO B1-33/1816) National Park Service. (Photo by Richard Frear)

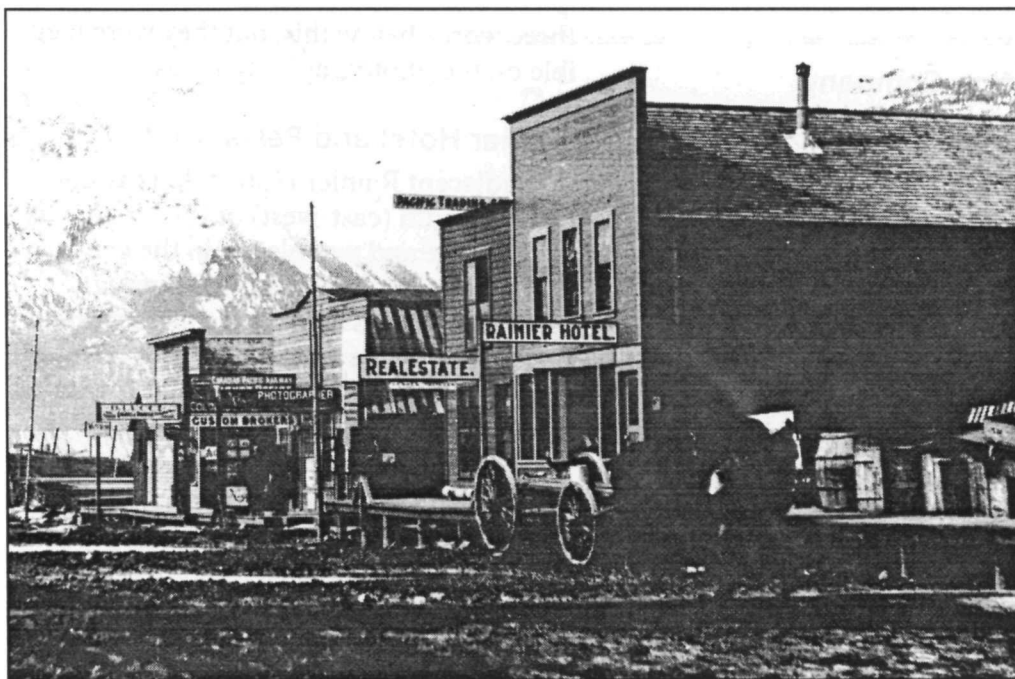


Figure 25: Skagway Late 1897, Rainier Building. (KLGO B1-157/5882) United States Geological Survey, Photograph Library, A.H. Brooks Collection, #20

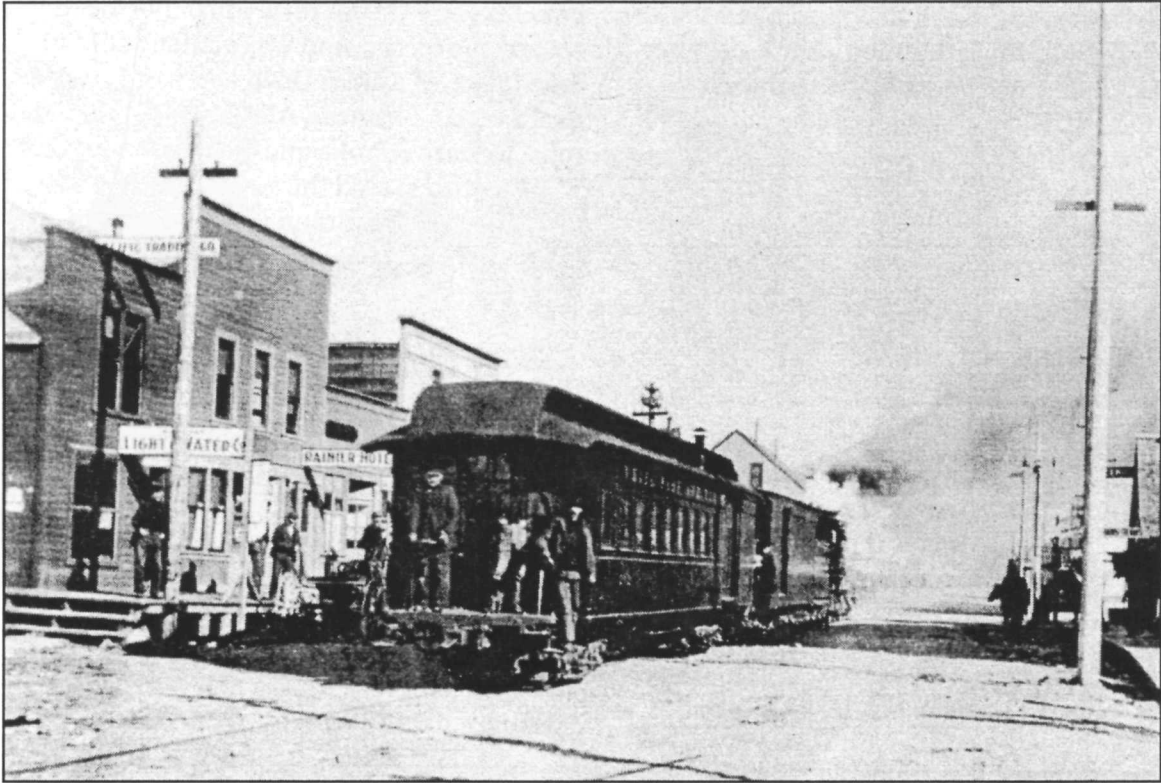


Figure 26: Skagway, October 3, 1898. (KLGO B1-15/270) Special Collections, University of Washington Libraries

Dr. Bloch, Dentist

Completing the row of buildings facing Broadway, around July 1898, was a small one-story building erected between the Fassel and Rainier Hotel buildings. According to the business directory, a Seattle dentist, Constantine Bloch, was one of the first occupants of the building (Clinton 1899: 133). Since tax records are not available for this early time period, it was assumed that all the businesses were leasing the property from Dr. Pohl. After tax information began to be recorded, the Pacific Trading Company is listed as the taxpayer for three years from 1900 to 1902.

In 1899, Dr. Bloch left his building, which was replaced, by a tailor shop (figure 27). That same year the Pacific Trading Company either moved or changed its name

to the Pacific Coast Steamship Company. Skagway Light and Power Company also was gone in 1899 (figures 28 and 29). By 1904 or 1905 the south building no longer had signs for businesses on the outside. In 1904 or 1905, the Y.M.C.A. camera club replaced the tailor shop (figure 15). The Rainier hotel was still in business at that time. The 1914 Sanborn Insurance map shows several changes. First, the Y.M.C.A. camera club had been replaced by a barbershop. In addition, question marks appear on top of the Rainier Building. Last, an extra building appears behind the south end building (figure 17).

Sometime in the 1940s, all three buildings on the south half of Lot 1 were converted to residences (figure 30). A hair salon was in the bottom floor of the Rainier Building

during the 1950s. All the buildings fell into disrepair in the late 50s or early 60s. They were demolished sometime in the early 1960s. This most likely occurred around 1963 when tax records show the improvement value for the lot as \$0 (table B-1). The deed for the land had been transferred the year before, which consolidated all of Lots 1 and 2 with one person (table A-1).

The tax records do show long periods of stability for who was listed as taxpayer. Either E.D. Wheelwright or the Dortero family was listed from 1904 to 1936. A deed transaction was not recorded for the south half of Lot 1 until 1937. In 1937 the land changed hands twice from Dortero to William Flynn and then from Flynn to A.L. Powell. Powell paid taxes on the land until his death in 1952. The land was then sold to S & B Joint Ventures. S&B Joint Ventures

paid taxes on the lot until 1963. The deed record shows the land was actually sold in 1962 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1915). Also in 1962, Robert Behnke and Sally Skinner (of S&B ventures) sold the south half of Lot 1 to Mr. and Mrs. Braun (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1915).

Lot 2

Hotel Seattle

There is a paucity of information about this lot and what is available is confusing. Lance Burton located the lot on August 10, 1897 (State of Alaska Deed and Lot Locator Records, Skagway, Alaska 1897). Historic photographs show buildings on this lot at



Figure 27: Winter of 1899 or 1900. (KLGO B1-21/240) Special Collections, University of Washington Libraries

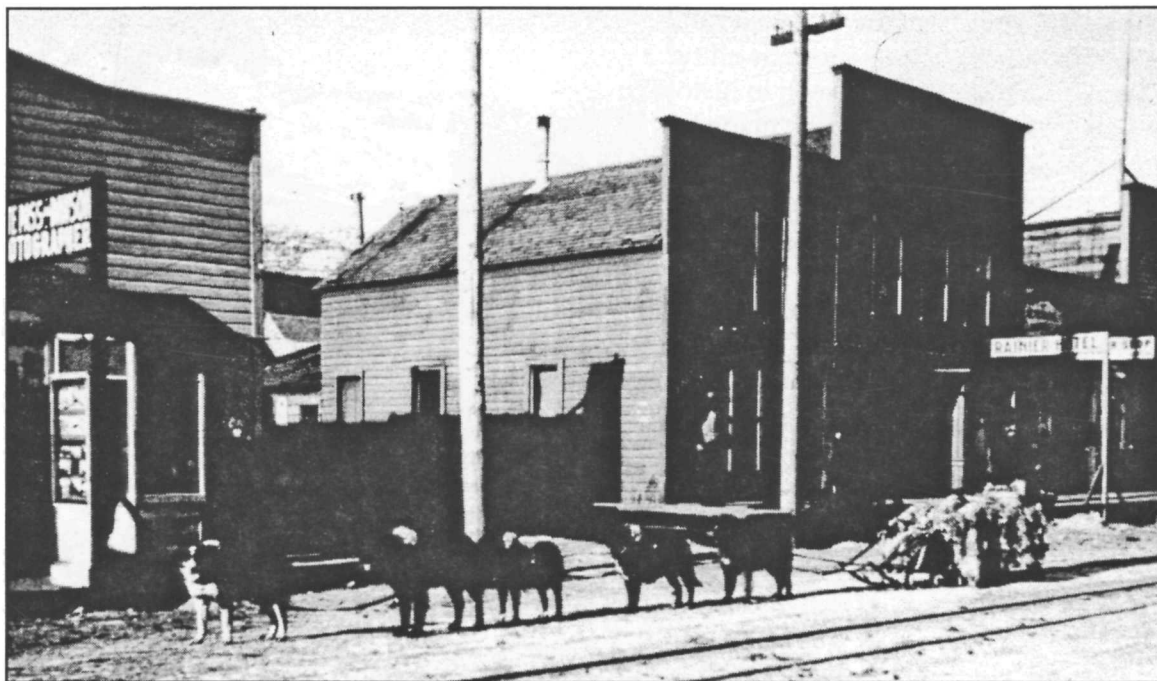


Figure 28: Skagway Street Scene, South Half of Lot 1. (KLGO B1-6/228) University of California, Berkeley, Bancroft Library, Accession #1905.17109: 1953

the same time as the Hotel Rosalie (figure 8). The buildings fronted Fourth Avenue, then called Bond Avenue. One of these buildings housed the Hotel Seattle, which was first mentioned in the *Skaguay News* newspaper. J.D. Gass is listed as the proprietor (*Skaguay News* 5 November 1897 1:5).

G.F. Keinstra signed a deed transfer on March 15, 1898, whereby all of Lot 2 went to G.A. Upper for \$2,500. For some unknown reason, G.A. Upper is never again involved in the deed history for Lot 2. During the period of March 22-23, 1898, four deed transfers were signed. Jas. D. Gass transferred the hotel and land in separate transactions to Nina Dupras. The sale prices were \$750.00 and \$800.00, respectively. Both transfers were recorded on the March 24. Two more transfers were signed on March 22. Nina Dupras sold the land and hotel back to Jas. D. Gass for the same

price; however, these transfers were not recorded until June 24, 1898. Confusing the chain of title, a deed transfer was signed on June 7, 1898, involving Lance Burden, quitclaiming the deed for \$1.00 to Jas. D. Gass. This transfer was also recorded on June 24. "Lance Burden" could have been a misspelling of "Lance Burton," the original lot owner. It is unclear how Jas. D. Gass received two deeds for the same plot of land. On June 18, Jas. D. Gass sold Lot 2 to Charles Moody for \$1,200.00. This transfer was also recorded on June 24 (table A-1).

Katherine Moyer came into possession of Lot 2 in 1904. Tax records show that the improvement value of the land remained steady. Information was not located concerning the building use on Lot 2 from 1904 until 1911. In 1911 the lot was transferred to J.F. Anderson, along with the Red Front Building and property. The 1914 Sanborn

CHAPTER 2: Site History

Insurance map of Skagway shows a storage shed and a small one-room dwelling on Lot 2 that had not been seen in historic photographs. According to the map, the Pantheon Saloon used the old Hotel Seattle as its liquor storage (figure 17). The tax assessment remained the same until 1920, when the land value was nearly doubled and the improvement value was reduced by almost half (table B-1). The tax assessment was constant through 1936, when the improvements were listed as \$0. From this time forward, the land values fluctuated; however, the improvement value never changed from \$0. In 1978, the park moved a singlewide trailer onto Lot 2 for seasonal employee housing and removed the trailer in late 1980 (Norris 1996:187,254).

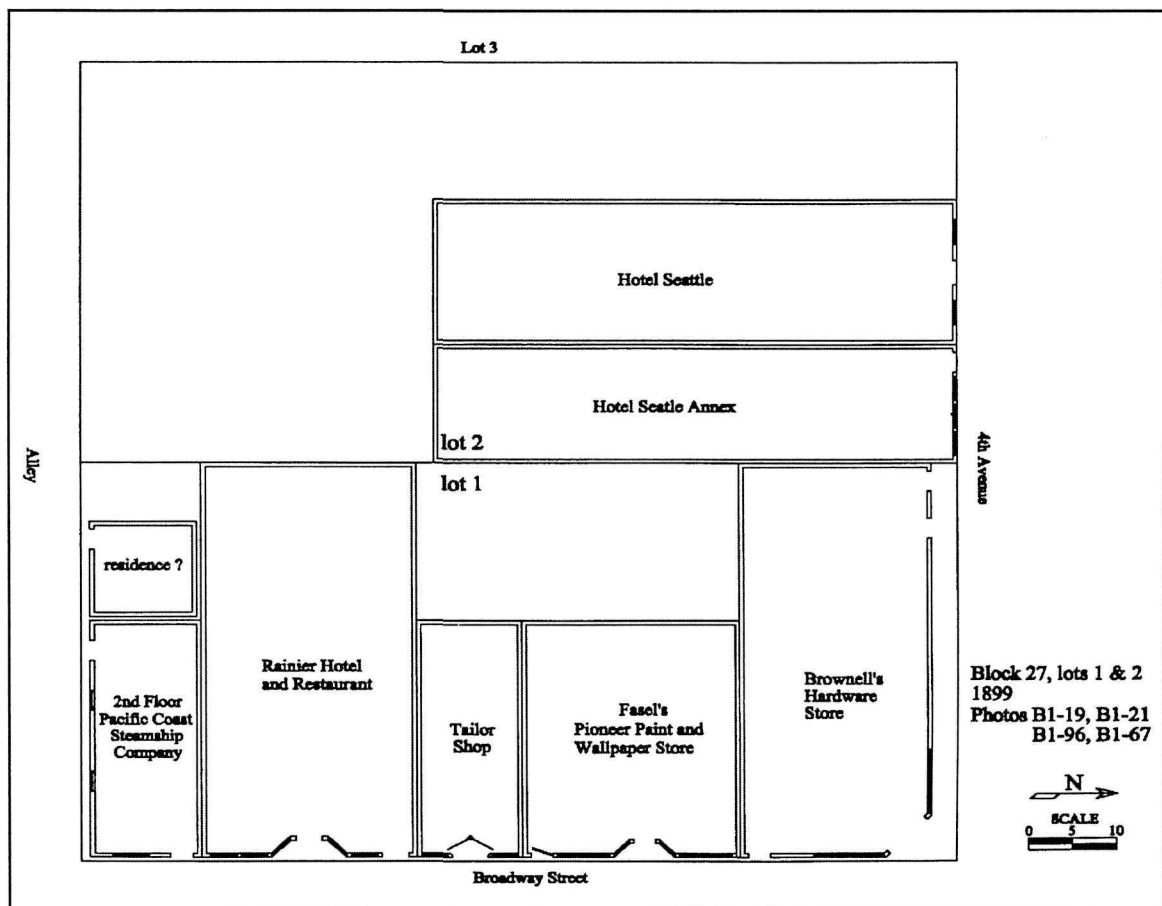


Figure 29: Building Configuration in 1899 (Drawn by T. Kardatzke)

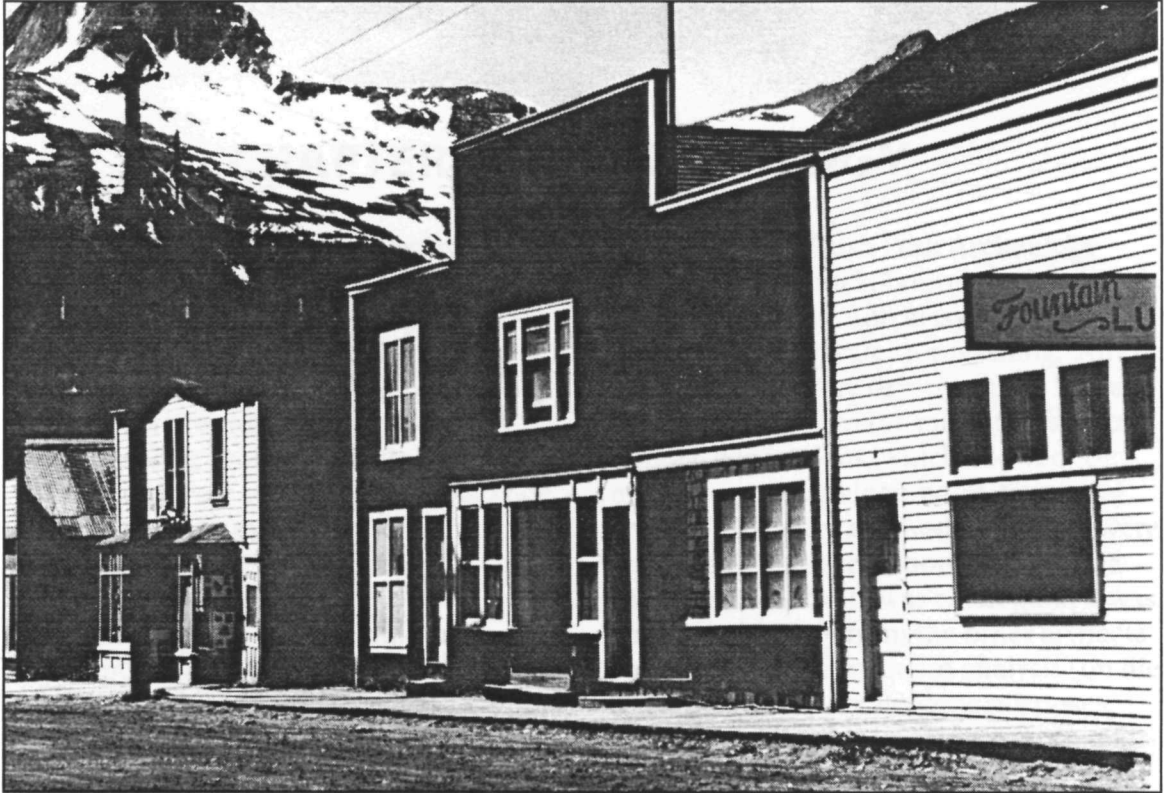


Figure 30: South Half of Lot 1, June 24, 1953. (KLGO B1-169/6130) Anchorage Museum of History and Art, McCutcheon Collection 18829-A

CHAPTER 3: METHODOLOGY

All archeological testing and excavation conformed to procedures established in the KLGO Field Manual (Cooper 1995). Excavation units were completed with trowels and sometimes shovels or picks. Small hand brooms were at times used in loose soil or around delicate objects. When large areas were cleared, a backhoe was used to remove a large portion of the overburden.

Excavation was by stratigraphic layer where possible. Any stratigraphic layer thicker than half a foot was excavated in arbitrary levels of .3 foot. Arbitrary levels thicker than .3 foot were usually excavated during the demolition phase of restoration, which required expediency. In order to remain consistent with other excavations in Skagway, measurements were recorded in feet and tenths of a foot.

Artifacts were recovered using a dry screen with ¼-inch hardware cloth mesh. All cultural materials or byproducts were collected, including visible faunal and floral remains. When large quantities of artifacts were present, such as thousands of fragments of coal, charcoal, brick, wood, eggshell, sheet metal fragments, or ceramic spalls, only a one-liter sample was saved. In the case of ceramics or bottle glass, an effort was made to recover as many diagnostic fragments as possible. The artifacts were bagged in the field and separated by material type.

All artifacts recovered were processed and cataloged in accordance with the

Klondike Gold Rush Park Archeology Laboratory Manual (Cooper and Sanders 1995). All ceramic and glass artifacts were immersed in tap water for washing. All other artifacts were dry-brushed. Extra care was taken with the metal artifacts to remove concretions, which allowed for more accurate cataloguing. A few metal artifacts that were deemed important were sent away for conservation and stabilization. Once the bone was catalogued it was bagged separately from the other artifacts and sent away for in-depth analysis (on file at the park). For cataloguing purposes, the artifacts were separated first into their material categories and then by function. Diagnostic elements such as bases, rims, or seams were noted for determining the minimum number of individual (MNI) artifacts.

Two to three liter soil samples were taken from excavation units for flotation. No samples were taken from auger tests, only from excavation units. The soils were then floated in a modified 55-gallon drum. The light fraction was captured using cheesecloth, while the heavy fraction was retained with 1-mm mesh near the bottom of the barrel. The light and heavy fractions were then air dried and sorted by size, using stacked mesh screens of differing size. Because of time constraints, analysis was not performed on these samples. Half-liter bags and 2-oz - 3-oz vials of soil were retained from the larger soil sample for specialized chemical or microscopic plant analysis. When a night soil or visible seed deposit was located, a one-half liter soil

sample was taken and retained (not processed) for later analysis by outside macrofloral experts. These samples were important for the recovery of seeds or pollen that remained in the night soil deposits and were taken when deemed necessary by the crew chief or project archeologist.

Once an excavation unit was completed, detailed soil profiles were drawn for each wall. Soil types and Munsell colors were recorded for each excavated layer or level. Plan maps were drawn at the base of excavated layers or levels to show artifact accumulations or features. Plan maps were not drawn at each level, only during the excavation of a feature or other anomalies. Photographs also recorded the excavation unit profiles and plan views. The photographs were taken with a 35mm camera, using color slide and black and white film. Flash and extra lighting were used when the daylight was inadequate for photographs.

The southwest property marker was the primary datum for the site. All exterior elevations were recorded from the primary datum. Since absolute mean sea level elevations were not known, an arbitrary 20-foot elevation was used for the southwest property marker. The property marker was chosen because it was the best fixed point for viewing all the vacant areas around the Pantheon Saloon Complex. The datum for the building interiors was established off the main datum with the transit positioned, in line of sight to the property marker, inside the buildings. All elevations were taken with a standard transit and stadia rod. The stadia rod was calibrated for engineer's scale, in tenths of a foot.

A grid composed of five-foot squares was laid out over Lots 1 and 2. The purpose of the grid system was for locating the posi-

tions of the auger test holes. The grid was 100 feet on a side and was aligned with the lot lines. For labeling the squares, the Cartesian coordinate system was used. Each square was labeled by its northwest corner with the 0,0 point defined by the southeast property marker. All auger holes and excavation units then could be located by a north and west coordinate.

The grid created a sample size of 400 squares each measuring five feet square. A total of 51 squares were selected for auger hole tests. The methods used for selecting auger tests were random, where documentation or photographs were lacking, and purposeful when historic records indicated an early structure might have existed. It was felt that these two methods used the known record and gave leeway where no historic record existed. In order to mark the position of each auger hole, we used a Brunton compass and two 100-foot tape measures. One tape was used to mark the lot line next to the alley, and the second was placed perpendicularly to the first with the aid of the compass. The auger holes were marked in the center of each designated grid square. The preliminary auger test was only conducted in the vacant areas of Lots 1 and 2. No excavated material was retained from those test holes. The information recorded included the depth of the hole, number and type of artifacts, dates of artifacts when possible, soil types, and other disturbances. The purpose of the auger test holes was to help determine where the excavation units would be placed.

In most instances, excavated units were smaller than the five-foot square grids. The smaller units were faster to excavate, which was important when trying to test a large area. In some cases it was necessary to expand excavations in order to determine

the extent of features. In addition, with the assistance of a backhoe, it was easier to investigate a larger area without sacrificing large blocks of time.

CHAPTER 4: STRATIGRAPHY

Information on the geological setting, the glacial history, the floral and the fauna of Skagway has been reported in previous publications and will not be duplicated here (Rhodes 1988; Blee 1983, 1988; Yehle and Lemke 1972). Lots 1 and 2 of Block 27 were located almost directly in the middle of the valley on the east/west axis and in the southern third of the valley on the north/south axis (figure 1). Most of the sediments are made of alluvial deposits from the Skagway River. The sediments consist of coarse sand, gravel, pebbles, and cobbles. The cobbles and pebbles are rounded and usually unsorted. Historically the lots were within tens of feet of the extreme high tide mark. Perhaps even before the gold rush the lots were occasionally submerged by the high tides. During excavations the water table was below our deepest unit, which was six feet below grade.

The soil descriptions and table that follows discuss the natural and human-influenced soil deposition. They, however, do not include any features found in the soils. The features were excluded because they had a different depositional history from the natural soil layers.

Layer A

Table 1 shows five stratigraphic layers were present to varying extents across the site. Layer A was a thick fill that was built up over time by National Park Service (NPS) restoration crews starting in 1978 (John Warder, personnel communication 1995). This was initially done to build up the

parking lot, which was prone to flooding. The fill came from other restoration sites in Skagway, such as the Depot and the Lynch & Kennedy. This layer fully covered the southern half of Lot 1 and a portion of Lot 2. Where the fill layer was encountered, the soil and artifacts were usually discarded. In one unit the artifacts were retained, because there was not a clear interface between Layer A and the next stratigraphic layer down. The deposition of this layer post-dates 1978; and even though older artifacts were found, their data potential was very low, owing to the mixed context (table 1).

Layer A'

This designates the soil found under the Pantheon Saloon Complex. These soils were very dry and silty. This soil was not related to the previous Layer A, but was the topmost layer found under the Pantheon. In some places it was characterized as a very thick dust accumulation.

Layer B

Layer B was composed of mixed sand with pebbles and cobbles. The transitional interface between this layer and A was sometimes difficult to discern, especially in the parking lot area by the alley. The soil color ranged from a dark, grayish brown to very pale brown. This layer was also found under the Pantheon. Artifacts contained in this layer were mixed in age, although because of the known start for the layer A fill, this layer pre-dates 1978 (table 1).

Layer C

This layer was found in the southeast corner of Lot 1 and the far southwest corner of Lot 2. It was described as the last grassy topsoil layer that existed before 1978; however, it contained artifacts from different periods. The soil was a dark loamy organic layer with tree and grass roots. The soil color ranged from black to very dark gray. The layer also pre-dates 1978, but no terminus-post-quem (TPQ) date could be determined (table 1).

Layer D

The soil for this layer was generally described as very fine loamy sand with some silt and organic material mixed into it. The color was brown to light olive brown. This layer also pre-dates 1978 and could represent sand left behind from very high tides before and during the gold rush. The area was still inundated periodically throughout the gold rush era. The layer did contain artifacts, but was possibly the soil encountered by the stampedeers.

Layer G

This layer was used for designating glacial outwash sediments. It always defined the base of excavations. The soil was described as coarse to very coarse sand, not sorted, and with large cobbles. No artifacts were recovered in this layer.

Table I. General Stratigraphic Layers

Soil Description	Stratigraphic Layer	Munsell	Units	Associated Dates
Coarse-very coarse sand w/pebbles and cobbles, unsorted	A	2.5Y5/1-5/3 gray/ grayish-brown/lt. olive brown	3N50W-L.1,4N59W-L.1-2, 6N35W-L.1-2, 6N39W-L.1, 10N35W-L.1-2, 10N39W-L.1, 13N92W-L.1-3, 14N39W-L.1-2, 22N35W-L.1-3,30N39W-L.1, 34N35W-L.1-2, 34N39W-L.1, 46N33.5W-L.1,47N31W-L.1-2	Recent fill
Very dry silt	A ¹	2.5Y 5/2 grayish brown	80N31W-L.1, 80N29W-L.1, 80N27W-L.1, 80N25W-L.1, 78N31W-L.1, 78N29W-L.1, 78N27W-L.1, 78N25W-L.1	Pre-1978
Mixed sands w/ pebbles and cobbles	B	2.5Y4/2 dark grayish brown; 10YR6/2 lt. brownish gray; 10YR7/3 very pale brown; 2.5Y2.5/1 black	3N50W-L.2-4;6N35W-L.3;10N35W-L.3-5;13N92W-L.3-5,7-8,10-12; 14N39W-L.3-6; 22N35W-L.3-4; 34N35W-L.2-4, 46N33.5W-L.2; 47N31W-L.5-7; 68N55W-L.1; 79N32W-L.1-2; 79N34W-L.1; 79N37W-L.1-3; 80N36W-L.1; 82N38W-L.1-4;	Pre-1978
Dark loam, organic layer, roots and root-lets, old surface	C	7.5YR2.5/1 black; 2.5Y4/2 very dark gray	13N92W-L.1-2; 30N39W-L.2-3; 46N33.5W-L.3; 47N31W-L.4	Pre-1978
Very fine-coarse, loamy sand, w/ organics	D	7.5YR3/4 dark brown; 2.5Y6/3 lt. yellowish brown; 2.5Y5/3 lt. olive brown	13N92W-L.6; 30N39W-L.4-5; 47N31W-L.3; 68N55W-L.2-4; 79N37W-L.4-10	Pre-1978
Coarse-very coarse sand w/large cobbles, unsorted	G	2.5Y4/3-5/2-5/3-6/2; 10YR3/2-5/2-5/3-6/4-7/2	all units	Pre-1897

CHAPTER 4: Stratigraphy

CHAPTER 5: EXCAVATION SUMMARY

Excavations at the Pantheon Saloon Complex (PSC) began in 1987. During that summer the Pantheon was one of several buildings undergoing archeological investigations and only received a cursory exploration. It was not until 1995 that large scale testing and excavation began. The excavations continued in 1996 and were completed in 1997 as restoration was started.

The archeologists in 1987 did not assign feature numbers to the excavations. In 1995 the project archeologist and crew chief decided to not go back and assign feature numbers to the 1987 excavations. After careful reading of the 1987 field notes and review of the artifacts, it was decided to designate the units from the south side to the Wood Shop and the units from the west to the Pantheon. The excavations of the units are discussed below. In table 2, the features recovered from 1995 through 1997 are described and information is provided for provenience; soil coloring; soil description, related building, and possible function; and dating. The features are discussed in depth in the text below.

Rather than discuss the investigations by year, the excavations are grouped together according to the building or area where they occurred. The Pantheon Building will be discussed first, followed by the Fasel/Red Front Building, and finally the Rainier Complex.

Hotel Rosalie/Clayson/Brownell/Pantheon

1987

In 1987, Ray DePuydt from the Alaska Regional Office conducted excavations at numerous sites in Skagway. Three (3) units were excavated on the west side of the shed (Units 4, 4a, 5). The shed building was 10 feet wide by 60 feet long. Unit 4 was placed near a depression in the ground adjacent to the shed. The unit was 10 feet south of the boardwalk on 4th Avenue (figure 31). Unit 4 measured 5 feet east-west and 2.5 feet north-south. Unit 4a was the same size as Unit 4 and was placed adjacent to the north. The unit was established to explore the extent of a privy found in Unit 4. Another Unit, 5, was placed to the north of 4a. The unit was also used to explore a suspicious privy-like depression.

Unit 4 - Pantheon

The surface layer was stratigraphically excavated to remove the topsoil, no more than 0.28 foot below the surface. The first excavated level went down to 0.59 foot. Five different colored soil layers were identified at the base of the level. The layers were numbered and identified from west to east. The first layer was very dark, greasy, silty sand. The second layer was light brown, very fine, loamy sand. The third layer was a dark brown silty loam. The fourth layer was gray, fine sand. The fifth layer was a disturbed brown silty loam area with a telephone wire-grounding rod. Few artifacts were recovered from this level.

Table 2: Feature Descriptions

Feature	Unit & level	Munsell	Description/Related Building	Dates
1	3N50W-L.1-7	10YR2/2 very dark brown	Fine sand, sandy silt loam, dump deposit, very high artifact concentration / Rainier ?	Pre-1940
2	3N50W-L.1-2	7.5Y2.5/3 very dark brown	Privy, excrement soil deposit, few artifacts, high concentration of seeds, non-structural / Rainier	Pre-1920
3	93N57W-L.1	B-7.5YR5/6 strong brown	Pea gravel cesspool, wood lined, well sorted very coarse sand, pipe running into box / Pantheon	Ca. 1930
4	not used	-----	-----	-----
5	4N59W-L.1-8	7.5YR5/2 brown	Dump deposit, very high artifact concen., mostly bones, sandy silt w/some clay loamy, med.-fine grain size / Rainier	Pre-1940
6	46N33.5W-L.1-2; 47N31W	2.5Y3/2 very dark grayish brown	Cobbles-boulders, 7 ft x 7 ft wood lined cesspool, no soil, hard-packed soil outside feature / Rainier	Post-1940
7	46N33.5W-L.1-2	2.5Y5/2 grayish brown	Non-structural soil feature, shallow trench paralleling feat. 6, med. sand poorly sorted loam/Rainier	Unknown
8	67N24W		Structural feature no associated soils, 4"x4" posts / Fasel	1898
9	63N27W		Builder's trench for water/sewer pipe / Wood Shop	Unknown
10	68N55W-L.1-3	E-2.5Y4/2 dark grayish brown, F&D-5/2 grayish brown, C-6/2 lt. brownish gray	Poorly sorted, pebbles and cobbles, cesspool, gray water box, structural soil feat / Wood Shop	Unknown
11	22N35W-L.4-5	2.5Y7/1 light gray	Metal pipe, trench, soil feature, pebbles and cobbles, coarse-medium sand / Rainier	Unknown
12	14N39W-L.1-3	D-2.5Y6/2 light brownish gray	Structural gray water box, very coarse-fine sand, roots, poorly sorted / Rainier	Unknown
13	34N39W-L.1-2; 34N35W-L.1-2	D-7.5YR4/1 dark gray; G-7.5YR3/3 dark brown	Non-structural soil feat., med.-fine grain size with pebbles and cobbles / Rainier	Post-1940
14	10N35W-L.1-5	K-10YR3/2 very dark grayish brown; G-10YR5/4 yellowish brown	Wood-lining, associated w/feats. 11 and 16, fill w/pebbles and cobbles, poorly sorted / Rainier	Gold rush

Table 2 (cont.)

Feature	Unit & level	Munsell	Description/Related Building	Dates
15	6N35W-L.4-5	E-7.5YR4/3 brown	Continuation of feature 14, divided by feature 11 / Rainier	Gold rush
16	6N35W-L.3-6	C-10YR3/2 very dark grayish brown	Installation trench for feature 12 / Rainier	Unknown
17	6N39W L.1-2 10N39W L.1-2	B-10YR2/2 very dark brown; F-10YR6/4 light yellow brown	Fill pit on top of feature 12 / Rainier	post 1950s
18	19N34W	Exposed in backhoe, not excavated	Wooden box w/pipe connectors / Rainier	Same as feat. 11
19	75-76N 30-36W	2.5Y4/2 dark grayish brown, not excavated	Trash dump, mostly whole beer bottles / Pantheon	1940s
20	56N29W L.1-6	A/B (7.5YR2/1 dark brown, 7.5YR4/2 brown, 10YR3/1 v dark gray, 10YR5/3 brown)	Wood cribbing, foundation piers / Wood Shop, possible Fasel	Unknown
21	74.6-77.8N 33.2-35.9W L.1-11	A-5Y2.5/1 black, B-2.5Y6/2 light brownish gray, C-10YR3/1 very dark gray, D-5YR2.5/2 dk reddish brown, E-2.5Y3/2 very dk grayish brown, F-7.5YR3/3 dk brown	Structural wood and artifact concentration privy w/excrement soil, CRM marker at base of feature / Pantheon, possible Brownell	Pre-1920
22	79N37W L.1-2	K-10YR2/2 very dark brown	High artifact concentration very loose ashy soil / Pantheon	Pre-1920
23	82-100N, 38W; 81-82N, 30-38W (L-shaped)	B-2.5Y4/2 weak red	Water pipe with trench and wood cribbing / Pantheon	@1905-1916
24	80-82N, 32-36W L.2-3	C-10YR3/1 very dark gray, K-5YR2.5/2 dark reddish brown, L-lime chunks	Structural wood and artifact concentration privy / Pantheon	1904-1909
25	85-95N, 40-45W		Dispersed artifacts west of feat. 23 / Pantheon	@1897-1940
26	90N46W	5YR2.5/2 dark reddish brown, 7.5YR4/4 brown	Artifact concen. 1000s of bottle caps and gambling paraphernalia, sampled CRM at base / Pantheon	1903-1945
27	71-74.5N, 46.5-48.5W	1-10YR2/1 black, 2-2.5Y6/2 light brownish gray, 3-7.5YR 6/8 reddish yellow	Wood lined trash midden 1000s of windowpane fragments, 2 small casks / Fasel	Gold rush

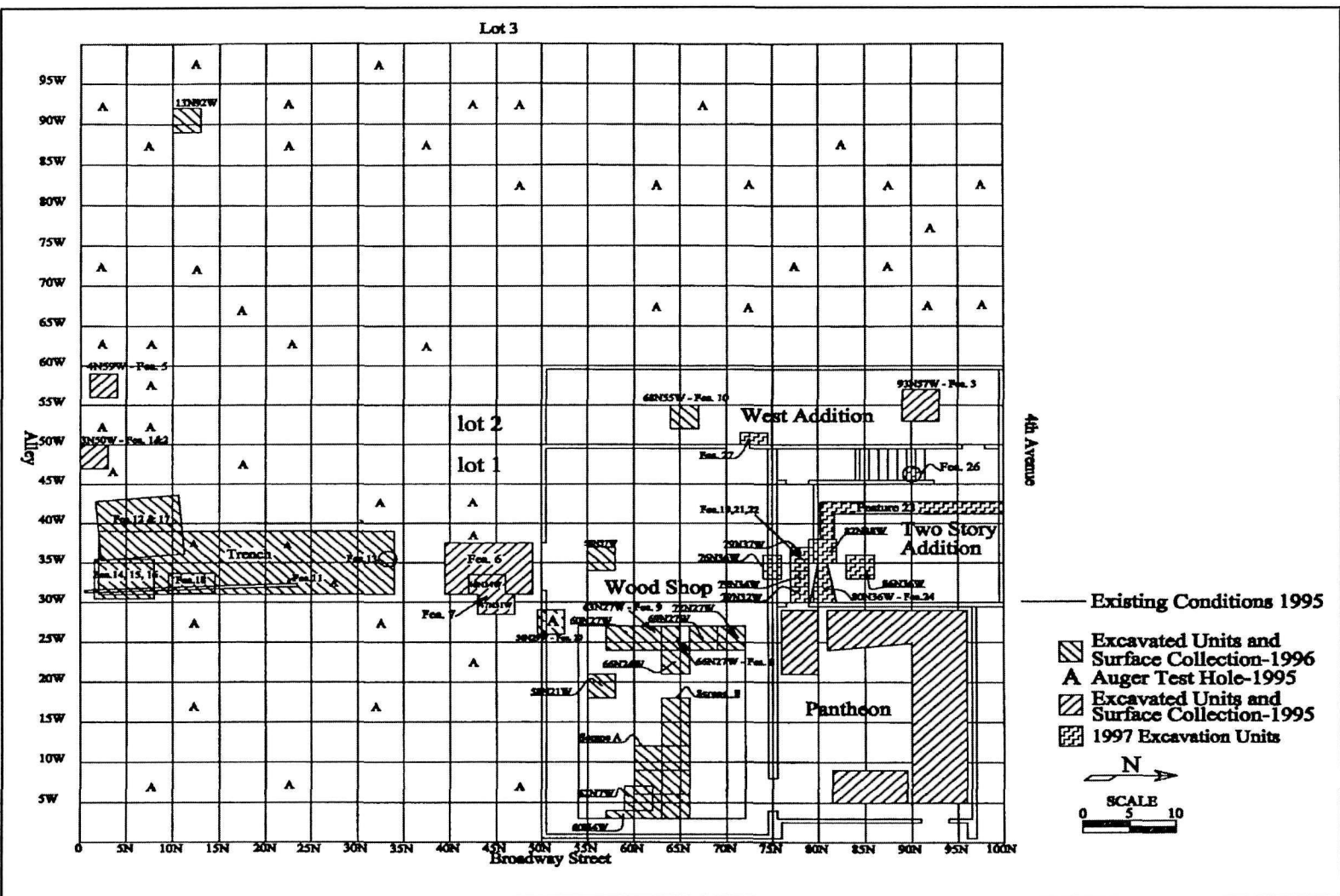


Figure 31: Pantheon Complex, Excavation Units Location Map (Drawn by T. Kardatzke)

The second level was excavated mostly on the east side of the unit. The soil layers became more homogenous with depth. The grounding rod disturbance was still present in the northeast.

In order for the unit to measure a uniform 1-foot below unit datum, only the west side was excavated in Level 3. The soil was characterized as dark, coarse, silty sand with cobbles and contained a large quantity of artifacts of recent age.

Level 4 was excavated to a depth of 1.5 feet below the unit datum. The soil color and type remained constant from the end of Level 3. A cast iron stove part and a rotting wooden board were found beneath a small patch of silty clay in the south wall. The soil layer continued in Level 5, although a darker more compact soil was found in the eastern portion of the unit. The silty clay lens on the south wall was removed to expose light-colored, coarse sand and decomposed rocks, characteristic of the river deposits. The soil disturbance from the grounding rod was totally removed at the base of the level.

In Level 6 the soil in the western portion of the unit was disturbed. The soil was described as very dark, coarse sand with cobbles and was loosely compacted. During excavations in the northeast corner, about 2-3 inches above the base of Level 6, a small hole developed in the floor of the unit. The hole was approximately 4-6 inches in diameter. Clearing the soil down to the base of Level 6 revealed a box outline composed of rotting wood. The lumber measured roughly 0.75 inch-1.0 inch wide. A large nail was found in a vertical post timber. Based on the available evidence at the time, the cribbed area was designated a privy. At the base of the level, in the western portion of the unit, lighter colored sand with fewer

cobbles was found. Most artifacts came out of the dark, coarse sand.

In Level 7 the light, sandy soil noted in the west covered at least half the unit. The privy was not excavated, only the 3 feet west of the privy was excavated. The artifacts recovered from the level had a wide range of dates based on the age of the bottle glass (circa 1880 to 1930). A 0.75-inch diameter metal water pipe was protruding from the north wall near the privy.

Level 8 was excavated to 3.5 feet below the unit datum. The soil near the west wall covering a ceramic sewer pipe (figure 32). The builder's trench was only 1-2 inches larger than the pipe itself. In the northeast corner of Level 8 another ceramic sewer pipe was found. This second pipe ran northwest to southeast. Since the privy was not excavated, it was unknown how much, if any, of the privy was disturbed by the installation of the pipes. The excavations were stopped to open another unit to the north and delineate the western edge of the privy.

Unit 4a - Pantheon

The main purpose of this unit was to expose the west wall of the privy found in Unit 4 (figure 31). The first level revealed much the same as its counterpart. In the second level, a widely spaced row of bricks was found in the north wall (figure 32). Excavation was stopped before the 0.5-foot thick level was completed. A dark, coarse sand cobble layer was encountered. The soils in the west half of the unit were thought to have been naturally deposited, based on the lack of artifacts and the undisturbed soil in the eastern half. The soil in the east half of the unit was light colored, fine sand that was removed down to the base of Level 2, which was one foot below the unit datum. The stratigraphy in the east

appeared to be sloping down to the west toward the privy.

Level 3 was excavated only in the west to bring the whole unit down to one foot below the datum. It was noted that a large quantity of artifacts was recovered from this level.

As a whole the artifacts were mixed in age. Level 4 was another 0.5-foot thick layer. Nothing was noted except the presence of a dark brown soil on the west and a light brown soil on the east. Both were loosely compacted with coarse sand and cobbles. Level 5 was noted as another cultural layer. In the northwest corner a concentration of cast iron stove parts were found. Also, decomposing wood was scattered throughout the level. In this unit, contact with the privy was established in Level 6. The notes state that the soil around the privy was undisturbed, dark, and organic. There was an apparent break in the soil just west of the privy that was associated with the sewer line that ran diagonally past the privy at a lower level.

In Level 7, a loosely compacted soil covered most of the unit except the privy. More of the stove was exposed in the level as well as wooden timbers and sheet metal in the northwest corner. A galvanized pipe protruded from the south wall of the unit toward the direction of the privy, but the notes indicate that the pipe stopped short of actually entering the privy.

Both sewer pipes were uncovered in Level 8. The pipe that ran diagonally through the unit missed the southwest edge of the privy by inches. The soil over the whole of the unit was disturbed with coarse sands and cobbles and was loosely compacted. The notes indicate for the first time that a strong odor was coming from the privy. Also one

of the ceramic pipes began to leak and required a patch before excavation could continue. None of the pipes encountered was active at the time. Artifacts were scarce in the soil layer.

The last two levels were excavated in the triangular area between the diagonal sewer pipe and the privy, in the northeast corner of the unit. The soil in the area was fine, dark, silty sand. Few artifacts were recovered from this area of the unit. Most of the wood cribbing thought to exist was no longer present. Portions of the privy began to collapse as the excavation continued. Level 9 was completed at four feet below the unit datum.

The coarse sand and cobble fill in Level 10 was sterile of cultural material. Dark organic soil directly in front of the privy did contain artifacts. A yellowish, clay-like soil was found near the privy with a burned layer underneath and a large quantity of nails. The field notes did not indicate that Level 10 was the last excavated level in Unit 4a. At that point none of the actual privy had been excavated. In 1995 efforts to relocate this privy were unsuccessful.

Unit 5 - Pantheon

This unit was placed on the north side of unit 4a. It extended another 2.5 feet north and was 3.2 feet east to west (figure 31). Figure 33 is a profile drawing for the east wall of this unit. It was hoped that this unit would fully expose the west wall of the privy. The unit was dominated by a slump in the soil, which sloped down, to the south and east. Three different soils were encountered in the first level. The topmost was a charcoal stained sandy soil with small fragments of artifacts. The next layer down was coarse loose sand with cobbles. The third layer, which was confined to the east

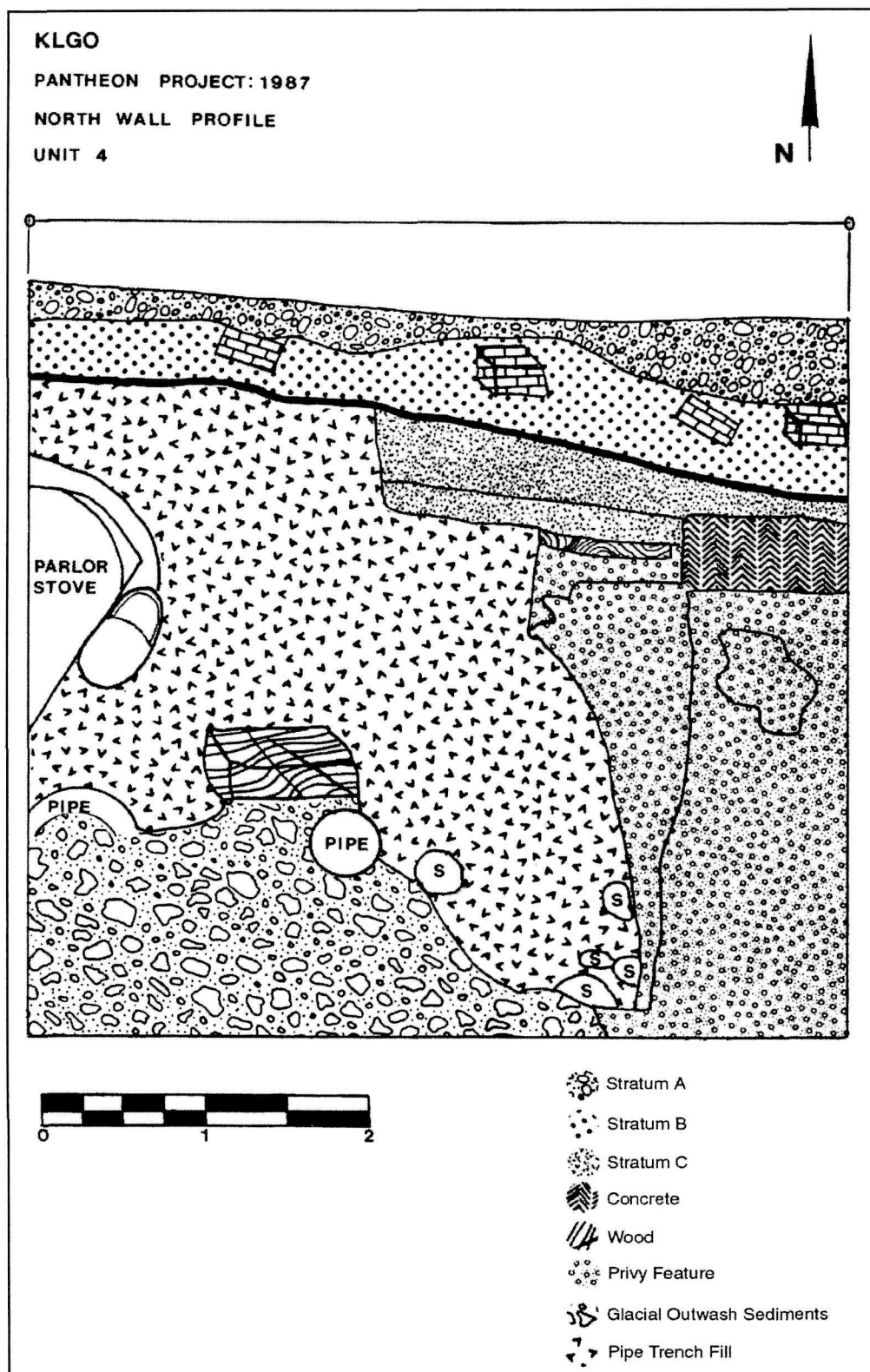


Figure 32: Unit 4, North Wall Profile

wall, was a slightly compacted, yellowish, mottled, fine sand and clay.

In Level 2, the charcoal-stained sand continued to yield modern artifacts, except for the mottled clay in the southeast corner. A lens of the yellow, compact clay was in the northwest corner at the base of the level. The soil provided clearly defined breaks, which allowed for the next level to be excavated stratigraphically.

In the next level, the soil layers continued to dip down to the southeast. Below disturbed soil in the southeast corner were two concrete slabs. The notes suggest that the slabs were used as footers for the west shed addition. The upper portions of the privy were found under compact clay in the southwest. The soil layers dipped below the concrete slabs in the southeast. Few artifacts were recovered.

In Level 4, the northwest corner of the west wall of the privy was found. It extended roughly one foot beyond the southeast corner of the unit. Vertical cribbing and nails were found at the corner. The majority of the level was excavated outside the privy and contained no artifacts. This was the last level of the unit. The field notes do not indicate if the privy was actually excavated.

1995

Feature 3 - Unit 93N57W - Pantheon

Once the northern half of the west shed was removed, a deep depression could be seen. A unit 3- feet square, later expanded to 4-feet square, was placed mostly in the depression and near the 1987 excavations (figure 31). The demolition debris from the top of the unit was cleared. Level 1 was fine-grain sand with pebbles. Wood was

found in the south wall and a pipe running north to south protruded into the unit from near the northeast corner. At the base of Level 1, a wood-lined square was exposed in the floor of the unit. The wood-lined square and its contents were labeled feature 3 with the hope that it was the beginning of the privy discovered in 1987.

A layer of pea gravel was at the top of feature 3. The gravel was very homogeneous throughout the two feet of material excavated from the wood-lined box. After the first few inches of excavation, it became apparent that the pea gravel was not the cap for a privy but fill from a cesspool. The wood lining was made up of vertical 1-inch x 12-inch planks about four feet long. On the east and south walls 2-inch x 4-inch cross members connected the planks and added strength since the naturally occurring soil on this side of the building was very loosely consolidated. Two pipes were exposed in the south wall, one was a 4-inch diameter concrete pipe found near the top of feature 3 and could have operated as an overflow pipe. The second pipe, also concrete, was three inches in diameter and found about 0.5 foot from the bottom of feature 3. The only artifact in the gravel was a plastic bag about 2.8 feet down on the line level. The gravel disappeared at 3.26 feet below the unit datum. Underneath the gravel was a dark, loamy, fine-grained soil. The unit was abandoned since the plastic bag near the bottom suggested a date from the late 1930s. For safety reasons the maintenance crew filled in the depression that was underneath the shed with soil from the Moore House.

No further attempts were made to locate the privy found in 1987. Since the construction plans did not specify further ground disturbing work for the area, mitigating any potential impact to the privy was not

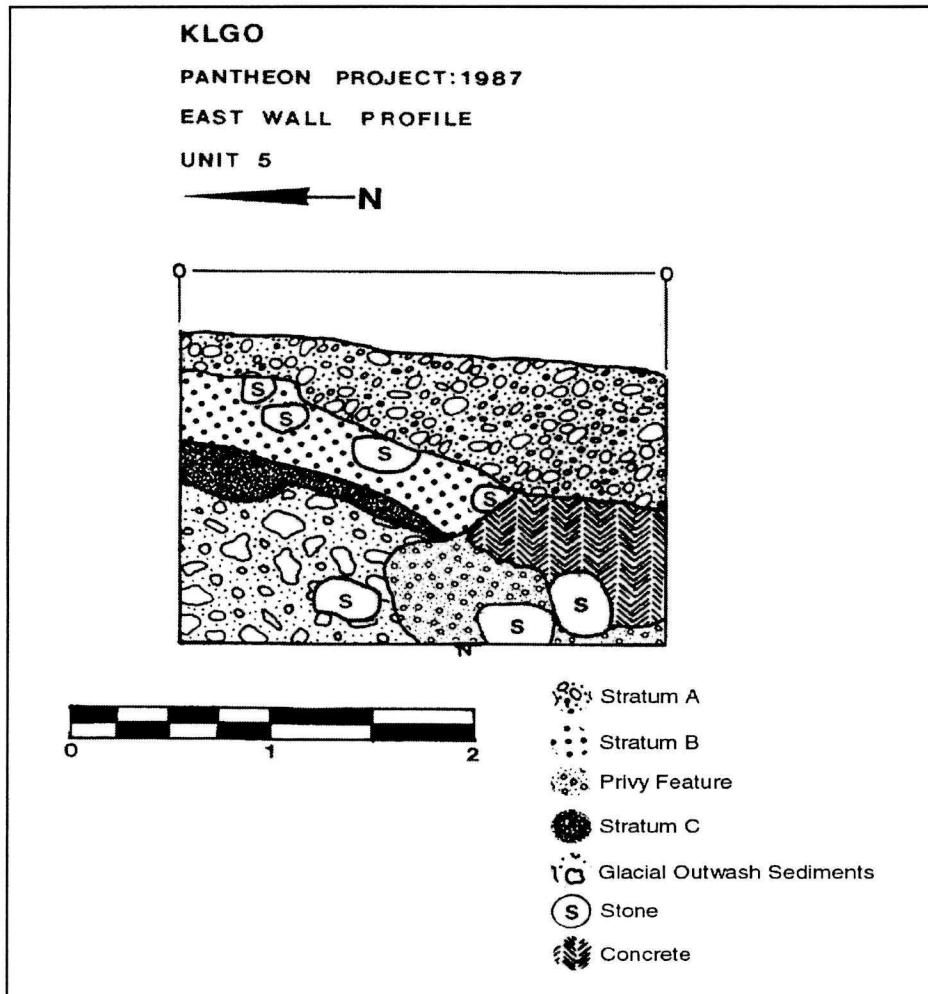


Figure 33: Unit 5, East Wall Profile

necessary. The rest of the investigations concerning the Pantheon were confined either to the interior or south exterior.

Pantheon Sub-Floor Investigations

In 1995, KLGO maintenance personnel removed two separate portions of flooring in the front room of the Pantheon for archaeological testing.

Foundation and Flooring Construction

The first floor cut was a 5-foot x 8-foot rectangle in the extreme southwest corner of the Pantheon front room. The second cut was roughly 4 feet x 6 feet made just under the east front door and extending under the front display windows (figure 34). Various construction methods and different flooring episodes were exposed in the floor cuts.

The Pantheon Building was not built on piers or pilings, but instead was built directly on the ground. A soil berm might have been used on the outer edges. Rough cut 2-inch x 6-inch boards were used as floor joists as well as pier beams underneath the joists. Sixteen-foot-long floor joists were laid down every 30 inches, measured from the center of the joist. The joists ran in a north-south direction. These joists made up the original width of the building. Exposed in the southwest floor cut, 6-foot floor joists were installed when the room was expanded to the south in 1899. The three joists that were exposed in the southwest floor cut were installed in an irregular, haphazard fashion. The south addition joists were not adequately joined or cantilevered onto the 16-foot joists. In fact, one was not joined at all. This method of construction was inadequate for placement of a weight-bearing wall. The fact that the floor was buckled where the addition and original joists connect indicated that the south wall was a weight-bearing wall and did not have the foundation to support the load.

The following descriptions are of the four different floors exposed in the cuts.

1897-1902, Floor 4

Floor 4 was the original floor of the Hotel Rosalie, Clayson Clothier, and Brownell's Hardware. The floor was rough cut 1-inch x 12-inch planking that ran perpendicularly to the joists. In the two floor cuts, the original floor planks were undamaged and in good shape. The planking in the south addition matches what was used in the original building. From this it can be assumed that floor 4 was used until late 1902, when Brownell vacated the building.

1902-1945, Floor 3

Floor 3 consisted of tongue and groove planks. This floor was most likely installed during the 1902 remodeling of the Pantheon and was not covered until after World War II. In both floor cuts it was possible to see areas where the tongue and groove planks were replaced. In the southwest floor cut, the planks next to the south wall were 6 inches wide. Two feet north of the south wall, the planks change to 4-inch wide tongue and groove. Six feet from the south wall, one of the tongue-and-groove planks had been removed for laying down a pipe. The pipe was set in the plank space, and the rest of the space was filled with mortar to hold the pipe in place. The pipe was in place and used before Floor 2 was laid.

1945-1950s, Floor 2

Floor 2 was a sheet linoleum tile backed with felt and glued with black adhesive to Floor 3. Unfortunately, the glue used to place the linoleum permanently marred the surface of the tongue and groove flooring below. The glue and felt covered any shadows that might have been left behind by partitions or furniture in the saloon. Several different colors of linoleum were used in the floor. Red linoleum covered most of the floor. Black and white linoleum was also used but was so poorly installed that extra cuts had been made to make the pieces line up. Dust shadows from seven diamond shaped squares could be seen in the linoleum about four feet north of the south wall, all in a parallel line with the south wall. The diamond shaped squares were where bar stools once stood. This was also the area where a counter had stood during the period that the building operated as the Brown Derby Restaurant from the late 1940s to the early 1950s.

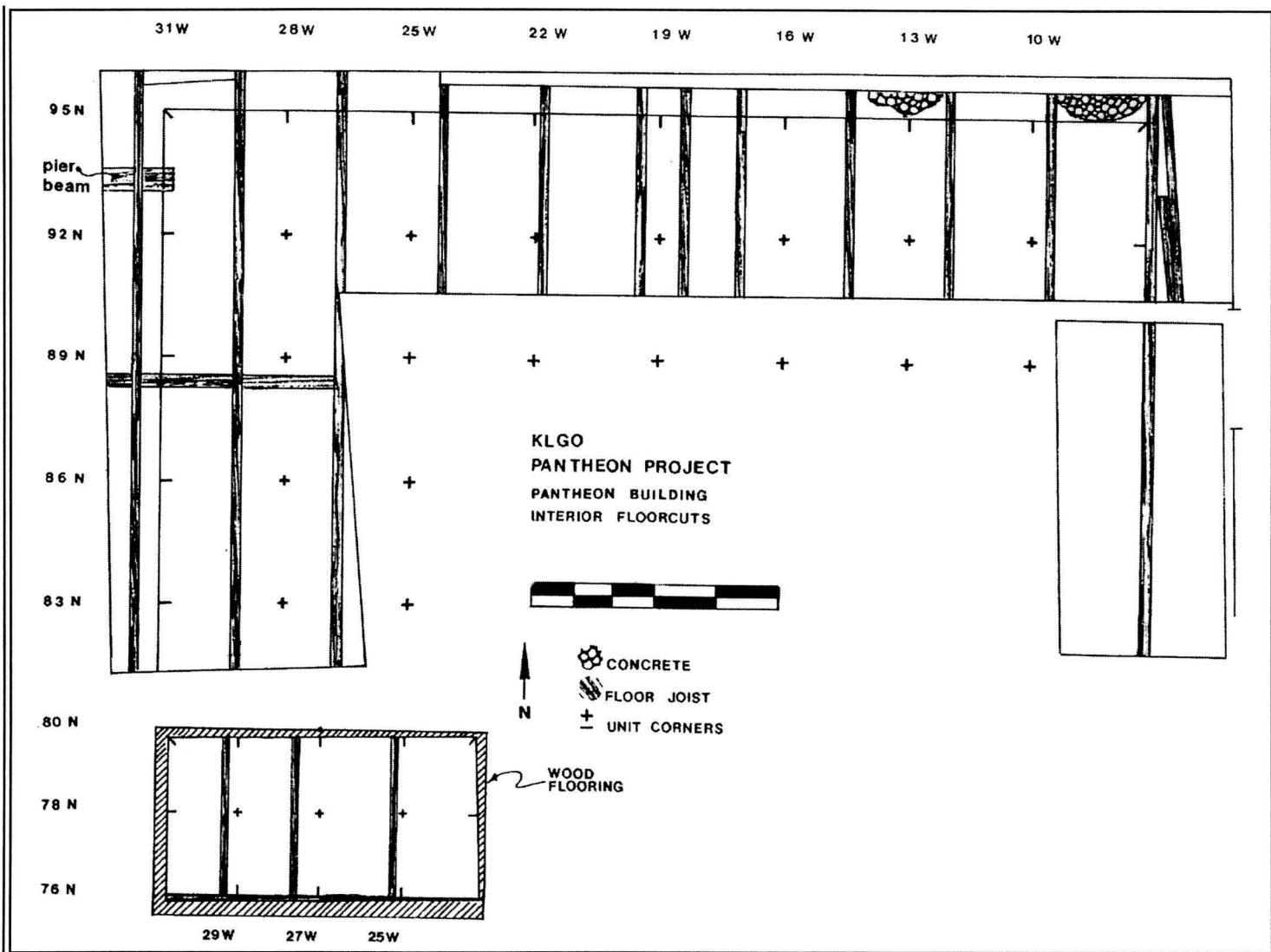


Figure 34: Pantheon Building, Interior Floor Cuts

1960s-1995, Floor 1

Floor 1 was built up with 2-inch x 4-inch studs laid over floor 2 and plywood sheathing laid on top of the studs. Asbestos tiles, eight inches square, were glued to the plywood. These tiles were taken up by specially trained KLGO maintenance staff with special equipment and disposed of as a hazardous waste.

Southwest Sub-Floor Collection and Excavation - Pantheon

The excavation units in the southwest floor cut measured 2 feet square. Eight units total were located in the southwest floor cut. The units were labeled 80N31W, 80N29W, 80N27W, 80N25W, 78N31W, 78N29W, 78N27W, and 78N25W (figure 34). All the 78N units were partially on a berm that was made for the expansion of the Brownell Hardware Store.

A surface collection was completed for all the units. The top most layer, A' was a grayish brown, very silty, fine grain sand with dust accumulation covering everything. There was also a large amount of pebbles and cobbles. This layer was not parking-lot fill and therefore different from Layer A outside the buildings. Dark gray and light, brownish gray sand pockets were also found in the surface layer. Most of the artifacts found were scraps of wood, nails, windowpane glass fragments, tin can fragments, a bottle cap, metal screen, and a cut glass vessel. No concentrations of artifacts or other culturally modified soil changes were seen.

Following the surface collection, excavation was conducted in arbitrary 0.3 ft or 0.5 ft levels. Excavation did not follow natural soil layers, which was due mainly to the lack of a clear interface between soil layers. Soil layers were determined later in soil profiles. After the second arbitrary level

only units with artifacts were selected for further excavation. Layer B consisted of a dark gray fine to very fine grain size matrix with pebbles and cobbles that contained artifacts. The layer ranged in thickness from 0.2 foot to 1.2 feet. Layer C was light brownish gray, powdery, silty sand with no pebbles, no cobbles, and did not contain artifacts. Layer C was roughly 0.5 to 0.8 foot thick. The artifacts from Layer B were tin can fragments, terra cotta flowerpot fragments, a wooden matchstick, windowpane fragments, nails, and cut bone. In Layer B of unit 80N29W, three rings were uncovered that resembled the tops of buckets but after further excavation were identified as barrel hoops.

Level 2 was excavated as an arbitrary 0.5-foot thick level for all the units. The artifact frequency was generally low. Parts of three barrel hoops were recovered along with fragments of a molded glass lid, coal, nails, windowpane glass, a bottle base, bone, tin can fragments, and milled wood. Possible fill materials were found in the northwest part of the floor cut.

Only 3 units were selected for a third level, based upon their proximity to what appeared to be fill material present at the base of Level 2. The units were 80N31W, 80N29W, and 80N27W. A live root was found on the north side of the units, and it had heavily disturbed the soil that it went through. Near the base of Level 3 to the south of the root disturbance, the soil changed to a very fine grain sand matrix with pebbles and cobbles. This was labeled Layer D. Layer D was 0.2 foot to 0.5 foot thick in the excavation units.

One unit was excavated deeper to understand the natural progression of the soil under the buildings. One problem was that the soil was extremely dry and might

have exhibited other characteristics when rehydrated. Level 4 was excavated into unit 8oN27W. Layer G was identified in Level 4. Two soil lenses were also found in Level 4. The yellowish brown and olive brown lenses were basically the same, the difference being that one lens contained a few rocks rich in iron, which stained most of the surrounding, very coarse-grain sand into a rust color. The soil lenses were sterile of artifacts. Layer G is the glacial outwash sediment layer, which is composed of very coarse-grain sand with many pebbles and cobbles. It was found under the soil lenses. Only 0.3 foot to 0.4 foot of Layer G was excavated. No artifacts were found in the layer. No features or evidence of features were found in the southwest corner of the Pantheon.

North and West Sub-Floor Surface Collection - Pantheon

Additional surface collection units inside the Pantheon were located in the north and west sides of the building where flooring was removed after the building was stabilized (figure 34). The NPS maintenance staff in the front room of the Pantheon installed a bracing system. The north wall was extremely unstable due to rotting support members. The bracing system consisted of four cables anchored into the floor in two places and attached high on the north wall for support. Floor-to-ceiling pipe jacks were installed near where the cables were anchored into the floor. This was done to ensure that the floor and ceiling had adequate pressure against them to hold the north wall if it started to collapse.

Once the bracing was installed, flooring could be safely removed for testing. It was thought that removing flooring along the north and west walls might yield artifacts that had suffered the least amount of dis-

turbance after deposition. The theory was that these walls were not heavily involved in much of the remodeling phases. A strip of floor was removed from along the north wall from the west to the east wall, out roughly 6 feet from the north wall. Just outside the north wall is a boardwalk and 4th Avenue. Both the road and the boardwalk have been built up through time so that artifacts could have been deposited under the building for a time until the soil filled in and covered the sides of the building.

Flooring was also removed along the west wall. However, a 2-foot section of flooring was left in place over the joists where the original building and the south saloon addition were joined together. The primary reason for choosing certain areas of the floor to remove and not others was the basic instability of the building. A small portion of floor was removed on the east side up against the wall (figure 34). No artifacts were found in this area of the building, despite having been the scene of heavy remodeling at least twice before 1903.

Twelve 2-inch x 6-inch floor joists, running north and south, were revealed in the two floor cuts. Each joist was 16 feet long. Eleven of the joists were spaced roughly 30 inches apart, measuring from the center of the joists, one joist, however, had been placed between two of the joists in the middle of the building, presumably for extra support. Near the northeast corner of the building, between two floor joists, concrete had been deposited. There was no evidence of a form; the concrete had been allowed to flow unconfined between the joists. Another concrete dump was located 6 feet to the west also between two floor joists. It was possible that the concrete represented an attempt by someone to shore up the building without going to the trouble of installing a real foundation.

A grid system of 3-foot squares was placed over the floor cuts, allowing easier provenience control. Twenty-two collection units in all were created with the grid (figure 34). A plan map was drawn of the floor cuts. The units on the west side of the building did not yield many artifacts and/or concentrations of artifacts. The soil Layer A' was concentrated on the west. No soil disturbance could be seen in the layer below A' that would suggest a deposit of artifacts that went below the surface. Most of the artifacts found were bottle caps, tin cans, coal, and bones. Much of it dated to the late 1930s and 1940s when the building was operating as a saloon.

Three units on the north side, 95N19W, 95N16W, and 95N13W, yielded a very heavy concentration of artifacts on the surface. The artifacts could be characterized as either construction or remodeling debris that was deposited under the sidewalk and eventually ended up beneath the building. The soil in this part of the floor cut was labeled Layer B and was loamy, sticky silt with sand to silt-grain sizes. The remodeling debris consisted of cut pieces of flashing, metal pipes, electrical wire (cloth and plastic insulation) from two periods, ceramic insulators, a Yale dead-bolt, windowpane glass, milled wood fragments, linoleum tile, wallpaper, and a flush toilet mechanism. The ceramic insulators and one fragment of electrical wire were from the earliest occupations of the building. Much of the rest of the debris dated to later remodeling. Possible debris from the saloon consisted of whole and fragmented bottles, bottle caps, tin can fragments, and a whole coffee cup. Other artifacts recovered consisted of three metal whistles, AA batteries, brackets, a caster, a door hinge, and fruit pits. Unit 95N13W had more than 100 fragments of windowpane glass. Some of the glass had paint on the border, and

stenciled letters were found on some fragments.

In unit 95N19W a coffee cup was found with a maker's mark on the bottom. The Shenango China Company of New Castle, Pennsylvania, made the cup (figure 35). The mark dated from 1901 to the present (Kovel and Kovel 1986:127).

A small 2.8-inch tall cylindrical clear glass jar was found intact. The jar is threaded with a metal cap and filled with cotton. The maker's mark is from the Owens-Illinois Glass Company and dated to the 1920s. Two beer bottle bases found with marks are also from the Owens-Illinois Glass Company. One base is green and the other is amber. The amber base has "Duraglas" embossed above the mark, an Owens-Illinois trademark introduced in 1940 (DePuydt et al. 1997:59). A nearly whole amber whiskey flask was found with a threaded top and embossed text on the shoulder, which reads "Federal Law Forbids Sale or Re-Use of This Bottle" (figure 36). This embossed text appears on bottles dating from after Prohibition (1933) until 1964 (Deiss 1981).

The artifacts present on the north side of the Pantheon date the bulk of the deposit to the late 1930s. Possibly the remodeling debris represents the work done before it was reopened as a saloon for army personnel during WW II. Auger tests were performed in 11 of the units to determine if any deep deposits existed. No artifacts were found in any of the auger tests.

1997

Feature 19 - Pantheon

Near the end of the field season in 1997, the restoration crew began dismantling the two-story west addition. During removal of the flooring from the first floor a depression was encountered near the south wall. The depression was filled with bottles; many were whole. The bottles generally dated to after prohibition. Mixed in with the bottles were wood scraps from construction or demolition. The first impression was that this represented an abandoned privy that had been filled with trash.

Chunks of lime were found mixed in with the bottles. Lime from slaked limestone was used to help break down waste in privies and to absorb odors. The bottles were removed from the surface and the loose soil on the top (figure 37). The bottles were designated as feature 19. The depression in the soil remained after the bottles were removed. The majority of the bottles were for liquor, beer specifically. Bud-weiser was the most common label for the bottles with paper labels, followed by Golden Age Beer and one embossed bottle from the Fidelio Brewery in New York.

A variety of glasshouses are represented among the beer bottles. From the manufacturer marks, the bottle date range is 1939 to 1952 with a mean date of 1946. These dates correspond to the WW II use of the Pantheon as a saloon.

Feature 21 - Unit 79N34W - Brownell

The depth of the depression and the closeness of the south wall made excavation difficult. To determine the nature of the depression, a 2-ft x 2-ft square was placed off-center to the east of the depression. The unit was numbered 79N34W (figure 31). Level 1 was a loose sand layer that was

removed and discarded due to possible contamination from feature 19 deposits. Since we were fairly certain that the depression functioned as a privy, it was

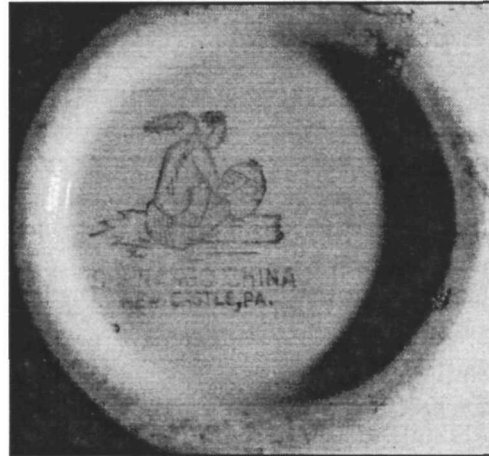


Figure 35: Shenango China Mark



Figure 36: Post-Prohibition Whiskey Flasks

decided to designate it and all the artifacts within as feature 21. Soils in the first three levels superficially resembled till, but were cultural fill. Artifacts were numerous in the first few levels, but were mostly fragmentary bits of bottles, nails, and bone. The number of artifacts started to diminish just above a layer of privy soil in Levels 4 through 6. This positively identified the function of the depression as a privy. Large lime chunks were found in Level 4, above the excrement soil and in Level 7, below the layer of excrement soil. Level 4 started

with reddish colored very hard-packed material in the center of the unit. In the next two levels it sloped down to the east.

By Level 7 the hard-packed excrement soil was removed. In Level 6, wood was found at the base running north/south. The outside of the privy was defined on the west side of the wood planking. Two pump-kinseed flasks were recovered in Level 6. In Level 7, on the north wall below the hard-packed excrement soil was a very loosely consolidated soil. A small seed deposit was also recovered. The loosely consolidated soil continued down into the next level. Bedded sands were found along the north wall. In the western corner of the unit outside the feature, an orange, ashy soil was found. In Level 10, the wood on the west side of the unit became more substantial,



Figure 37: Feature 19 Artifacts

from areas in the east and southeast. A coin was found in the level. The first three digits of the date are readable but the last one cannot be read with certainty. The coin is a Liberty Head Nickel and probably dates to 1893. Level 11 was the last in the unit. Glacial sediments were found at 4.7 feet below the unit datum.

Feature 21 - Unit 79N32W - Brownell

After Level 7 in 79N34W was completed, another unit (79N32W) was opened up to the east (figure 31). This allowed better

working conditions and better visibility. Sidewall cave-ins were a common occurrence throughout the excavation. This unit was placed on the edge of the depression. When excavation began, the floor of the unit dipped sharply down to the west. Two non-feature levels were excavated before the top of feature 21 was reached. The first level in the feature encountered densely compacted lime, which resembled concrete in hardness. Feature 21 at this point in the excavation was confined to the southwest corner. In the second level, a small-galvanized metal water pipe was found in the north wall. It was angled down to the south. The cultural fill was composed mostly of sand with a small percentage of clay. Five clear glass vials were also found in that level.

The third level in the feature encountered large clumps of newspaper and lime. The newsprint was not readable. This seemed to indicate that the privy was just below. Level 4 recovered fewer artifacts than before, which was due to the depth of the lime clumps. By the fifth level the lime clumps disappeared. Wood planking was found along the south wall. The wood represented the cribbing used for the privy box. The first evidence of excrement soil was found in the northeast corner. Level 6 was used to bring the whole unit down even to the top of the excrement soil. The seventh level was a complete stratigraphic layer removing the excrement soil. Few artifacts were recovered from this level.

Samples were taken for macrofloral and pollen analysis. Bedded sands at the top of Level 8 were thought to be naturally occurring and would lead to sterile soil. Two coins were recovered in the level. One is an 1893 Indian Head Cent, and the second is a 1905 Liberty Head Nickel. The three coins found in the lowest parts of feature

21 suggest that the privy may have been used during the gold rush. However, once the building was extended over the privy, it continued to be used as a water closet. The copious use of lime was to cover odor, perhaps when the privy was closed down.

After 0.8 foot of excavation in sand, another layer of excrement soil was encountered. A thin layer of excrement soil was removed in the ninth level. Samples were also taken from this level. Directly below the excrement soil was natural sediments, which ended the unit at 4.97 feet below the datum. Fifteen small clear glass vials were found throughout feature 21. It is unclear what the function was; however, a chemical analysis of the residue in some of the vials would indicate at least their last functional use.

Feature 21 & 22 - Unit 79N37W - Brownell

It was decided to open another unit 3 feet to the west and complete the trench of the large depression (figure 31). Unit 79N37W was very similar to the other units, except that there was no layer of excrement soil continuing down. Almost at the start of the unit, lime chunks were uncovered, along with old prescription bottles. This was considered to be anomalous since the privy was thought to be on the east side of the depression. In the Level 4 a layer of dark, brown-orange, ashy soil was found in the southeast corner. The ashy soil was very spongy throughout and produced few artifacts in Levels 5, 6, and 7. In Level 8 bedded sands were found in the southeast corner. Large cobbles as well as burned material were encountered starting in Level 8.

In Level 9 the soil was very loosely compacted. Ashy soil was found in the northeast corner with small cobbles found along

the south wall and very large cobbles in the center. A dark soil was found around some decaying wood. An orange-colored soil covered the southern half of the unit in Level 10.

The unit uncovered a large number of windowpane fragments and small graphite rods. The rods were smaller than the graphite rods used in outdoor arc lamps. In Level 10 a beer mug was found intact, and upright, with seven rods in the mug (figure 38). Since most of the rods appear to have been unused they could represent stock items from the hardware store.

Feature 22 was designated after Level 10 due to the sharp difference in soil color and the extremely high number of artifacts recovered. Feature 22 is considered to be the remains of a very early privy that predates feature 21, and likely goes back to the beginning of the gold rush. Fifteen carbon rods were found in the two levels of feature 22. The feature proved to be quite deep with the last level in feature 22 ending more than 5.3 feet below the datum. Samples were taken for flotation and macrofloral analysis. The second level in the feature was discontinued, since it was no longer safe to excavate. Excavation in the unit was never finished mainly because the final depth of Level 2 was below what the restoration crew needed for the foundation.

From Level 10 a sample of soft blue material, which had adhered to a white friable material, was sent off for analysis. The sample was cross-sectioned for microscopic analysis. The cross-section revealed a jumble of lead-based linseed oil paint mostly in two colors, blue and dark blue. One fragment began with two layers of a cream-white paint followed by another layer of blue and ended with a final layer of dark blue. The white friable material tested

positive to dilute hydrochloric acid, which is an indication of calcium carbonate, or lime, an essential ingredient in plaster. None of the samples had remains of their containers, which left the origin of the samples unknown (Phillips 1997).

The faunal analysis (appendix K) determined that for feature 21 there are many more mammal bones ($n=92$ frags), than bird ($n=16$ frags) or fish ($n=19$ frags). Most of the bones come from cattle, sheep/goat, flounder (halibut), and pig, respectively.

Macrofloral (appendix M) and pollen analysis (appendix L) from features 21 and 22 indicated that tree pollen was low compared with other areas in the site (Cummings and Moutoux 1998). The pollen recovered from trees included *Alnus* (Alder), *Betula*-type (Birch), *Pinaceae* (Pine Family), *Picea* (Spruce), *Pinus* (Pine), *Pseudotsuga* (Douglas Fir), and *Tsuga* (Hemlock). Native plants were represented by *Artemisia*, High-spine *Asteraceae*, *Epilobium*-type (fireweed), probable *Eriogonum* (buckwheat family), *Poaceae* (grass family), *Rhus* (sumac family), and *Rosaceae* (rose family).

Weedy plants were the most abundant type of recovered pollen. They were represented by Low-spine *Asteraceae*-type (ragweed), *Centaurea* (star thistle-type), *Cirsium*-type (thistle), *Liguliflorae* (dandelion), *Brassicaceae* (mustard family), Chenopods (chenopodium, amaranth), *Erysimum*-type (treacle mustard), probable *Ipomoea* (morning glory), *Polygonum*-type (knotweed/smartweed), *Rumex* (possible rhubarb), and *Silene*-type (common catchfly). Many of these pollens represent plants that were grown in local gardens. So instead of unwanted weeds, they were desired flowering plants. Also types such



Figure 38. Carbon Rods in Beer Mug

as *Brassicaceae* could represent vegetables like broccoli or cauliflower.

Possible food pollen recovered was related to the palm family and it most closely resembled pollen from a coconut (*Cocos nucifera*). *Cerealia* (cereal grains) pollen was abundant in the feature samples. Other food pollen recovered was from *Eugenia* (cloves), *Fragaria* (strawberries), *Vaccinium* (blueberries), *Vitis* (grapes), and *Zea mays* (corn) (appendix L). More evidence of food pollen was in features 21 and 22 than anywhere else sampled. Parasite eggs were found in the samples from feature 21, but not in large enough numbers for analysis. No parasite eggs were found in the feature 22 sample.

The phytolith samples showed variable amounts of dendritic elongate forms, which were indicative of breads and cereals. The majority of the phytolith sample was from local grasses that grew in the area before the gold rush. Diatoms and sponge spicules recovered from the sample were evidence

of the former high tide zone that would have been close to the Pantheon Saloon Complex up to and including the time of the gold rush.

Four samples from feature 21 underwent macrobotanical analysis (appendix M). Samples were derived from Level 5 of 79N34W and Level 7 for units 79N32W, 79N34W, and 79N37W. A sample from feature 22, Level 2 of 79N37W was also sent. All the samples except for Level 7 of 79N37W contained botanical remains. The types of seeds found include *Ficus* (figs), *Fragaria* (strawberry), *Lycopersicon esculentum* (tomato), *Rubus* (raspberry), *Vitis* (grape), *Solanaceae* (nightshade family), and *Polygonum*-type. The *Polygonum*-type is a weedy plant that likes moist, disturbed soils. Feature 21 also has the largest number (n=59 frags) of fruit pits and nutshells compared to any other provenience at the PSC excavations. These consisted of peach, apricot, cherry, walnut, filbert, peanut, Brazil nut, and pecan. Feature 22 only has a small number of peach pits (6) and filbert shells (2). The seed densities for four of the samples were comparable with privy deposits found elsewhere in Skagway.

A large number of artifacts (n=103 minimum number of individuals [mni]) from feature 21 provide chronological information, and indicate the feature was used between 1899 and 1917. Twenty-two of the dates came from manufacturer mark information. Sixty-four of the artifact dates came from bottle glass (i.e., SCA, selenium, and so on). The dates suggest that the original excavation of the privy occurred during the gold rush. The coins found near the interface of features 21 and 22 also indicate that the privy was in use for some time after the gold rush, possibly up until the remodeling, which added the second story. Feature 22 has very few artifacts (8) that

are datable. Six artifact dates come from bottle glass, one from a can manufacturer mark, and one from a lamp part. The open ended manufacturing dates for some of the bottle glass is responsible for the 1918 mean date for the feature. Feature 22 was found stratigraphically below feature 21; and without evidence of later disturbing, feature 22 predates feature 21.

Feature 23 - Pantheon

Feature 23 is a water pipe and associated trench, which runs north/south just below ground surface at the north wall to roughly two feet below ground surface in the south. The pipe could not be uncovered all the way to the south wall because that endangered the feature 21 and 22 excavation units. Near the north wall the pipe was connected to a cut-off valve. Directly west and stratigraphically above was another water pipe. The south end of this pipe ended with a 90-degree elbow (figure 39). The pipe continued under the north wall and presumably into the street. These two sections of pipe were likely connected in the past, and, therefore, it was decided not to assign the higher pipe a different feature number.

About midway in the run of the exposed pipe a slight "S" curve had been put in the pipe. The reason for this is unknown, but perhaps it was done to match the height of the pipe with which it was connected. At the point where the pipe went into the south wall, wood planking could be seen above the pipe. Later excavation revealed that the pipe turned 90 degrees east and continued into the main Pantheon room. The east run of pipe was in line with the pipe that was installed in the tongue and groove planking in Floor 3. City of Skagway water records show that the Pantheon Saloon had water supplied for two water closets, one urinal, and water to the bar

(Skagway Water, City Account Ledger 1904-1909, microfilm: reel 6B).

Feature 23 represents the water supply to the bar. Use of this pipe was most likely discontinued during prohibition when all bar paraphernalia was removed to make way for the museum. The date range of artifacts from the pipe trench indicates that the pipe trench had cut through older deposits. The artifacts from the trench date from 1900 to 1919. These dates are within the Pantheon Saloon period. Fifteen (15) of the datable artifacts come from bottle glass. Two of the bottle dates are based on manufacturing marks.

Feature 26 - Pantheon

Feature 26 was found below the staircase landing and consisted almost entirely of rusted clumps of bottle caps and liners (figure 40). Only samples of the caps and liners were collected. Also recovered were one poker chip, a die, two small glass vials, and shot glasses. These remains are likely associated with the Pantheon Saloon occupations. The food remains recovered consisted of fruit pits, nutshells, and mammal bones. Nearly half of the bones were identified as pig; and none exhibited signs of burning, cutting, sawing, or gnawing. The matrix inside the feature contained almost no soil. Instead, it consisted entirely of ferrous oxide mush from the bottle caps. Some clay material was scattered throughout the deposit. The exact dimensions of the feature could not be determined. Deteriorated wood was found on one side, but evidence for a complete wood lined midden was not found.

The artifacts recovered from feature 26 date the deposit from 1900 to 1912. Taking into account the context of the

recovery (under a staircase), it is probable that the deposit pre-dates the installation of the staircase. Stairs were unnecessary until the second story was added. The date for the construction of the second story addition are circa 1905-1910, with 1908 being the most likely date. By using only the artifacts from the pre-prohibition era, the dates for the deposit would be calibrated as 1902 to 1906. These dates fall in the time period between the closing of the hardware store and the opening of the saloon.

Feature 24 - Unit 80N36W - Pantheon

This unit was on the north side of the 79N units and was to remove the balk separating the units. The unit began as a 1-ft x 3-ft rectangle and was expanded another foot on the west and two feet on the east to remove the rest of feature 21. The excavations, however, encountered a different privy deposit, feature 24. The location of the feature can be found on figure 31.

The first level was a loosely consolidated surface fill. The recovered artifacts have a wide range of dates. The second level consisted of loose fill when at roughly 0.5 foot down in the level, bedded sands were found. The bedded sands indicate the start of feature 24. In the second level of feature



Figure 39: Feature 23 Water Pipe

24, lime chunks and nightsoil were found beneath the bedded sands primarily on the north side (figure 41). Artifacts found in the level consist of nails, window glass, ceramics, medicine vials, bottle glass, cans, bone, and a die.

In Level 3, the fill was completely removed and a mixture of hard-packed nightsoil and lime was found across the unit. Eventually the nightsoil mixture disappeared and left a thick layer of hard-packed lime. The base of the level and unit was determined when the level matched that of the restoration crew's foundation trench. The general date range for feature 24 based on all datable recovered artifacts was from 1904 to 1909. The dates fall in the range between the opening of the Pantheon Saloon and the construction of the second story addition.

Unit 82N38W - Pantheon

This unit was placed to the north of 79N37W. The 79N units and the excavation for the foundation created a berm, which was concentrated on the north side of the building. There was speculation that this unit might better define feature 22.

The top level of the unit appeared to be fill and was loosely compacted. The artifacts

recovered were mostly nails, bones, and windowpane fragments. Also found were a set of metal tags from a dog collar (figure 42). Both tags were stamped with "WHITE HORSE" at the top; below that was the stamped outline of a dog; below the dog were ID numbers, one of which read "484" and the other "485." Each was stamped with a date; one was "1903," and the other was "1905." The early dates from the tags suggest that the last time the whole floor was exposed could have been during the remodeling that saw the installation of the feature 23 water pipe.

The second level was filled with tin can fragments. In Level 3, the number of artifacts dropped dramatically. The excavation notes suggest that this was the top of the builder's trench for either the privy to the south or the feature 23 water pipe. The fourth level was excavated down one foot because of the lack of artifacts and stratigraphy.

The feature 23 water pipe was found 3.15 feet below the datum. Further excavation west confirmed that the pipe had a 90° elbow and continued on to the east into the saloon (figure 43). The dark soil area was from rainwater that had leaked through the partially deconstructed roof. A fifth level was excavated to expose the pipe and



Figure 40: Feature 26



Figure 41: Feature 24

to also ensure that no other features were below the pipe.

Unit 86N36W - Pantheon

Unit 86N36W was a 2-foot square in the center of the two-story addition. A small depression could be seen on the surface, and it was decided to excavate before the restoration crew moved into the area. Only two levels were excavated into the unit. Nothing remarkable was found in the levels, and the glacial outwash sediments were found before the base of Level 2.

Fasel/Red Front/Wood Shop Building

The area encompassed by this structure was roughly 25 feet north to south and 35 feet east to west. The exact dimensions of the building were never known for any period before WW II, although the 1914 Sanborn map is a fairly accurate portrayal of the dimensions. In the summary that follows, the name Fasel/Red Front Building will refer to the original building. The Wood Shop will refer to the structure built in its place during WW II. As with the Pantheon Building, the excavations are discussed as they happened chronologically, unless otherwise noted.

1987

Unit 1 – Wood Shop

Unit 1 was placed on the south side of the Wood Shop, 10 feet west of the Broadway boardwalk. The unit measured five feet north to south and 2.5 feet east to west (figure 31). The surface of the unit on the northern end comprised mossy gravels caused by the drip-line from the roof. A thin sod layer was south of the drip-line. The first level went down on average 0.45

foot. The soil in the north was described as a dark brown sandy loam with sticky clay.

In the south the soil was a light brown/gray mix of dry sand and ash. Cobbles and pebbles were found throughout. Many roots from a nearby cottonwood tree ham-

pered excava-

tion. There were 186 (mni) artifacts recovered from this level.

Level 2 was excavated a uniform 0.45 foot. The soil in this level was the same as the previous level. The soil was loosely consoli-

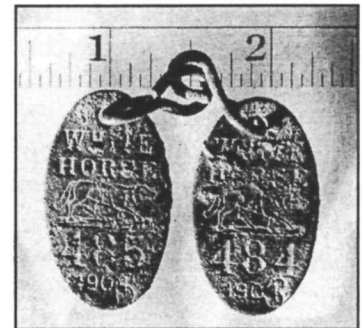


Figure 42: Dog Collar Tags



Figure 43: Feature 23-Fully Exposed

dated, and the roots were larger in diameter. Roughly the same number of artifacts were recovered from this level (n=181 mni), compared to the previous level. No discernible stratigraphy was noted in the profile.

Level 3 was another uniform 0.4 foot deep. Light brown sand covers much of the unit. Artifacts were almost nonexistent, and the soil profile resembles fill. Level 4 was a continuation of the previous levels. The roots

were becoming much larger. Level 4 ended two feet below the unit datum.

The fifth level encountered silty soil and artifacts. The level ended roughly 3 feet below the datum. Wood covered most of the floor of Level 5. A solder seam can was found above a possible wood post. Silty sand was on top of the can, and fine sand with gravel was below. It was noted that the soil appeared to be fill. Another 0.5 foot of excavation revealed that the silt layer disappeared and was replaced by a finer sand and small gravel layer. Level 6 was started at that point. The beginning of Level 6 was a uniform, fine sand and gravel surface. At its deepest, Level 6 was 4.15 feet below the datum. The tree roots ended and glacial outwash sediments were found below.

Unit 2 – Wood Shop

Unit 2 was placed 43 feet west of the Broadway boardwalk (figure 31). Figure 44 is a profile drawing of the west wall in this unit. The surface of the unit was a uniform, dark brown sod with sparse grass. Compact gravel from the adjacent parking lot covered most of the unit. The drip-line from the roof was in the north portion of the unit as well as a small fuel oil pipe, which was no longer in use. Deteriorated lumber was on the east side of the unit. The first level was excavated down about 0.8 foot. The sod layer was roughly 0.1 foot thick. The soil then became very dark, greasy, and odorous, an obvious stain from the oil line pipe. There were also reports of painters dumping cleaning fluids in the area of Unit 2 (Andrew Bierely, personal communication 1995).

The uncontaminated southwest corner of the unit was a light brown, sandy soil. The fuel oil odor was present in the southwest corner as well. The dividing line between the soil that was contaminated by fuel oil

was quite distinct. Level 2 was started but was halted shortly thereafter due to the overwhelming odor of fuel oil. The soil saturated with fuel oil covered close to three-quarters of the level surface. The one-quarter of the unit not covered with oil resembled Level 1 with loose sand and few cobbles. Many artifacts (n=145 mni) were found in this level. The unit was left open and uncovered for one month to let the oil smell dissipate.

Remarks in the notes for Level 3 indicated that the soil in the northern portion of the unit was still very saturated with oil after excavations resumed one month later. Close to the bottom of the .5-foot level it was noted that the soil was getting lighter in oil saturation. The soil in the south was light tan, sandy gravel. It was noted that the oil-stained soil was basically the same type of soil. At the bottom of the level, 1.5 feet below the datum, wood cribbing was uncovered in the northeast corner of the unit. The color of the soil behind the cribbing was darker, but appeared to be free of oil. The artifacts from the level date from the 1930s to 1970s.

Throughout Level 4, the light tan, sandy gravel soil continued in the south of the unit. In the northern portion of the unit, the oil-saturated soil continued down 2-feet below datum. Wooden boards in the northwest were found to be covering a ceramic sewer pipe. A clay soil lens was found in the center of the unit on the west wall. It extended down into the next level and resembled a cap. The soil under the cap was similar to the tan, sandy gravel.

Level 5 was excavated in an arbitrary 0.5-foot level. The oil-saturated soil disappeared along with the clay that was present in the previous level. The wood cribbing and sewer pipe were still in the north;

however, the wood covering the pipe was removed. The soil in Level 6 resembled back fill for the sewer pipe trench. The soil was a random mixture of tan sand and sandy gravel.

At the base of Level 7 wet, compacted, sandy gravel was noted. The notes suggest that the oil from higher levels had reappeared. However, the proximity to the sewer pipe might explain the wet soil. The oil was not mentioned in the field notes for more

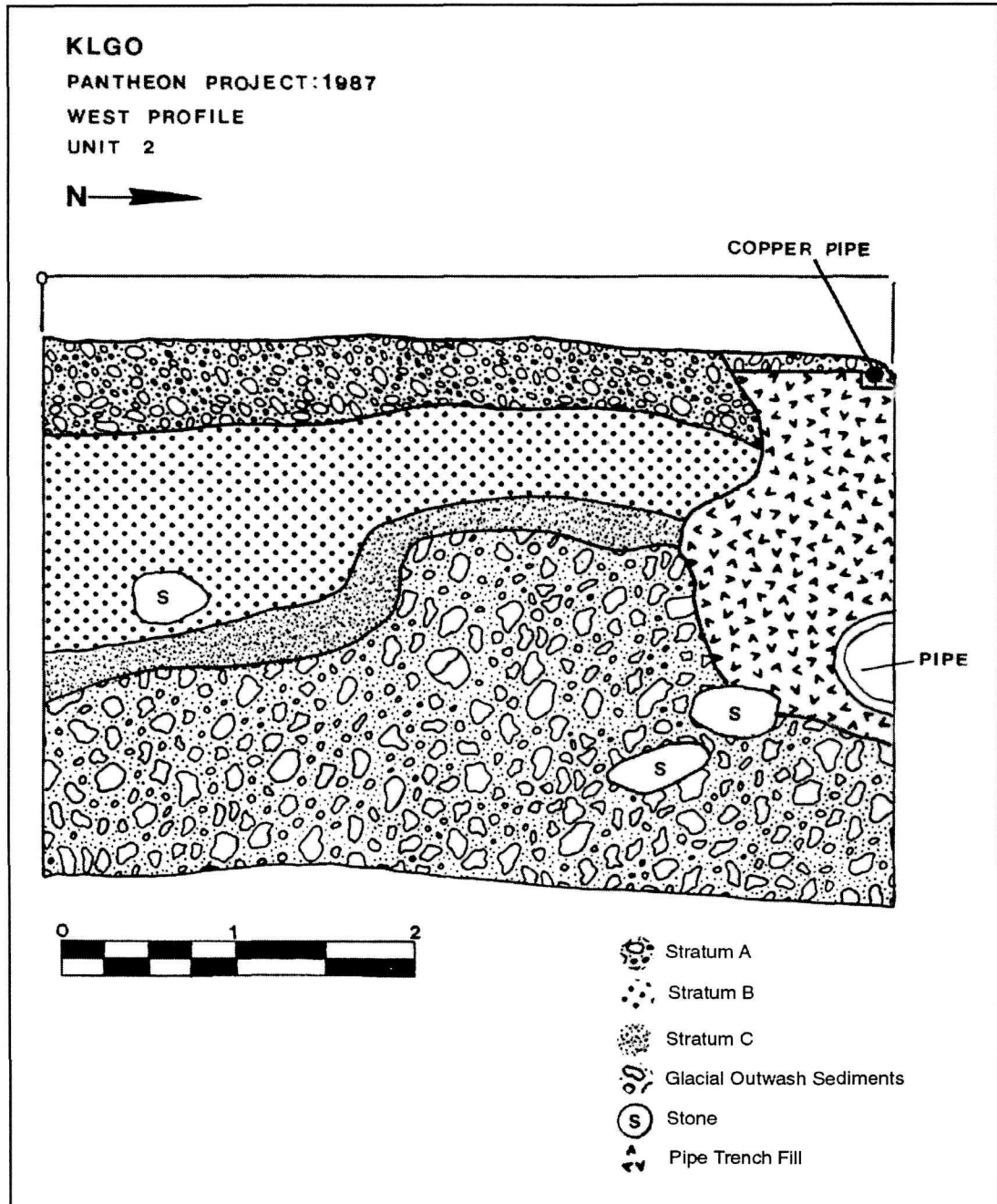


Figure 44: Unit 2 West Wall Profile

than one foot of excavated material. In the southeast corner, a dark brown, humic, silty soil was found.

Most of the artifacts from the level were found in that corner area. This layer sloped down to the east. In the next level the dark, silty soil was designated as a feature. Level 8 was taken down to 4.2 feet below the unit datum. The unit was closed at that point because the feature was trending away to the southeast and the rest of the unit was in outwash sediments. The soil in the feature most likely represented older topsoil that was outside the builder's trench when the sewer pipe was installed. The wood cribbing in the north was resting on top of the ceramic sewer pipe. It is unknown how the cribbing relates to the pipe, unless it provided access in some way to the pipe.

1996

Floor Removal and Excavation

Foundation and Flooring Description

The WW II era (Wood Shop) building was built without a substantial foundation. The foundation consisted of wooden pier beams placed directly on the ground. These pier beams were found at the perimeter of the building beneath the northern and southern outer walls. Three additional pier beams were spaced between the outer walls. The beams were oriented in an east/west direction. The beams differed dimensionally in height and width: 0.7 ft x 0.7 ft and 0.5 ft x 0.5 ft. The beams supported 22 floor joists across a 24-foot span; each joist had a dimension of 0.3 ft x 0.3 ft. These floor joists were laid approximately 16 inches apart, measured from the center of the joists. The joists were paired into 16- and 8-foot lengths, which spanned the

24-foot width of the building. Additional joists measuring 5 to 6 feet long were added between the three center pier beams. The addition of the shorter joists created an almost solid floor of joists in the center of the building. The extra joists in the middle of the building would have provided additional support, but they were unnecessary, considering what was already in place. One possible explanation is that the joists were used, rather than thrown away as waste wood. While not a scarce commodity, wood might have been too expensive not to use. Another possibility is that the builders were inexperienced at carpentry and lacked knowledge of basic construction practices, such as framing a new building.

Flooring

Attached directly to the floor joists were 1 x 12-inch rough-cut planks. The planks were laid in an east/west direction and were fastened with modern wire nails. On top of the planks was a layer of asphalt (tar) paper. Above the tarpaper was the interior tongue and groove flooring. This flooring was laid in a north/south direction and covered the floor from the front (east wall) of the structure to the concrete pad in the southwestern corner. The floor appeared to be intact across the width of the structure, except along a section approximately 12 feet from the west wall. At this location at some point in its later commercial history, an electrical conduit was added for power. The conduit was added well after the original floor had been laid. The electrical equipment was of a modern design and the grooves of circular saw cuts were plainly visible in the original joist below where the floor had been cut out and replaced along the conduit path.

Surface Survey

Before any inspection of the surface could begin all the floor joists were removed.

While obtrusive the pier beams were left in place, to preserve the integrity of the building. The first obvious disturbance was an excavated ditch in the center of the exposed floor. It was located in the middle of the north wall and extended 10 feet south to the center of the room. In the ditch was an exposed 2.25-inch diameter water pipe. On the sides of the ditch excavation was a considerable amount of re-deposited fill dirt that was not used to cover the pipe. In some areas the fill dirt covered the pier beams and obscured the path of the water pipe. The south end of the water pipe was buried under the pier beams to pass under the remaining beams and continue outside. Along the buried path of the line there was a faint depression in the surface that ran between the beams. The depression appeared to pass out of the structure and continue to the feature 6 cesspool found in 1995.

In addition to the water line ditch, there was a sloping depression in the southwest corner of the exposed floor (figure 45). The depression was mostly beneath the section of flooring not removed. The beams along the building perimeter were exposed; however, toward the east end of the structure and along the eastern wall, the soil and surface debris were level with the top of the pier beams and made surface evaluation difficult. The ground surface between the center beams revealed little information about potential subsurface features, such as privies or construction remains. The surface between the beams to the perimeter walls was closely inspected for any surface indication of previous structures.

The surface artifacts were then drawn to record the array of materials deposited and to establish whether there was a pattern to the materials that littered the surface. A collection grid was established with 3-foot

squares. Objects too large to retrieve (i.e., beams) were recorded on the unit surface maps. After the surface collection was completed and the initial artifacts were collected, the locations for further excavation units were chosen.

The Wood Shop structure was divided into three areas to be investigated by excavation. The first area was the portion of the Wood Shop where the floor had been removed to allow access to the ground surface. Nine units were excavated in that area. The second area was the western side of the Wood Shop where the concrete pad was located. The pad was used for ovens from the former bakery. Adjacent to the concrete pad, the floor was removed directly over where the test unit would be located. The unit in this area was labeled 58N37W. The third area to test was under the shed attached to the rear of the structure on the west. The floor in the shed was made of a single layer of planks nailed to a 2-in. x 4-in. board. The unit under the shed was 68N55W. The unit would allow evaluation of the areas that were immediately adjacent to and in the rear yard of the structures.

Sub-Surface Testing

Unit 62N7W – Wood Shop

The unit was located approximately on the centerline of the building and several feet west of the eastern front wall, and measured 3-ft square (figure 31). This was done to avoid any possible contamination from later construction. The first level was a surface collection of artifacts that could be seen without excavation. This collection yielded a variety of building materials, including tongue and groove flooring, 6-in. rough-cut planks, and wire nails. Most of the building materials recovered were from the early 1940s construction of the Wood Shop structure. Roofing materials and nails

found below the pier beams are possibly related to the original 1898 building. The surface layer was a very silty, fine grain loam or sand. This layer appeared to be a thick accumulation of dust, with a large amount of pebbles and small cobbles on the surface of the unit. Other artifacts collected from the surface include plate window glass, flat glass (both green and clear), amber bottle glass, bones, metal strapping, fragments of tin cans, and electrical wire with insulation.

The first excavated level resembled the surface collection in every respect. Level 1 was excavated as a natural level, approximately 0.3 ft - 0.4 ft deep. The artifacts recovered include ceramic sherds, glass (both flat and bottle), wire nails, a peach pit, and unidentifiable metal fragments of varying sizes.

Level 2 was composed of light, yellowish-brown, sandy silt. The number of artifacts increased in the unit as the level deepened. There were no stains or other indications of features beyond a scatter of artifacts.



Figure 45: Depression in Southwest Corner of Wood Shop

There was a negligible amount of root intrusion or other disturbances indicated at the base of the level. At the bottom of Level 2 there was a slight change in color, and the fine grain sands were slightly more compact. The majority of the 91 artifacts are wire nails ($n=73$ mni), but also includes bottle glass, window glass, and porcelain insulators. The random yellow/brown sands were light layers only slightly detectable within the second level.

The soils in Level 3 were a lighter version of Level 2. The soil was sandy and had none of the brown sands of the previous level. The grain size was from fine to medium, and there were few pebbles or cobbles present. Only 39 artifacts were recovered from this level and included mostly nails ($n=23$ mni) and window glass ($n=9$ mni).

Level 4 saw a major increase in the density of pebbles and cobbles. No artifacts were recovered from this level. The soil matrix consisted of a yellowish-brown, coarse, sandy soil with small pebbles and medium cobbles. This soil layer extended well below the level of the pier beams. Upper level artifacts that were dislodged by the cleaning of the wall profiles were discarded due to the lack of provenience.

The bedded sands found below the surface layer are representative of natural formation processes from water deposition. The composition of the soils and the displaced and scattered nature of the recovered artifacts indicate the unit lay in an area that had some exposure as a surface that was open to trash deposition, and later covered over. The collection of surface artifacts appears to be a product of the later (1940s) building phase with scant evidence of the earlier 1898 constructions. Among the surface artifacts recovered are two intact bottles. The first is an amber beer bottle

with “DURAGLAS” embossed on the base. Numbers on the base identify it as an Owen-Illinois bottle from the Charleston, West Virginia, glass-house. According to Toulouse (1971:170, 395, 403) the combination of elements on the base of the bottle give a date range from 1940 to 1954. The second bottle is a 1/2-pint whiskey flask. Embossed on the shoulder was “Federal Law Forbids” and “National Distillers.” No manufacturing information was found on National Distillers; however, the phrase “Federal Law Forbids” dated after prohibition (1932) and was used until 1963 (Deiss 1981).

Unit 59N21W – Wood Shop

This unit was located in the southwestern area of the exposed floor (figure 31). The first level contained two strata. The first was dark grayish brown, very fine sand, very loose and heavy in pebbles and cobbles. The second layer was very dark gray, loamy sand, which ranged in size from fine to coarse. This soil layer was characterized as poorly sorted with pebbles and cobbles. Some of the artifacts recovered were from either construction or destruction debris, such as milled wood, nails, wall plaster, mortar, brick, windowpane glass, metal flashing, tarpaper, electrical insulators (interior), and burned wood. Also recovered were a few domestic artifacts such as butchered bone, bottle caps, and assorted bottle glass (total n=116 mni).

Level 2 was excavated entirely in the very dark gray loamy sand. The artifacts recovered from this level were similar to the previous level, but with a slightly higher frequency (n=130 mni). They included nails, roofing material, window glass, tarpaper, a fragment of 35 mm camera film, decorated glass, and bone.

The third level contained a different soil

layer. The soil was a light yellowish brown with very fine sand and few pebbles or cobbles. The artifacts recovered (n=81 mni) include bones, nails, tin cans/containers, and bottle glass. Level 4 contained no artifacts and was finished once glacial outwash sediments were found.

Feature 8 - Unit 67N27W – Fasel

This unit was on the extreme western end of the floor cut (figure 31). It was laid out along one of the center pier beams to establish the context of the beam placement and the early history of the construction in the area.

The first level was similar to the other units excavated in the floor cut. The soil was dark grayish brown, mostly sand in assorted grain sizes, with pebbles and cobbles. The artifacts recovered from this level are predominately building debris (n=51 mni) with fewer (n=22 mni) domestic artifacts. The artifacts included nails, bottle caps, bottle and window glass, tin can fragments, some milled/shaped wood pieces, and ceramic sherds. At the base of the level there was an upright cut post (4 in. x 4 in.; feature 8) located in the northeast quadrant of the unit.

Feature 8 was present throughout Level 2. Associated artifacts reflect less construction debris and more domestic utilitarian objects. The artifacts recovered (n=40 mni) from the hole around the post were nails, window glass, bottle glass, metal container fragments, crockery, bone, burned wood fragments, cork, and a marine bivalve fragment. The soil in Level 3 was light yellowish brown sand of very fine grain size, with pebbles and cobbles. After Level 3 the unit was expanded another three feet to the east (67N24W). The exposed post was partially in the east wall, and expanding the unit exposed the rest of the post.

A total of 31 artifacts were recovered from this level. The feature 8 post did not extend down past Level 3. After the second unit (67N24W) was excavated, it was discovered that the feature actually comprised two posts, located approximately 2.5 feet apart, and aligned in the eastern half of the unit (figure 46).

The first post was complete but weathered; and the second post, located in the southeast corner, had only fragmentary wood remains in the excavated base depression. These posts did not function as supports for the Wood Shop structure, and it is probable that the posts were pier supports for the earlier Fasel/Red Front Building.

Feature 9 was a utility line trench with a 2.25-inch -diameter metal water pipe in it. It passed through the southern end of the unit and destroyed a major section of one feature 8 post. The excavation was not able to determine if the pipe supplied water or was a gray water outlet possibly leading to the feature 6 cesspool. The size of the pipe suggests that it was a gray-water outlet pipe.

Feature 9 - Unit 63N27W – Wood Shop

This unit was directly south of 67N27W (figure 31). The unit further explored the feature 9 gray-water pipe. The unit measured 1.5 feet north to south and 3 feet east to west. The feature was a builder's trench that encompassed the entire 3-ft. x 1.5-ft. unit with a 2.25-inch diameter pipe through the length of the unit.

The soil in the first level was described as dark grayish brown fill. The sand was fine to coarse, and included in the matrix were pebbles and cobbles. The field notes indicate that a trench as large as the unit was just below the surface of the ground. This was the installation trench for the feature 9

pipe. Artifacts recovered in the trench fill include nails, brick, shell, window/bottle glass, metal fragments, and the feature 9 metal pipe.

The first level of feature 9 was excavated entirely in the trench fill. In the southwest corner of the unit the pipe was discovered to have a 45-degree angle coupling (figure 47). The angled section of pipe ran in a northeast/southwest direction. The artifacts found in this level include nails, insulators, bottles, window glass, and bottle caps (n=75 mni).

The second level of feature 9 extended down to the bottom of the trench feature. Just below the pipe the soil turned to sterile outwash sediments. The sediment was



Figure 46: Feature 8 Posts

grayish brown with medium-to-coarse sand grains and numerous pebbles and cobbles. Fewer artifacts (n=47 mni) were recovered from this level, but are still similar in kind to the previous level.

Feature 8 - Unit 60N27W – Fasel

This unit was excavated to verify the existence of fill immediately beneath the pier beam and to locate additional features that relate to feature 8. The pier beam covered half the unit, leaving a 1.5-ft. x 3-ft. area in which to excavate.

At the beginning of Level 1 sands were encountered that ranged from fine to coarse along with pebbles and cobbles. The majority of the artifacts came from a dark gray, sandy soil. The artifacts recovered in this level include nails, bone, glass, wood, and metal fragments (n=30 mni).

Level 2 was excavated entirely in the dark gray, sandy soil. The artifacts include a whole sanitary can with single crimped end seam and double side seam, a door knob, nails, bone, window glass, milled wood, crown bottle caps, brick, plaster, tarpaper, and ceramics (n=174 mni). The level was abruptly ended when glacial outwash sediments were encountered nearly one foot below the datum.

Unit 69N27W – Wood Shop

This unit was initially three feet on a side, however, a pier beam on the south covered roughly one foot of the unit. The only level excavated in this unit was entirely in a dark grayish brown, sandy soil. The sand size ranged between very coarse to medium and contained a large amount of cobbles and pebbles. The level was discontinued at roughly one foot of depth when sterile bedded sands were encountered. The bedded sands were used as an indication of outwash sediments. Artifacts consisted of bone, nails, and crown bottle caps, tin can fragments, bottle glass, brick mortar and plaster fragments (n=84 mni).

Unit 72N27W – Wood Shop

This unit was excavated in the same manner as the previous unit (69N27W). A 1-foot thick level was excavated to the top of the bedded sands. Artifacts recovered were glass, bone, brick mortar, and metal can fragments.

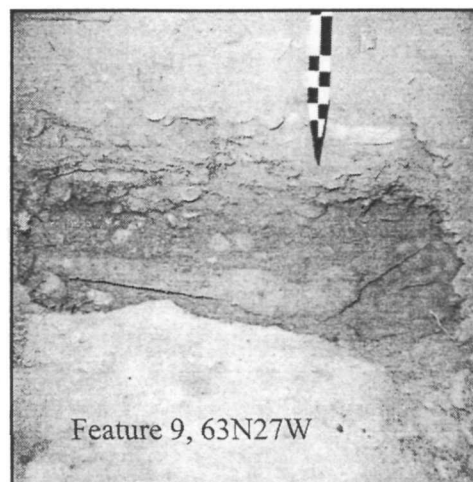


Figure 47: Feature 9 Sewer Pipe

Unit 60N4W – Wood Shop

This was a small 1-ft. x 2-ft. unit near the east wall of the wood shop (figure 31). The unit was excavated in two levels with a total depth of 0.3 foot. The artifacts consisted of post-1950s trash. Because of their very late age, no artifacts were retained for analysis.

Scrapes A & B – Wood Shop

After unit excavations were completed, two large areas were outlined for a surface scrape (figure 31). The wooden sills on their northern and southern limits defined these areas. Scrape Area A measured nine feet east to west and three feet north to south. In a portion of the scrape area was unit 69N7W. The grid coordinates were from 63N3W to 63N12W. Only identifiable and datable artifacts were retained. The artifacts were provenienced by the unit in

which they were found. No additional features were found in the scrape area.

Scrape Area B included the cleared surface between unit 66N18W to 66N3W. The area was 15 feet east to west and three feet north to south. The main purpose of this scrape was to find more features that related to

feature 8, however, no further information was recovered.

Unit 58N37W - Wood Shop

This unit was specially cut near the concrete pad where a large bake oven had been located in the 1950s and 1960s (figure 48). The unit was excavated to determine if the installation of the concrete pad had disturbed older deposits; however, no such deposits were found.

The soil from the first level was grayish brown sand and was similar to other excavations in the wood shop. Artifacts found in this level include a buckle, a button, bottle glass, crockery, bone, shell, nails, tin can fragments, brick, coal and white-ware ceramic sherds (n=89 mni). At the start of Level 2, a thin layer of wood was encountered that extended across the unit (figure 49). Further excavation did not reveal any associated building materials such as structural members or hardware fasteners that would indicate that the wood was an intentional structure such as a floor. The wood did have a layer of paper with some backing material, most likely tarpaper, that suggests instead roofing material. The artifacts recovered include a peach pit, cork, ceramics, shell, bottle glass, bone, brick, nails, can fragments, and a shoe grommet (n=74 mni). Few artifacts were recovered from Level 3 (n=22 mni). Near the base of the level, light brownish gray sand was encountered. This was an indication of bedded sands, which ended the excavation in the unit.

Nothing in Level 3 signified the purpose of the wood found in Level 2. The presence of the wood just above the bedded sands indicated that it could have had some function with the gold rush era building. The installation of the concrete pad did not appear to disturb older deposits.

Feature 10, Unit 68N55W - Wood Shop

This unit was located in the shed area on the west side of the wood shop (figure 31). The floor consisted of one layer of tongue-and-groove planking. Another jumble of floor joists and supports was revealed below the flooring. The main support in the center was a 4-in. x 4-in. beam laid directly on the ground surface. On the west wall of the building a 2-in. x 4-in. wall stud was used as a support beam with shims underneath for leveling.

Another shorter wall stud was used just to the east as a support beam. It also was shimmed underneath presumably for leveling. The floor joists were 2-in. x 4-in. wall studs cut to the 10-foot width of the building. The poor construction method suggests that this shed was built in haste and with a minimal knowledge of framing. Level 1 was composed of grayish brown



Figure 48: Concrete Pad after Removal of Building

sand that was coarse to fine with pebbles and cobbles. The artifacts recovered include bottle glass, crown bottle caps, windowpane fragments, brick, bones, nails, and wood debris (n=129 mni). Level 2 also consisted entirely of grayish brown sand. The soil was loosely packed and rocky in

the southwest corner. Artifacts recovered include brick, glass, a whole bottle, bones, and nails (n=44 mni).

In the third level on the western side of the unit the soil changed to a light brownish gray that was compacted and contained pebbles and cobbles. On the eastern side the soil changed to a dark grayish brown that was very organic and loamy with a high concentration of pebbles and cobbles. A small lens of the grayish brown sand was in the center of the unit (figure 50, profile view). There was a slight depression in the light brownish gray layer that was thought to have been a builder's trench, but subsequent excavations did not support this speculation. The artifacts recovered include brick, nails, and windowpane fragments (n=55 mni).



Figure 49: Wood Planking in 58N37W

During excavations of the fourth level, the field notes indicate that a layer of rock was found with small amounts of loosely compacted soil in the spaces between rocks (figure 50, plan view). This was similar to other pebble and cobble cesspools found on the site. The top of the feature was

cleared off for the next level (feature 10). Recovered artifacts consisted of nails, glass, brick, bones, wood, and caulking (n=36 mni). Based on previous experience this feature was tentatively identified as a cesspool or gray water box. Even though no structural wood was found in this level, the soil composition and deposition were consistent with previous cesspool excavations. The excavator noted that the feature may have started in the previous level but was indistinguishable from the non-feature soil. Artifacts recovered were not separated between the feature and Level 3 for the same reason, but only the feature was excavated from level 5 to the close of the unit. Artifacts include nails, glass, brick, mortar, bones, and metal fragments (n=27 mni).

Small pockets of soil were found throughout the first level of feature 10. In the level there appeared to be a fragment of wood cribbing that would have been typical of cesspool construction. Some pebbles and cobbles when removed had voids beneath them, most likely produced by rapid filling or created by decomposition of organic matter between the cobbles. Artifacts from this level include nails, glass, brick, mortar, bones, and metal fragments (n=35 mni).

The second level in feature 10 was nearly 0.5 foot thick. No changes were seen in the feature. Also, no further wood cribbing was found, which was necessary to bolster the idea of a cesspool. The artifacts found in this level include nails, brick, mortar, burned wood, bottle glass, window glass, and metal fragments (n=83 mni).

By the middle of the third level in feature 10, the coarseness of the sand grains increased and continued to the lowest portion of the level. Artifacts were recovered at the beginning of the level, but none near the bottom. Artifacts recovered include

nails, metal fragments, glass, bone, and charcoal (n=197 mni). In the upper portion of the level in the northwest corner, a foot from a cast iron stove was found. No other associated stove parts were found in the entire unit. Glacial outwash sediments were encountered roughly 2.5 feet below the unit datum.

The artifacts recovered from the feature have a wide date range, from 1904 to 1946. Without further diagnostic artifacts, it was impossible to refine the dating. It is possible that the feature dates from the early 1930s to the early 1940s. The Hotel Seattle on Lot 2 was known to cover the area from very early in the gold rush until the 1930s when it supposedly was demolished (table B-1). The lack of definite wood cribbing and pipes made it difficult to label feature 10 as a cesspool. However, no other evidence points to a different use.

Summary of Sub-Floor Excavations in the Wood Shop

In the excavations of the units in the eastern (front) half of the structure, there was a high frequency of construction related materials. The materials were modern and reflected construction from the early 1940s. The materials consisted of modern electrical wire, wire nails, and plastic products. These artifacts were deposited on top of the destruction debris materials of the Fasel/Red Front Building. The artifacts representative of the gold rush era building and its destruction include tin roofing, tarpaper, fire-checked brick, wire nails, and glass bottles and windowpane fragments.

Excavations in the open trench area of the feature 9 water/sewer line support the historical building sequence. The excavation of the pipe can be dated to the 1940s addition by the feature profile, which clearly

cuts through the earlier levels. In addition, the line can be traced to the previously excavated (1995) gray water or cesspool (feature 6) located south of the structure.

The gold rush building was also represented in the fragments of plate glass display windows. The thickest window glass was found in the units on the eastern side of the building. The thick glass corresponds to the large display windows that faced Broadway in the Fasel/Red Front Store. The units farther from the east wall had thinner window glass, indicating that residential-type windows were in the rear or side of the building.

The excavations support the historical record as to the sequence of building constructions and expansions. In the lowest levels artifacts were infrequent and scattered. Higher levels show larger frequencies of similar artifacts; however, structural debris was much more common. Artifacts such as roofing materials and wallpaper sections were mixed together, which are the kinds of disparate materials heaped together when a structure is demolished. These artifacts were found in Level 2 of 58N37W and 60N27W, Level 3 of 59N21W and 62N7W, and feature 8.

If the site was open to the elements after the demolition of the original structure, it was not readily discernible in the archaeological record. As many as eight years passed between the demolition of the Fasel/Red Front Store and the construction of the Wood Shop in 1942. The poor construction of the flooring lends credence to the hypothesis that the Wood Shop was quickly built. No evidence of fire to the earlier building was seen, so it was presumed that the gold rush building had simply become a victim of structural instability.

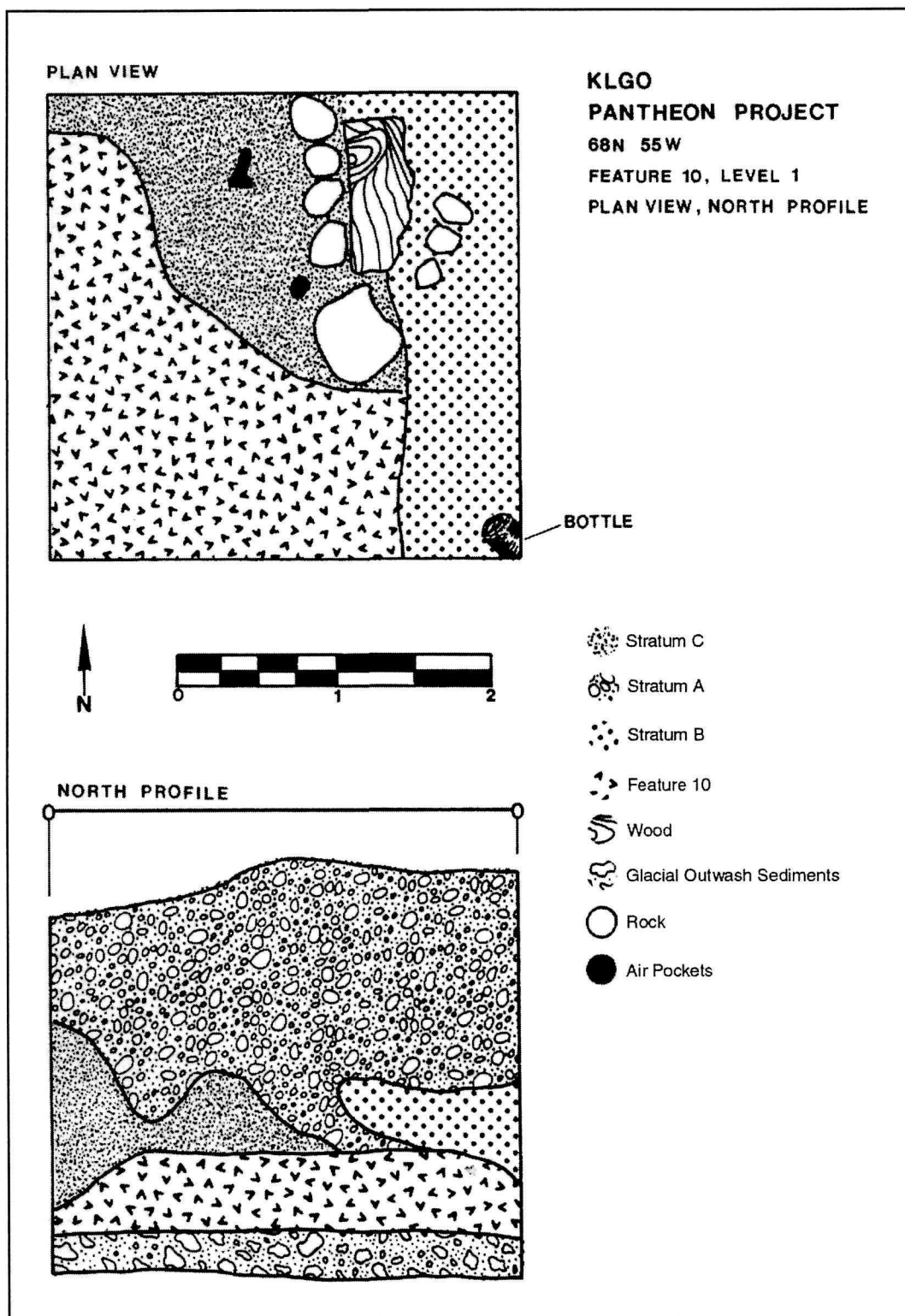


Figure 50: North Profile and Plan View of 68N55W

1997

Feature 20, Unit 56N29W - Wood Shop

During the sub-floor investigations in the wood shop, in 1996, a large circular depression about 5 or 6 feet in diameter was found under the south wall, west of the centerline (figure 31). Time constraints did not allow for excavation in the depression. An auger test was performed in the center of the depression to determine the nature of the deposit. Enough artifacts were recovered from the auger hole to warrant additional investigations. In 1997, the portion of wall above the depression was removed. The unit was laid out so that it cut through only a portion of the depressed area. The unit measured 3-feet square and was given the coordinates 56N29W. Figure 51 is a profile drawing of the west wall of this unit. Feature 20 was identified in this unit (table 2).

The surface of the unit sloped sharply down to the south. A very spongy humic soil was found under the leaves. The soil in the first level was not screened, and no artifacts were retained. At roughly 0.75 foot down an intact soil layer was contacted.

The second level was excavated mostly in the north to even out the unit. The level was an arbitrary 0.3 foot thick. The soil was reddish brown near the top of the level and grayish brown at the base of level. The artifacts include small bottle fragments, windowpanes, tin cans, and bones (n=117 mni). In level 3, a fill-like soil was found on the north side of the unit and spread across the floor of the unit. The artifacts were clustered on the south side of the unit away from the fill-like soil.

Level 4 was an arbitrary 0.3 foot thick. The fill increased until it covered most of the

unit, except for the center and southwest corner. The color of the fill was dark, grayish brown. The artifacts came from the center of the unit and include nails, bones, bottle and window glass, textile, plastic, brick, and a .38 caliber cartridge (n=84 mni).

In Level 5, the soil consisted of a loose matrix between large pebbles and cobbles. Ashy, burned material was in the center of the unit. A small vertical post was in the northwest corner as well as a bottle in the southeast. The artifacts were concentrated in the southern half of the unit.

In Level 6, a whole Lea & Perrins bottle was recovered. Coal chunks, paint chips, glass, nails, and bone fragments were also found in the level (n=84 mni). The soil in the northwest with the post was loose coarse sand with cobbles. In the southwest the soil was a fine grain sand and gravel. The center contained burned material and paint chips.

In Level 7, a horizontal wood beam was found in the north end of the unit. Ashy/charcoal soil was present in the south portion of the unit. The artifacts consisted of nails, glass, brick, ceramics, coal chunks, wood, and concrete fragments (n=103 mni). The wood beam in the north section of the unit continued through Level 8. Another beam was also found in the southern portion of the unit in Level 8. Plastic was found in this level as well as tin can fragments, brick, nail, glass, ceramics, and sewer pipe fragments (n=64 mni). The beams in the unit were designated as feature 20. The structural feature was classified tentatively as a builder's trench or cribbing for a gray-water box or cesspool.

The first level in feature 20 contained wood beams in an advanced state of decay. The

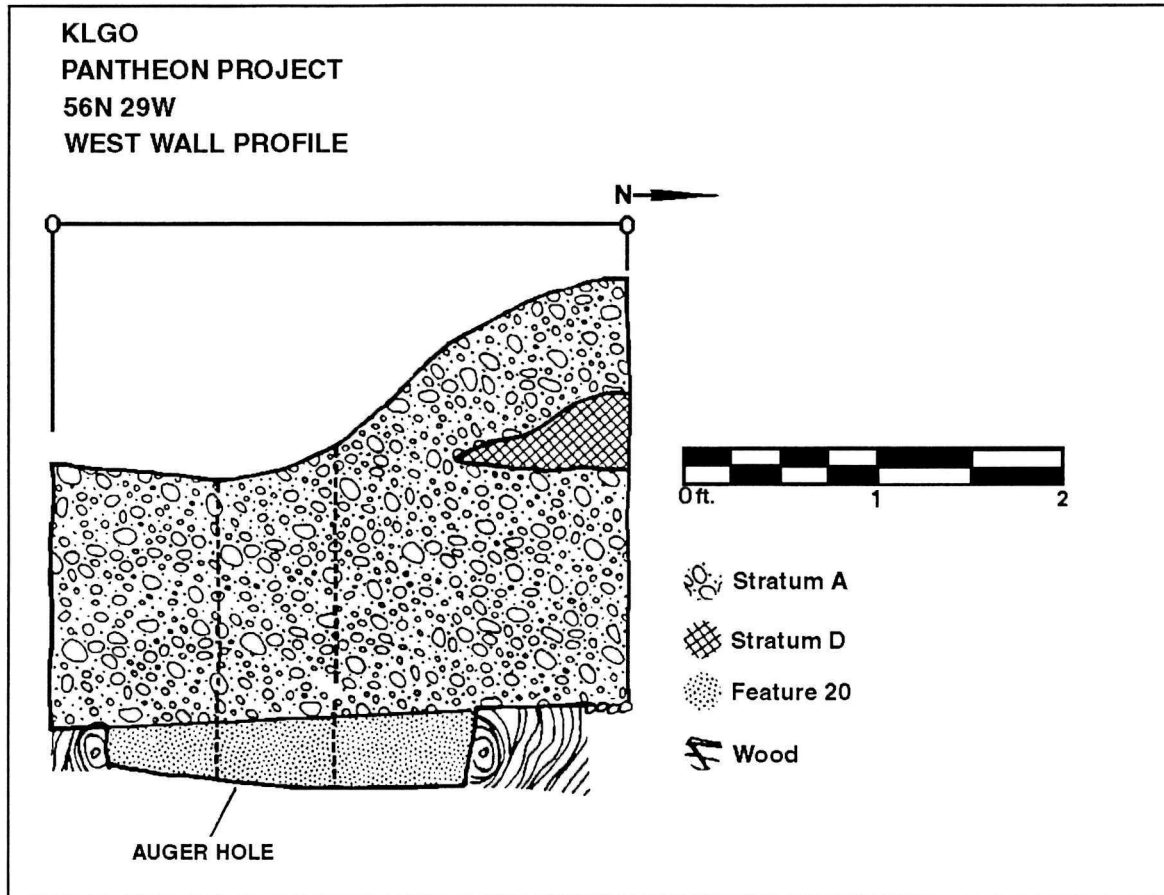


Figure 51: West Wall Profile of 56N29W

beam on the north was roughly six inches on a side, while the south beam was 6 in. x 3 in. A vertically oriented electrical conduit and a metal bar were found at the base of Level 1. The profile drawing shows a break between feature 20 and the upper portion of the unit; however, this was only to indicate the feature area, not to denote a change in the soil (figure 51).

In Level 2 a 2-inch wide beam was uncovered. It projected roughly 6 inches into the unit from the west wall. The beam on the north side started at 2.6 feet below datum and extended down below 3.2 feet. The electrical conduit was removed at that level about 3.5 feet below datum. Level 3 was similar to Level 2 in soils, and the

wood beams extended down through the level. The soil in-between the beams was disturbed and resembled fill, although the presence of glacial sediments indicated that perhaps the end of the deposit was found in the north. The artifacts from this level consist of flowerpot sherds, ceramics, nails, glass, and a possible gear shift lever (n=68 mni).

In the fourth level of the feature, the wood beams continued down, but the soil appeared to change to a sandy, less rocky soil. Artifacts were also recovered from the new sandy soil. The feature appeared to be at the same height as the feature 6 cess-pool cribbing, which indicated a possible relationship of function. The sandy soil

was similar to that found at the bottom of feature 6. Level 4 contained plastic, as well as nails, glass, ceramics, bone, and tin can fragments (n=50 mni). Level 5 had similar soils and artifacts, except for another wood plank or beam that ran north-south and in an undetermined manner connected with the beams on the north and south sides of the unit. Level 6 was never completed due to floods from rain. The depth of the deposit was approximately four feet below the unit datum.

The foundation was excavated to a depth of five feet, while the stem walls were excavated to a depth of 6 feet. In the area of feature 20, a 4-in. x 12-in. by 4-ft.-long beam was found. Unfortunately, new sewer pipes had been installed without archeological monitoring, destroying whatever was left of feature 20. In the southwest corner of the excavation, two older sewer pipes were found. They ran parallel to each other and parallel to the south edge. The pipes disturbed the soil and the artifacts recovered were of mixed ages. Some of the artifacts recovered include a Cudahy Packing Co. milk glass jar, a "Murray & Lanman Drug-gists Florida Water" bottle, a tooled dip mold alcohol bottle, two enameled tin pots, an Olympia "shorty" beer bottle, a cast iron stove foot, several very large mammal bones, a complete steer's horn, a porcelain door knob, and a flat-end shovel without a handle.

The depth of the wood beams suggests a function other than foundation support. The mixed deposit with modern debris and plastic suggest that the beams were installed after the Fasel/Red Front Store was removed, possibly in conjunction with the feature 6 cesspool.

Feature 27 - Fasel/Red Front

This midden feature was discovered during the restoration crews' excavations for the foundation. It was located in what would have been the extreme northwest corner of the Fasel/Red Front Building (figure 31). The top of the feature was about three feet below the ground surface. On first inspection it was a concentration of artifacts in dark soil surrounded by rotted wood (figure 52). The field notes indicated the feature contained hundreds if not thousands of windowpane fragments. The sheer number precluded a complete collection, so only a sample of recognizable pieces could be recovered. Feature 27 also appears to have been in part a paint dump during the Fasel occupation.

After the overburden was removed, it was discovered that the feature was close to four feet wide north to south. The trash midden was wood lined as evidenced by vertical planking found on the north side. In the center of the feature were two small wooden casks or barrels, each containing an unknown substance that was collected for later analysis. Three samples were sent to the Northeast Cultural Resource Center in Lowell, Massachusetts. Two of the samples were whitish lumps that were somewhat flexible and soft. The third sample was green.

All of the samples were cross-sectioned for microscopic analysis. The first sample had at least four distinct layers. The first was wood fibers from the cask. The second was a black tar like substance. The third layer contained two to three layers of a white to off-white paint. Each layer was subjected to tests to determine its composition. All the layers reacted positively to sodium sulfide, which is an indication of lead-based paint. The relative softness is an indication that linseed oil was the base for the paint, and

this had yellowed through time. The fourth layer was dirt or clay from the surrounding midden. The inference is that paint was kept in a tar-lined cask or barrel.

The second sample followed the same basic layering as seen in the first sample. The difference was that slightly different colored paint was kept in the second cask. The first layer was white followed by a light cream color in two or three layers and lastly a single layer of cream paint. These paints also contained lead and linseed oil.

The third sample came from just outside the casks. In cross-section it was a jumble of paint covered in dirt. All the paints in the sample were lead-based linseed oil. The sequence of paints began with three layers of green paint, each one separated from the other by fractures, which is an indication that some time had passed in-between layers. Another fracture was between the green layers and two or three layers of a yellowish-white paint and another layer of green paint and final a layer of yellowish-white paint. The sample lacked the wood fiber and tar layers found in the first two samples, which perhaps indicates that the sample was from the center part of a different cask.

One macrobotanical sample was submitted for analysis from this feature (Martin and Popper 1998). The identified seeds consisted of *Ficus* (fig), *Fragaria* (strawberry), *Lycopersicon esculentum* (tomato), *Rubus* (raspberry), and *Vitus* (grape). Even though the main function of the feature appears to have been a trash deposit, the density of seeds recovered suggested that human fecal matter was also deposited in the feature area. The strawberries and raspberries represent the only fruits that were possibly locally grown. All of the others represented fruits and vegetables that would have to

have been imported. The list is limited in variety, considering the feature dates to the gold rush when the availability of different fruits and vegetables was quite high.

The dates indicated by the artifacts ranged between 1899 and 1915. The large number of artifacts relating to home improvement (i.e., window glass and paint) indicated that the deposit dated to the occupation of Fasel's Paint and Wallpaper Store. The store was in business from late 1898 until early 1902. The location of the trash dump would also indicate that the original store did not fill its portion of the lot.

Rainier Complex

1996

Utility Corridor Trench Excavations

The mitigation plan called for the archaeological investigation of the utility corridor that extended roughly 40 feet from the entrance of the wood shop south to the alley (figure 31). Past restoration experience indicated that the utility corridor would need to have a maximum clearance of 8 feet in width. The planned clearances gave the restoration crew and backhoe operators the most leeway in placing the new utility lines.



Figure 52: Feature 27

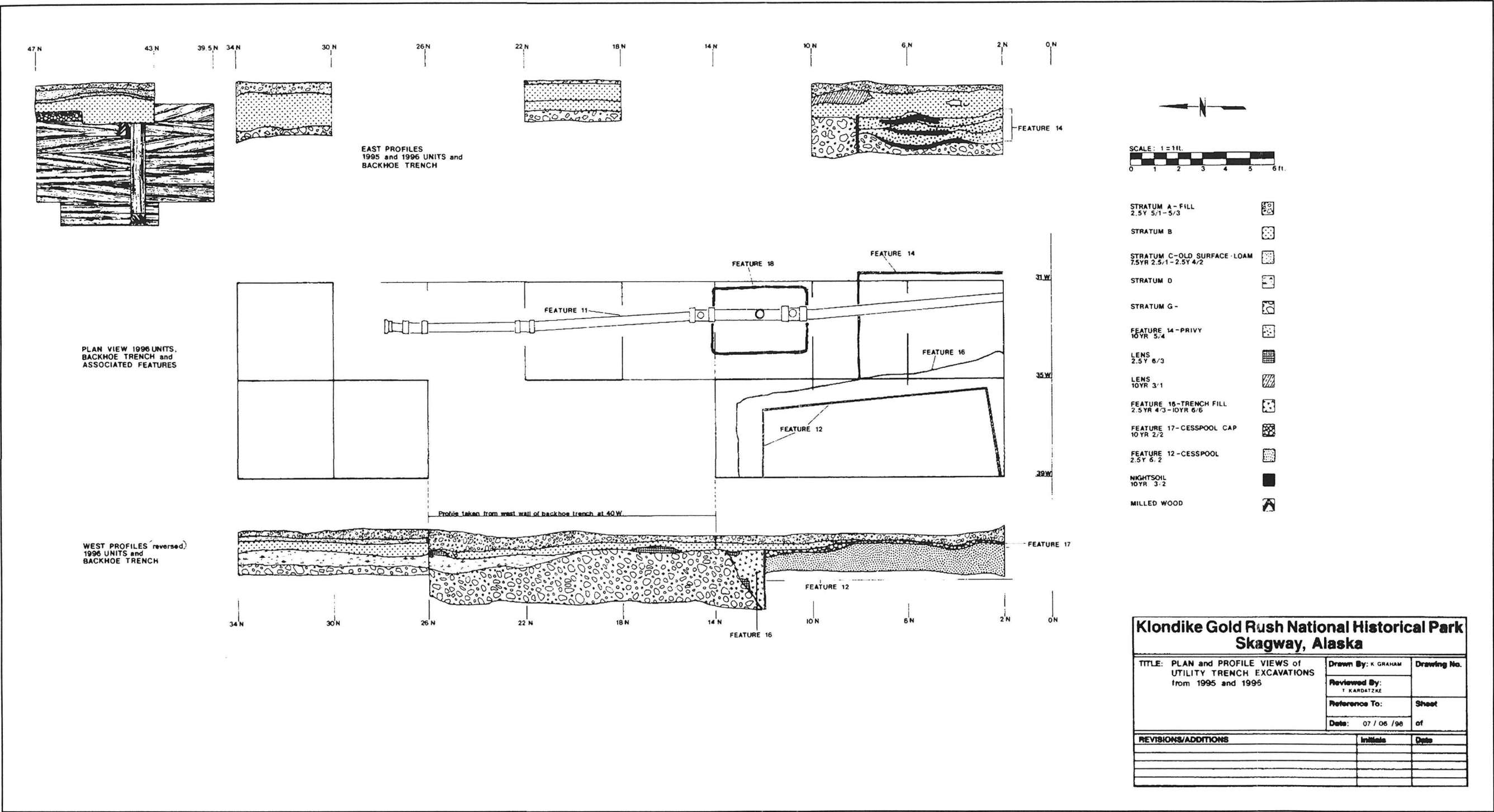


Figure 53: Utility Trench Excavation Drawing

A backhoe was used to remove the parking lot fill to a depth of approximately 1.5 feet. The parking lot fill was Layer A. After the removal of the fill, an area approximately 10 ft. x 40 ft., units four feet on a side were laid out in the trench. The units established in the trench were 6N35W, 6N39W, 10N35W, 10N39W, 14N39W, 22N35W, 30N39W, 34N35W, and 34N39W (figure 53).

Features 12 and 17 - Units 6N39W and 10N39W - Rainier

These units were excavated contemporaneously to further expose features found in Unit 14N39W. Feature 12 was the gray-water/sewer box first discovered in 14N39W. The units were excavated to the top of the feature to determine its full extent.

Two levels were excavated in each unit. The units were excavated down to a depth of 1.5 feet. The first level encountered fill that is thought to be a cap (feature 17) for the gray-water/sewer box below, however, later excavations revealed that feature 17 covered an area much larger than feature 12 and acted as a cap only as a by-product of its deposition. The second level completely removed the feature 17 layer and exposed wood from feature 12 (figure 54). Excavation was discontinued once feature 12 was exposed. Since the feature was virtually sterile fill it was decided not to fully excavate it.

Features 11 and 14 - Unit 10N35W - Rainier

Levels 1 and 2 were excavated by stratigraphic level and both were composed of fine, dark, grayish brown sand, very loose and poorly sorted soil with pebbles and cobbles. These levels cleared off any remaining parking lot fill that was missed by the backhoe. Artifacts found in these levels were not retained for analysis.

Levels 3, 4, and 5 comprised the fill layers for feature 11 (figure 55). Feature 11 was a cast iron sewer pipe (four inches in diameter) that ran for nearly the entire length of the utility corridor (table 2, figure 53). The fill was a mix of ash, slag, burned coal, pebbles, and cobbles in a sand matrix. The northwest corner of the unit appeared to be outside the feature 11 area (figure 56). The levels contained a large amount of building debris. The field notes suggest it was from the demolition in the 1960s of the buildings on the south half of Lot 1. Artifacts recovered include a button, bones, ceramics, bottle and flat glass, building materials, clothing, and housewares.

In Level 5, feature 14 was first identified; however, profile drawings of the south wall indicate that the feature started just below Layer A (figure 55). Feature 14 was a wood-lined privy. The discovery was delayed due to the lack of a clear interface between features 11 and 14. The upper portion of feature 14 was very fine sand with few cobbles and pebbles, while the lower portion was loamy and heavily organic. The builder's trench for the feature 11 sewer pipe cut through feature 14 on the west. On the west wall of the unit a wooden wall, capped with a cement slab, was discovered. It appeared to evenly divide the unit north and south. The wooden wall separated feature 14 from the surrounding outwash sediments (figure 56). The wooden wall represented the north retaining wall for feature 14. The wall was also seen at the base of the unit. A small installation trench was found on the north side of the wall. Presumably the trench was for the feature 14 wall.

Feature 14 soils in the southwest corner, behind the wooden wall had organic components (eggshell and small bone) as part of the soil matrix. Whole bottles were recovered from the southwest corner of the unit,

A backhoe was used to remove the parking lot fill to a depth of approximately 1.5 feet. The parking lot fill was Layer A. After the removal of the fill, an area approximately 10 ft. x 40 ft., units four feet on a side were laid out in the trench. The units established in the trench were 6N35W, 6N39W, 10N35W, 10N39W, 14N39W, 22N35W, 30N39W, 34N35W, and 34N39W (figure 53).

Features 12 and 17 - Units 6N39W and 10N39W - Rainier

These units were excavated contemporaneously to further expose features found in Unit 14N39W. Feature 12 was the gray-water/sewer box first discovered in 14N39W. The units were excavated to the top of the feature to determine its full extent.

Two levels were excavated in each unit. The units were excavated down to a depth of 1.5 feet. The first level encountered fill that is thought to be a cap (feature 17) for the gray-water/sewer box below, however, later excavations revealed that feature 17 covered an area much larger than feature 12 and acted as a cap only as a by-product of its deposition. The second level completely removed the feature 17 layer and exposed wood from feature 12 (figure 54). Excavation was discontinued once feature 12 was exposed. Since the feature was virtually sterile fill it was decided not to fully excavate it.

Features 11 and 14 - Unit 10N35W - Rainier

Levels 1 and 2 were excavated by stratigraphic level and both were composed of fine, dark, grayish brown sand, very loose and poorly sorted soil with pebbles and cobbles. These levels cleared off any remaining parking lot fill that was missed by

the backhoe. Artifacts found in these levels were not retained for analysis.

Levels 3, 4, and 5 comprised the fill layers for feature 11 (figure 55). Feature 11 was a cast iron sewer pipe (four inches in diameter) that ran for nearly the entire length of the utility corridor (table 2, figure 53). The fill was a mix of ash, slag, burned coal, pebbles, and cobbles in a sand matrix. The northwest corner of the unit appeared to be outside the feature 11 area (figure 56). The levels contained a large amount of building debris. The field notes suggest it was from the demolition in the 1960s of the buildings on the south half of Lot 1. Artifacts recovered include a button, bones, ceramics, bottle and flat glass, building materials, clothing, and housewares.

In Level 5, feature 14 was first identified; however, profile drawings of the south wall indicate that the feature started just below Layer A (figure 55). Feature 14 was a wood-lined privy. The discovery was delayed due to the lack of a clear interface between features 11 and 14. The upper portion of feature 14 was very fine sand with few cobbles and pebbles, while the lower portion was loamy and heavily organic. The builder's trench for the feature 11 sewer pipe cut through feature 14 on the west. On the west wall of the unit a wooden wall, capped with a cement slab, was discovered. It appeared to evenly divide the unit north and south. The wooden wall separated feature 14 from the surrounding outwash sediments (figure 56). The wooden wall represented the north retaining wall for feature 14. The wall was also seen at the base of the unit. A small installation trench was found on the north side of the wall. Presumably the trench was for the feature 14 wall.

Feature 14 soils in the southwest corner, behind the wooden wall had organic components (eggshell and small bone) as part of

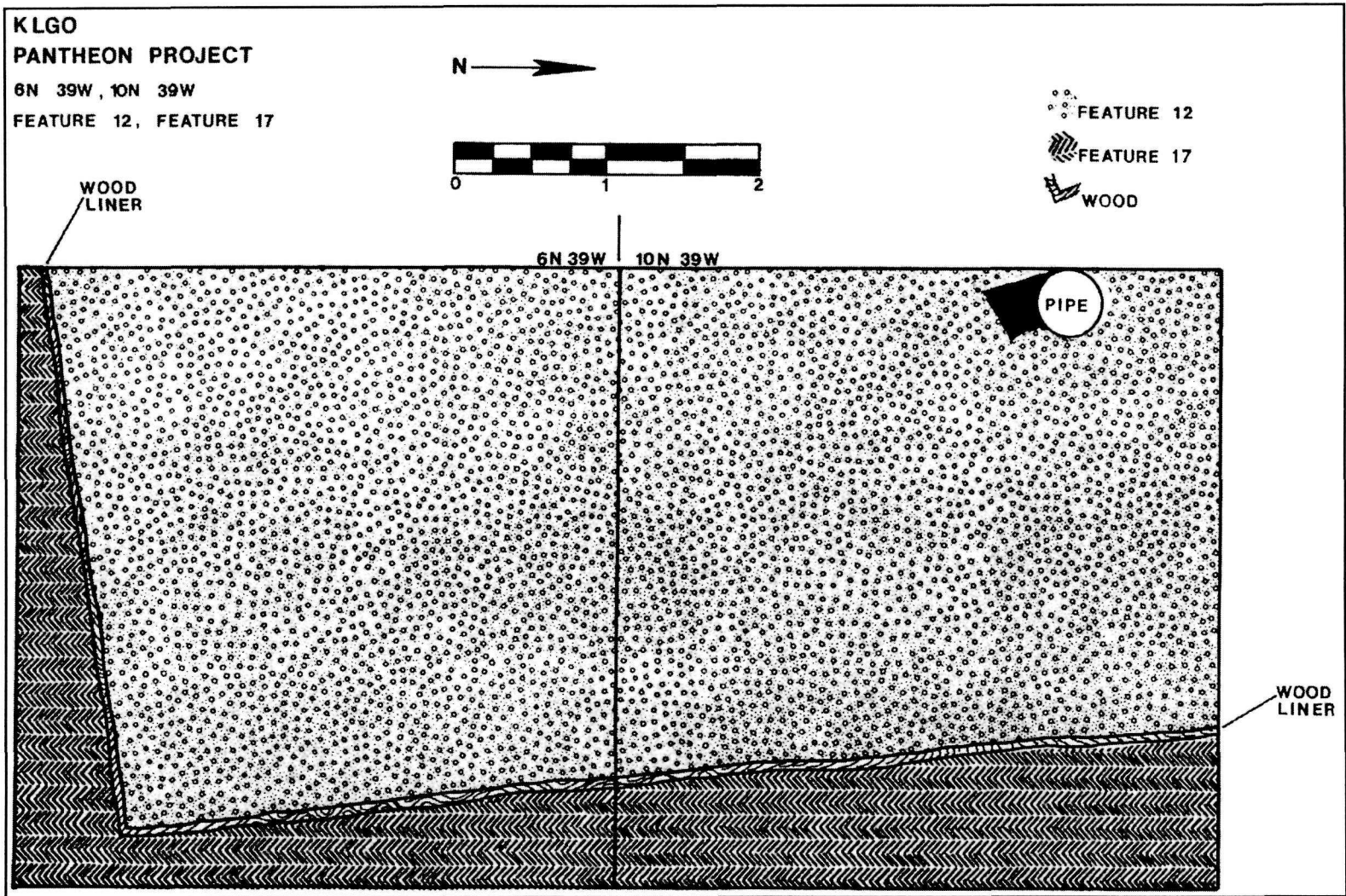


Figure 54: 6N39W, 10N39W Plan View

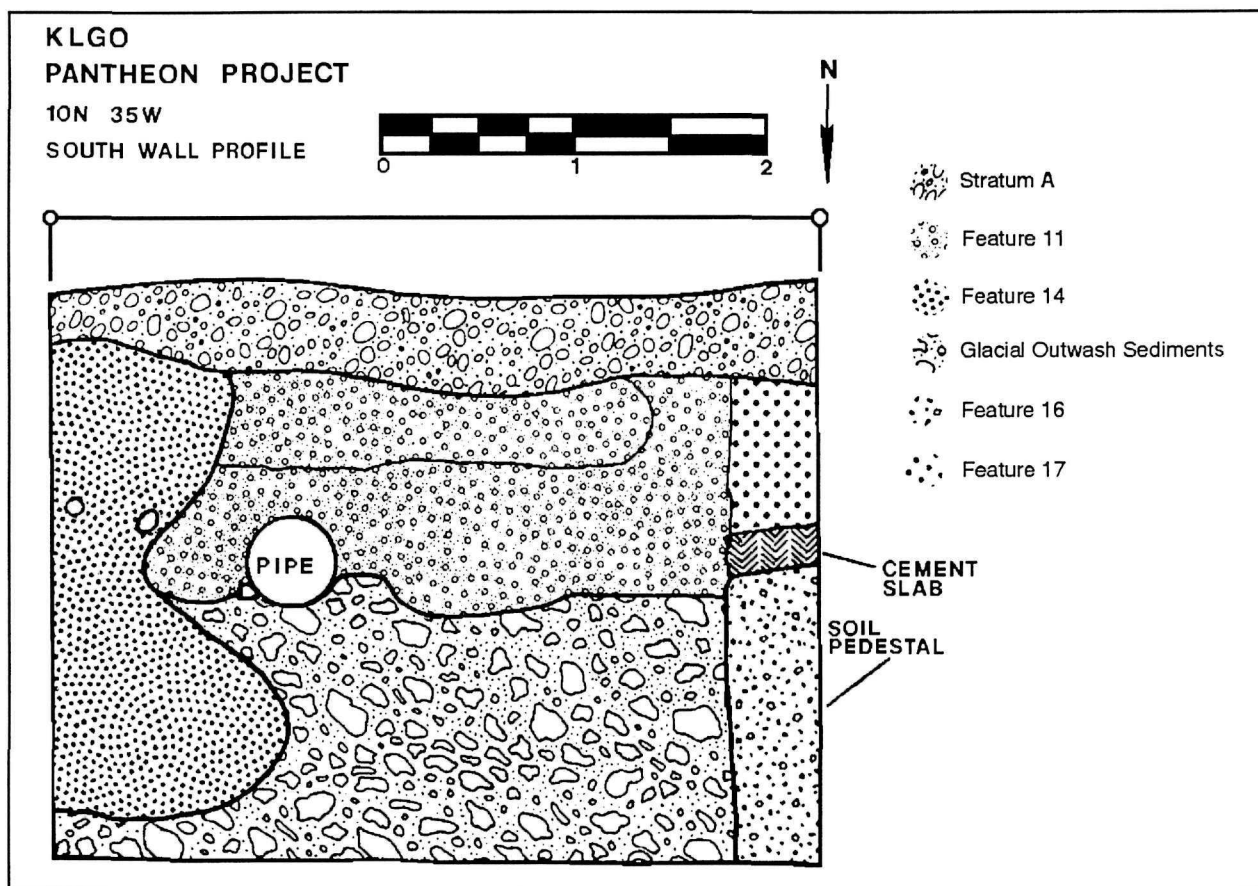


Figure 55: 10N35W South Wall Profile

the soil matrix. Whole bottles were recovered from the southwest corner of the unit, which corresponded to the west portion of feature 14. Evidence of seed concentrations, and human waste material confirms feature 14 functioned as a privy.

The second level of feature 14 was an arbitrary 0.3-foot layer through more compact fill soils, with decayed rock in soil pockets. Whole bottles were found on the east side of the unit. This was the first indication that there was another undisturbed deposit in the unit. Only later was it realized that it was related to the west privy deposit. Artifacts recovered were buttons, coal (unburned), bones, a threaded bolt, a railroad spike, a non-ferrous metal cylinder, nails,

tacks, can fragments, bottle glass (green, amber, blue and clear), and tin foil (n=94 mni).

By the third level of feature 14, a clear north/south separation was visible. The thin wooden wall found earlier went across to the east side below feature 11. The northern half of the unit outside the feature 14 box was outwash sediment. Excavation in the northern portion of the unit was discontinued. Numerous seeds and small bones were found throughout the south portion of the level. Recovered artifacts include buttons, foil, medicine and drinking bottles (whole), bottle with text "patent May 1899," sewer pipefitting, shotgun shell,

marine bivalve, ceramic sherds, nails, and screws (n=389 mni).

The fourth and fifth levels were a continuation of the previous three levels. Large quantities of seeds and other organic material were found throughout the feature portion of the unit. Artifacts of the same variety as found above were recovered from both levels.

During later analysis it was discovered that feature 17 (see units 6/10N39W) intruded from the west into the unit over feature 14 (figure 56). The sequence of events based on this unit suggests that feature 14 was installed first. The installation trench for

feature 12 cut into feature 14, and the cap fill from feature 17 covered the west wall of feature 14. Feature 11 cut through feature 17 and the center of feature 14, removing most of the north retaining wall. Also a portion of feature 12 was removed by feature 11.

Three samples from feature 14 were sent for macrobotanical (appendix M) and pollen analysis (appendix L). The pollen sample was taken from Level 4 and the macrobotanical samples were taken from Levels 3 and 4.

The pollen yielded a variety of trees, weedy plants, and edible plants. The most common tree pollen was from pine and

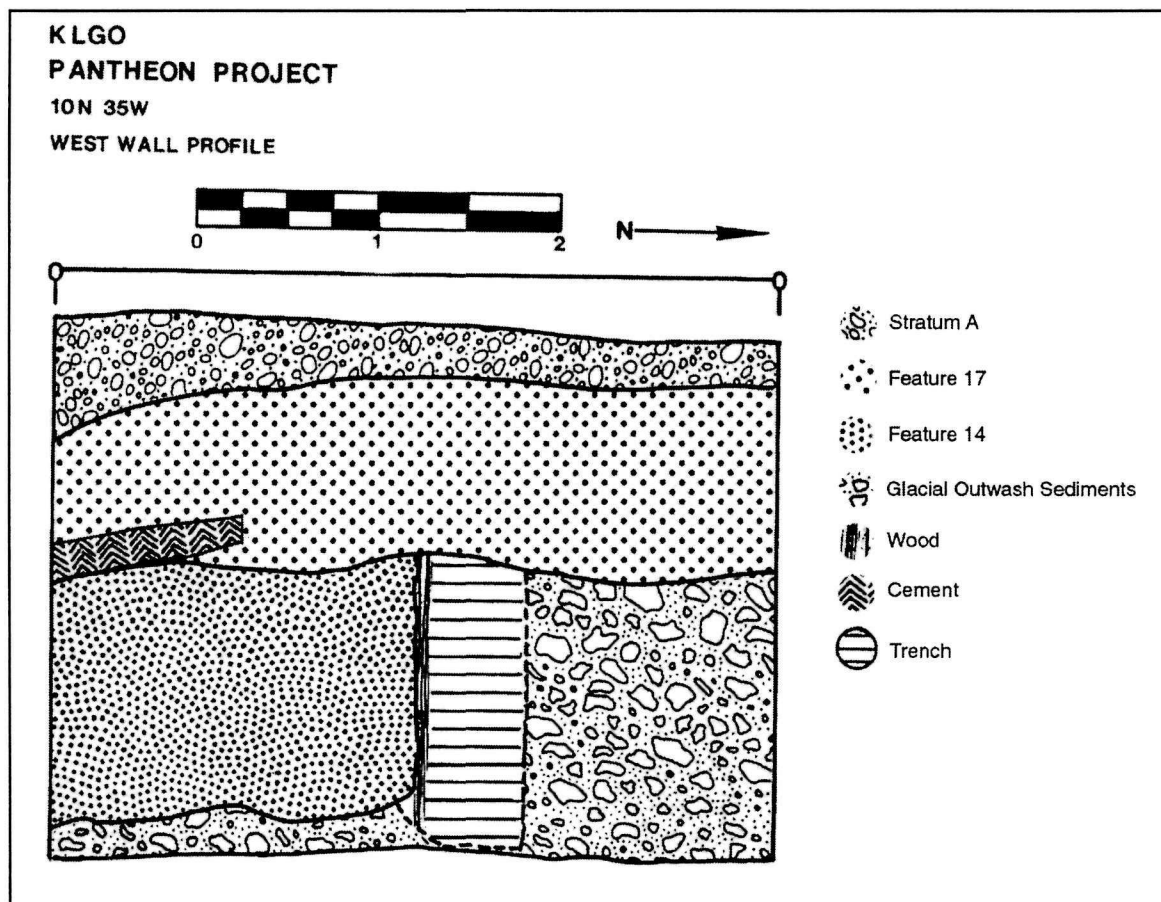


Figure 56: 10N35W West Wall Profile

spruce, with alder and hemlock comprising a smaller portion of the sample. Evidence of weedy plants found in the sample include *Arenaria* (pussytoes), *Artemisia* (sagebrush), *Poaceae* (grass family), low-spine *Asteraceae* (ragweed), *Astragalus* (milkvetch), and Chen-Ams (amaranth family). The Chen-Ams could represent an edible form from the spinach family. Pollen from edible plants includes *Apiaceae* (carrot/parsley family), *Cereal*, *Eugenia* (clove), *Fragaria* (strawberry), *Lamiaceae* (mint family), *Vitis* (grape), and *Zea mays* (corn). *Trichuris* and *Ascaris* parasite eggs were recovered, as well as fungal spores (Cummings and Moutoux 1998).

Pollen from the trees and much of the weed plants represents native species. The only edible plant pollen that is considered native came from *Fragaria*. The rest of the edible plant pollen came from outside Skagway and could only have been introduced by human action. The parasite eggs were an exciting find, considering that these parasites cannot reproduce outside a human host. The sample from the privy had the highest concentration, of all tested samples, of parasite eggs per milliliter of soil.

Phytoliths from these samples are dominated by smooth elongate forms, which are similar across species and therefore not useful for identification purposes. The dendritic elongate phytoliths, which are indicative of edible grasses, were more common in Level 3. Both samples contained phytoliths from the *Arecaceae* family, which has dates and coconuts as members. Level 4 also contained more diatoms than Level 3. Diatoms are the remains of microscopic animals that live in the sea. This means that the soil in Level 4 was more often exposed to tidewaters than Level 3.

The macrobotanical analysis reveals that Level 3 of feature 14 had a higher density of seeds than Level 4 (Martin and Popper 1998). The most common seed families in Level 3 were from figs, raspberries, tomatoes, strawberries, and grapes, respectively. The most common families in Level 4 were strawberries, tomatoes, raspberries, figs, and grapes, respectively. The seeds from the raspberry and strawberry families were the only specimens in the sample considered native to the area. Tomatoes have been and still are grown locally in hothouses. Reliance on imported foods, as today, was the mainstay of subsistence during the gold rush.

Features 12 & 17, Unit 14N39W - Rainier

Levels 1 through 3 encompassed two different layers (A & B). Feature 12 was identified in this unit as well as feature 17, but not until two adjacent units were excavated could feature 17 be identified. Feature 17 was between Layer B and feature 12.

At the base of Level 3 in the center of the unit was a thin line of wood that separated the unit into north and south halves. This was the upper portion of a wooden cess-pool box. North of the wood line was the installation trench for the box (figure 53). The soil in the trench was documented only as far as its color (light, brownish gray). A metal water pipe, found in the southeast corner, extended into feature 12. The small pipe helped designate the feature as a gray-water box.

The soil of feature 12 was a coarse, sandy, mixed soil. The dimensions of the gray-water box were not immediately determined because the feature extended beyond the boundaries of the unit. No artifacts were found inside the area of the box. The artifacts recovered were associated with

fill materials from the installation trench. After Level 1 of the feature was completed, it was decided to concentrate on the installation trench to the north to collect as many artifacts as possible. The second and third levels were excavated exclusively in the northern half of the unit. The soil from the installation trench was crushed rock and poorly sorted fill. The nature of the bottom of the feature was not determined because of wall collapse in the unit.

A sample from Level 3 of feature 12 was sent for pollen analysis. The sample includes *Pinaceae* (pine family), *Alnus* (alder), *Betula* (birch), *Abies* (fir), *Pinus* (pine), *Picea* (spruce), and *Tsuga* (hemlock). *Arnica*-type (pussytoes), *Artemisia* (sagebrush), *Poaceae* (grass family), and *Shepherdia canadensis* (Canadian buffaloberry) represented weedy plants native to the area. Low-spine *Asteraceae* (sunflower family), *Liguliflorae* (dandelion), *Astragalus*, *Brassicaceae* (mustard family), Chenopods, and *Erysimum* (treacle mustard) represented non-native weedy plants. Food pollen from *Cerealia* and *Lamiaceae* (mint family) was found in the sample. Neither starch granules nor parasite eggs were found in the sample. A single dung fungus spore (*Sporormiella*) was found, indicative of the manure from a grazing animal (Cummings and Moutoux 1998).

Feature 11, Unit 22N35W - Rainier

This unit was the first to discover the feature 11 sewer pipe (figure 57). The feature was discovered near the base of Level 3. The light gray soil in the pipe trench was medium coarse sand with pebbles and cobbles. The fifth and final level was excavated entirely in the glacial outwash sediments. The pipe was laid directly on top of the outwash sediments. No artifacts were found below the pipe.



Figure 57: 22N35W, Feature 11

Features 11, 14, 16, & 17, Unit 6N35W - Rainier

This unit contained four features (11, 14, 16, and 17). The unit was located in the southeast corner of the trench (figure 53). The first two levels in the unit were in Layer A, which was one foot thick. The third level was 0.5 foot thick and consisted of an ash/sand loam with pebbles, cobbles, and some roots. The fill soil was part of the feature 17 cap for feature 12. Artifacts recovered include whole bottles (preserves and medicine), a gold plated charm, shells, ceramics, windowpane fragments, and wood and leather fibers.

Level 4 was a predominantly brown soil with fine to coarse sands and was 0.5 foot thick. The level was originally thought to have three features in it, feature 11, feature 15, and feature 16. Later analysis concluded that feature 15 was a part of feature 14, which was cut-off by the installation trench for feature 11. Feature 16 was a part of the installation trench for feature 12 (figure 58). In this level, large numbers of artifacts were recovered from the various features including a flask bottle, three whole champagne bottles, several bottle fragments, a

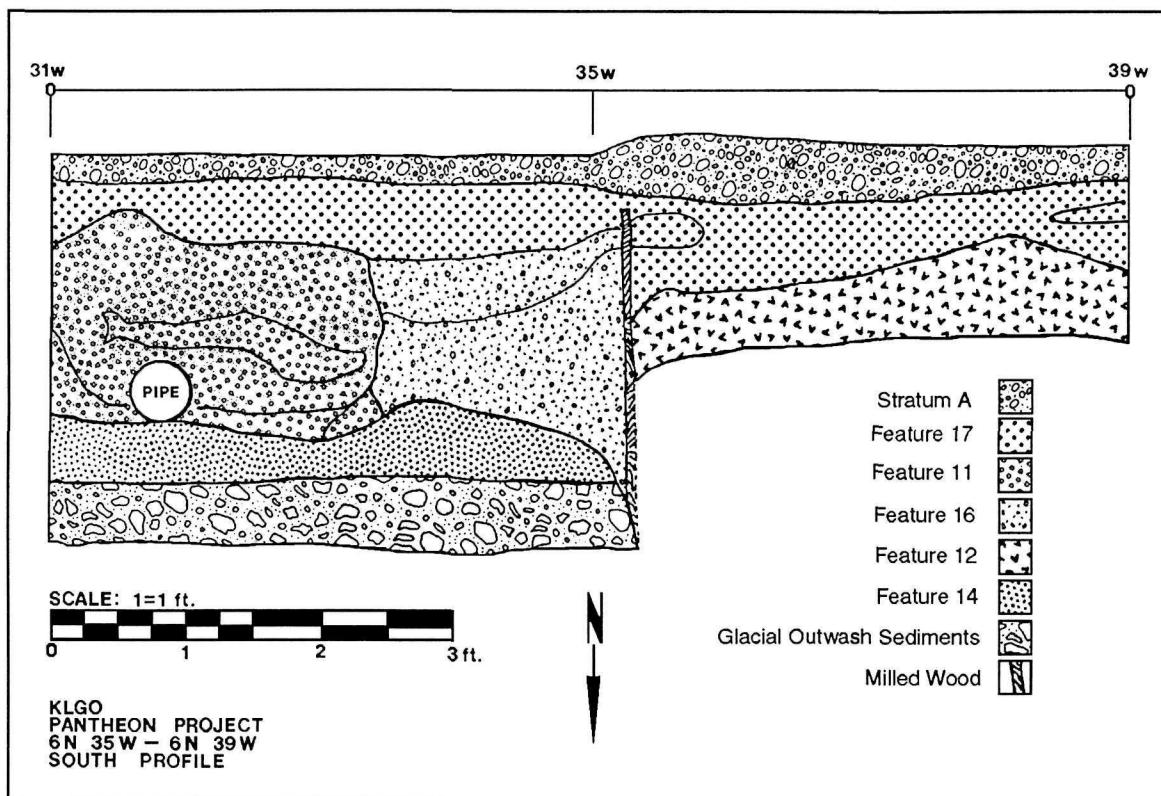


Figure 58: 6N35W - 6N39W South Profile

medicine bottle, four buttons, a buckle, shoe parts, and a safety pin (n=259 mni).

Level 5 was a mixed soil with cobbles, roots, and organic matter. Outwash sediments were found near the top of this level. Artifacts recovered include bones, white Japanese pattern ceramics, a nutshell, bottle glass (green, clear, and amber), fluted glass, button, nails, and assorted ceramic sherds (n=92 mni).

Although feature 16 was the installation trench for feature 12, the artifacts recovered from it indicate an older deposit was disturbed, most likely feature 14. It was impossible to sort out feature 14 from feature 16. The dates taken from the artifacts show feature 16 to be quite old with a range from 1897 to 1919. Perhaps this indicates that the

deposit, while disturbed, was not heavily mixed with younger artifacts.

Three samples were taken from the unit for pollen analysis, Level 3, Level 1 of feature 16, and a seed sample from the east profile. Two macrobotanical samples were also taken: Level 2 of feature 14 and a seed sample from the east profile.

The tree pollen from the samples included alder, pine, spruce, and hemlock. Possible native plants included *Arenaria*-type (pussytoe), *Artemisia* (sagebrush), High-spine *Asteraceae* (aster), *Eriogonum* (buckwheat family), *Lathyrus* (vetchling), *Poaceae* (grass family), and *Rosaceae* (rose family). Other weedy plants found included Low-spine *Asteraceae* (ragweed), *Astragalus* (milkvetch), *Brassicaceae* (mustard

family), *Cheno-am* (amaranth family), and *Euphorbia*-type (spurge). The *Cheno-am* and *Brassicaceae* were recovered in large quantities, when compared to other pollen from the same sample, and could indicate that the edible species from these families were present (Spinach and Mustard families). Food pollen was recovered from the families of *Cereal* (wheat, barley), *Eugenia* (clove), *Fragaria* (strawberry), and *Lamiaceae* (mint). *Vitis* (grape) and *Zea mays* (corn) pollen was also found. No parasite eggs were found in either the Level 3 or Level 1 of feature 16 sample.

The sample from Level 1 of feature 16 was subjected to a phytolith analysis. It contained a large number of dendritic elongate forms, which were indicative of cereal grains. Similar to the sample from Level 4 of feature 14 from Unit 10N35W, this sample also contains spherical spiny phytoliths from *Arecaceae* (palm family), which includes dates and coconuts.

The macrobotanical analysis for Level 2 of 6N35W reveals the seeds from *Ficus* (fig),

Lycopersicon esculentum (tomato), *Rubus* (raspberry), *Fragaria* (strawberry), and *Vitis* (grape) in descending order (Martin and Popper 1998). The east profile sample contains *Rubus* (raspberry), *Ficus* (fig), *Solanaceae* (nightshade family), and *Vitis* (grape). The amounts of seeds from Level 2 were taken as an indication of a privy.

The pollen and macrobotanical samples from 6N35W differ from those from 10N35W, which are from the main intact portion of feature 14. The 6N35W samples contain less food-related pollen and do not include parasite eggs, which indicates that human waste was not part of the deposit. The analysis from all three botanical studies supports the conclusion that feature 16 contains a mixed portion of the feature 14 privy deposit.

Feature 13, Unit 34N35W - Rainier

This unit was placed directly over the feature 11 pipe. The pipe was not uncovered in the general excavations; however, later backhoeing did reveal the continuation of the feature 11 pipe in the north wall. Two

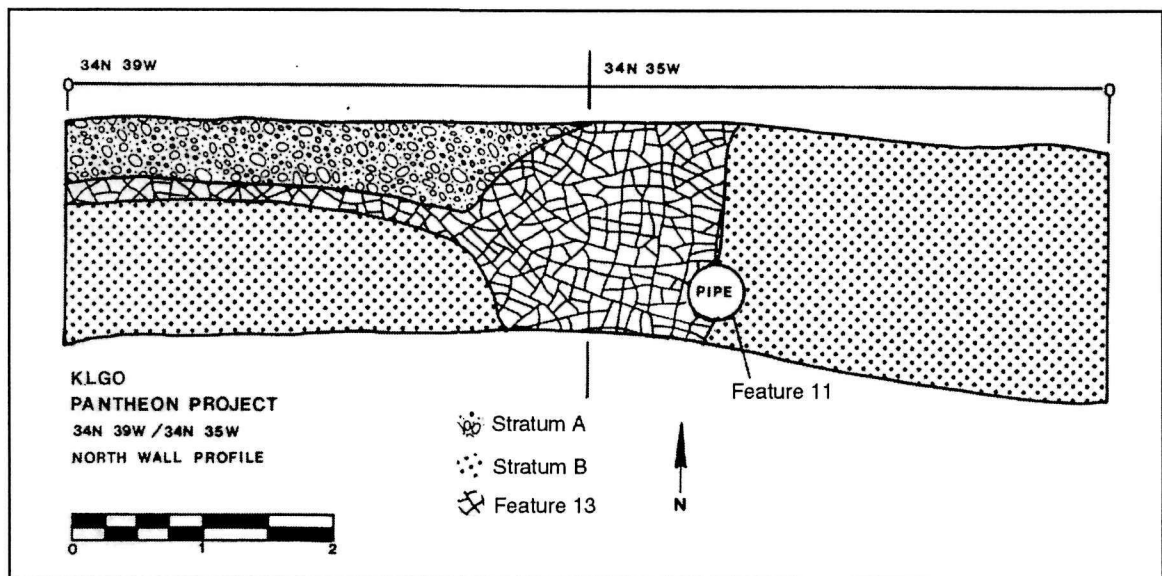


Figure 59: 34N39W - 34N35W North Wall Profile

distinct fill layers were found on the east and west sides of the unit.

On the east was the ubiquitous Layer B fill. It continued down to the bottom of the excavations. On the west was a different fill material that was designated feature 13 (figure 59). The feature was later found to be part of the installation trench for feature 11.

The first level was a mix of feature 13 on the west and Layer B on the east. The feature side of the unit had soils that were fine to medium sand with few artifacts. Artifacts recovered included iron fragments, a cut bone, bottle glass (clear, amber, and aqua), a plastic strip, and modern ceramic sherds. A large piece of discarded iron sewer pipe was found extending to the next level. The pipe was clearly broken off and not connected to other pipes.

The second and third level sediments were the same as the first. Artifacts recovered included bottle glass (clear, aqua, blue, and amber), metal pipe fragments, nails, 0.25 inch rubber hose, white ceramics, cut bone, and a Kodak metal film can (n=96 mni).

The fourth and final level contained the same sediments as those above. The artifacts recovered were predominantly from the feature 13 side of the unit and included a plastic strip, 22 caliber cartridges, a small whole bottle, bones, and molded white-ware ceramics (n=56 mni). Since the feature 11 pipe was missing from the trench, it was hypothesized that feature 13 represented the backfill after the pipe was removed. The reason for removing the pipe was not revealed by the excavations.

Datable artifacts from feature 13 range between 1899 and 1932. These dates are much older than expected since feature 11 is considered a later intrusion into Lot I. It

is possible that the feature 13 deposit was excavated and redeposited on several occasions for the installation and removal of the feature 11 pipe without significant mixing of younger artifacts.

Feature 13, Unit 34N39W - Rainier

This unit was placed west of 34N35W to further explore feature 13 (figure 53). The unit did encounter more deposits from feature 13, but was not able to help explain the feature. The first level was in the parking lot fill or Layer A. Artifacts recovered in this level were not used for analysis.

The second level went through a thin layer of feature 13 (figure 59). Layer B was below the thin feature layer. Recovered artifacts included nails, assorted metal fragments, bottle glass (aqua, brown, clear, and blue), bones, a pipe, light bulb fragments, electrical fuses, a 1940s Indian Head nickel, a carbon rod, a rivet, and a toy balloon (n=67 mni).

The beginning of Level 3 had outwash sediments in most of the unit except for feature 13 on the east side. Only the feature area was excavated in the level. No artifacts were recovered except in the area of feature 13, which included .22 caliber cartridges, glass, metal fragments, bone, white-ware ceramics, and assorted building debris such as nails and screws (n=56 mni).

Trench Excavation Conclusions

After all units were completed, a backhoe was used to excavate the entire trench. The backhoe also cut back the east and west walls. The west wall profile was drawn after the trench was cleaned out (figure 53). A small section of the west wall from 26N to 34N was not cut back by the backhoe. The profile drawing shows that the stratigraphy in the trench is very complex.

One small additional feature (18) was located by the backhoe (figure 53). Feature 18 was a wooden box that surrounded three joints in the feature 11 sewer pipe. The first was a 4-inch "T" coupler. The vertical pipe section of the coupling was broken. The second was a 4-inch "Y" coupler.

The "Y" section represents a clean out valve that was accessed from the north. The third and last was a 4-inch "T" coupling, with a reducer for a 2-inch pipe as the vertical section. The feature represented a possible access way for maintenance on the pipe or a clean out valve. Access to the box would have been gained from the Rainier Hotel. Stratigraphically, the feature 11 sewer pipe is the last known disturbance in the area and possibly dates from the early 1940s to the mid-1960s.

Feature 15 in the southeast of 6N35W was actually part of the feature 14 privy. The feature 11 sewer pipe confused the designation on the east wall. The second backhoe scrape revealed a wooden wall just east of units 6N35W and 10N35W. This wall enclosed both features 14 and 15 (figure 53). The highest stratigraphic remains of feature 14 were found in the northwest corner of unit 10N39W. Feature 14 was also found below both features 11 and 16. Feature 16 was first defined as a privy cut by features 11 and 12. Feature 16 actually lies within the installation trench of feature 12. Feature 16 was redefined as the part of the installation trench for feature 12. Feature 17 was originally defined as a cap for feature 12; however, the profile from 6/10N39W (figure 54) shows that feature 17 covers an area larger than feature 12. Feature 17 probably still acted as a cap for feature 12, but that may have been a by-product of its deposition.

In terms of age, the oldest deposits discovered in the trench were features 14 and

15. The artifact dates from the feature 14 privy place it very close to the gold rush, circa 1897 to 1902. Features 11, 12, and 16 were roughly contemporaneous in age with feature 11 being slightly younger than the others, dating from the 1940s. Feature 16 is not an in-situ privy deposit, and its dating is questionable; however, it is clear that an older gold rush privy deposit (possibly feature 14) was disturbed because of the similarity in dates and materials of the artifacts in the features 14 and 16. Feature 17 covered both features 11 and 12, making it possibly the youngest deposit in the trench, dating between 1902 and 1942. Feature 13 represented fill from the removal of a section of the feature 11 pipe. The earlier artifact dates from feature 13 (1901-1938) were anomalous, considering feature 13 post-dates feature 11, which appears to have been the last major disturbance in the lot, along with feature 6.

There is evidence of at least 12 sewage related structures or features from the Pantheon lot (see features 2, 3, 5, 6, 9, 11, 12, 14, 21, and 24, Unit 2 and 4 from 1987). The ceramic pipes found in 1987 may relate to each other. It is also possible that features 11 and 6 are in some way related.

Unit 13N92W

Preliminary construction plans called for a concrete pad to be placed in the southwest corner of Lot 2, which was to be the new location of a garbage dumpster. The swell of ground in that area of the lot was previously tested with an auger in 1995. All four auger holes had a layer of charcoal and ash at roughly the same level. Mitigation plans called for a 3-ft. x 3-ft. test unit designated 13N92W (figure 31). A reference drawing of the south wall profile shows the different layers uncovered in the excavations of this unit (figure 60). The first level was an arbitrary 0.3-foot into Layer A. There were

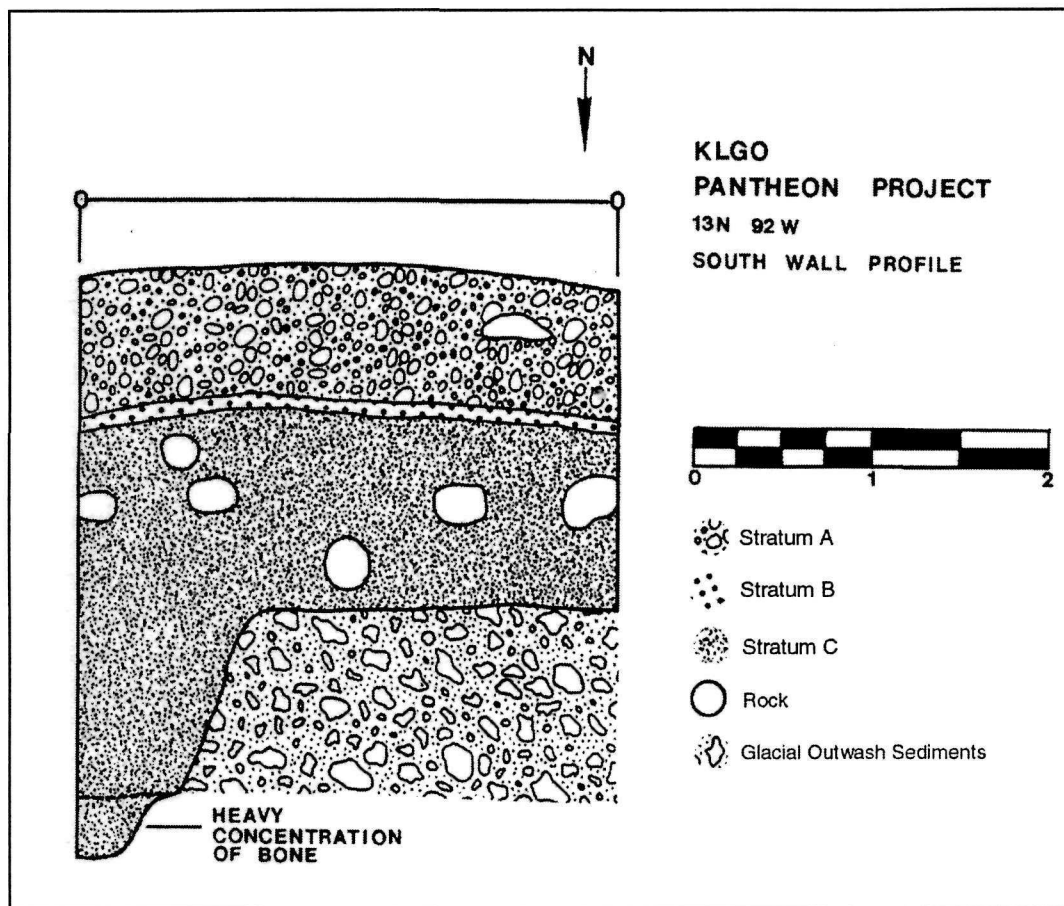


Figure 60: 13N92W South Wall Profile

also quite a few pebbles and cobbles mixed in the soil. No soil sample was taken. The artifacts consist mostly of flat glass (colored and clear), metal fragments, nails, butchered and burned bone, ceramic sherds, shell, bottles, screws, and a brass plate marked "Youngstown." (n=51 mni).

Layer A was present in levels 1-3 to an approximate depth of 1.0 foot below ground level. Within this layer there were several lenses of soil. A dark brown soil lens was indicated at a depth of 0.55 foot in the southeast center and dark, gray-brown, clay-like lens in the northeast quadrant wall. All three levels had both pebbles and cobbles with roots throughout. Two yellowish-brown stains were associated with

a modern telephone wire and a plastic electrical cable at the base of Level 3.

Artifacts recovered in Level 2 included a brass electrical split connector, lead washer, a bottle cap, wire nails/brads, coal, a white ceramic shirt button, and a 0.5-inch diameter galvanized pipe coupling (n=100 mni). In Level 3, the artifacts recovered included a telephone signal wire, an electric cable with plastic insulation, bottle caps, wire nails, wood screws, brown utility ware ceramic, and assorted colored glass (n=60 mni).

Layer B began in Level 4 and was a poorly sorted loamy soil with pebbles and cobbles, although no roots. This layer was a dense

and dark colored soil and appeared to be a “cap” for soil below. The layer was less than 0.3 foot thick and had assorted artifacts dating from the mid-twentieth century. Artifacts include nails, flat colored glass (including wine), a glass tumbler base, both whiteware and brown utility ware ceramics, milk glass, printed whiteware (white/black), wood fragments, coal, and a foil wrapper marked “Kraft Philly Cheese.” (n=83 mni).

Layer C appeared in Level 5 and continued through Level 12. The soil in Layer C was a poorly sorted, fine, loamy matrix with pebble and cobbles. The very dark brown soil contained many artifacts. Between Levels 5 and 6, Layer C appeared to be on the edge of a trash pit. There was a large collection of burned material along with large quantities of bone. The artifacts from Level 5 include one square-headed nail, wire nails, assorted tin can fragments, two clothing snaps, building stone, mortar, a cellophane wrapper from a cigar package, and a woman’s sororal pen (identified as a “Royal Arcanum”) (n=157 mni). Throughout the layer there was a high volume of ash, coal, and slag, all good indications of a trash disposal area. In Level 6 a brown silt sand lens was found. Bone found in the level was closely associated with the soil lens. The succeeding levels were reduced in area as Layer C receded into the eastern wall. The midden receded completely into the eastern profile at Level 12. Along with the artifacts mentioned above were waste products such as slag, coal, melted glass, and heavily oxidized iron. Outwash sediment was found on the east side of the unit in Level 7; and although unexcavated, it continued through Level 12.

1995

Features 1 & 2, Unit 3N50W - Rainier

The placement of this unit, located in the extreme southwest corner of Lot 1 of Block 27, was decided by three factors: 1) the preliminary construction drawings on the sewer and water line placement, which indicated that the area would be heavily disturbed by the utility line installation; 2) an auger hole test, 8 inches in diameter, recovered nine glass bottle finishes; and 3) an early photograph appeared to show a privy located in the area (figure 9). The unit was 3 feet on a side (figure 31). The south side of the unit was also the south property line for the lot. Features 1 and 2 were designated in the unit (table 2). Figure 61 is a drawing of the east and south wall profiles.

The entire parking area in the south half of Lot 1 had been covered over with fill in several different episodes. The surface was very compacted. Any artifacts recovered were not kept for analysis. The fill was generally about 0.6 foot deep in the unit. The parking lot fill was labeled Layer A. Below that was Layer B, followed by Layer C.

Layer B was a fine-grain-size loam with some burned coal material and pebbles. Layer B was 0.3 foot thick in the northeast corner and 0.1 foot thick near the west wall. Layer C was fine-grain-size sand, no clay or silt, with large pebbles and cobbles. It was later discovered that Layer C was a different trash layer from B. Layer C ranged in thickness from 0.4 foot to 0.5 foot. Most of the artifacts from this unit came from feature 1 in Layer B, a non-structural midden deposit. The interface between Layers B and C was diagonal from the northwest to southeast corners. Feature 1 was on the northern side of the diagonal interface (figure 61).

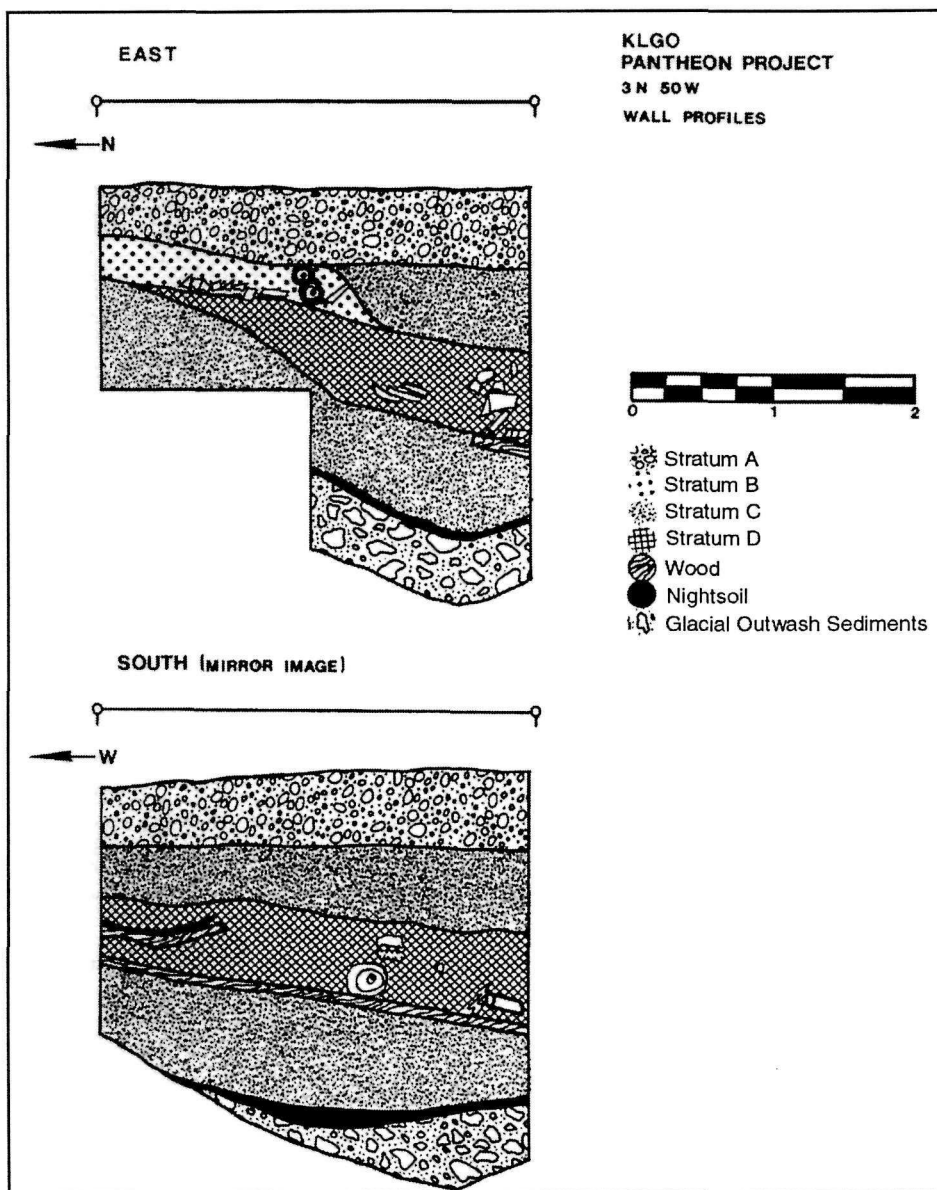


Figure 61: 3N50W South and East Wall Profiles

Excavation continued only in the feature area. In Level 1 of feature 1, many pieces of scrap shoe leather and sole were found along with more than 20 glass seed beads. A small, one-story building in the center of Lot 1 used to be a tailor shop (figure 27). Fasel's Paint and Wallpaper Store also had a shoe repair sign out in front (figure 62).

In the east wall a portion of a wringer for an old-style washing machine was exposed. The other artifacts recovered were cut bones, nails, bottle fragments, and windowpane fragments (n=107 mni). Level 1 was 0.2 foot thick and was cut-off at the beginning of a heavy artifact concentration in the northeast corner.

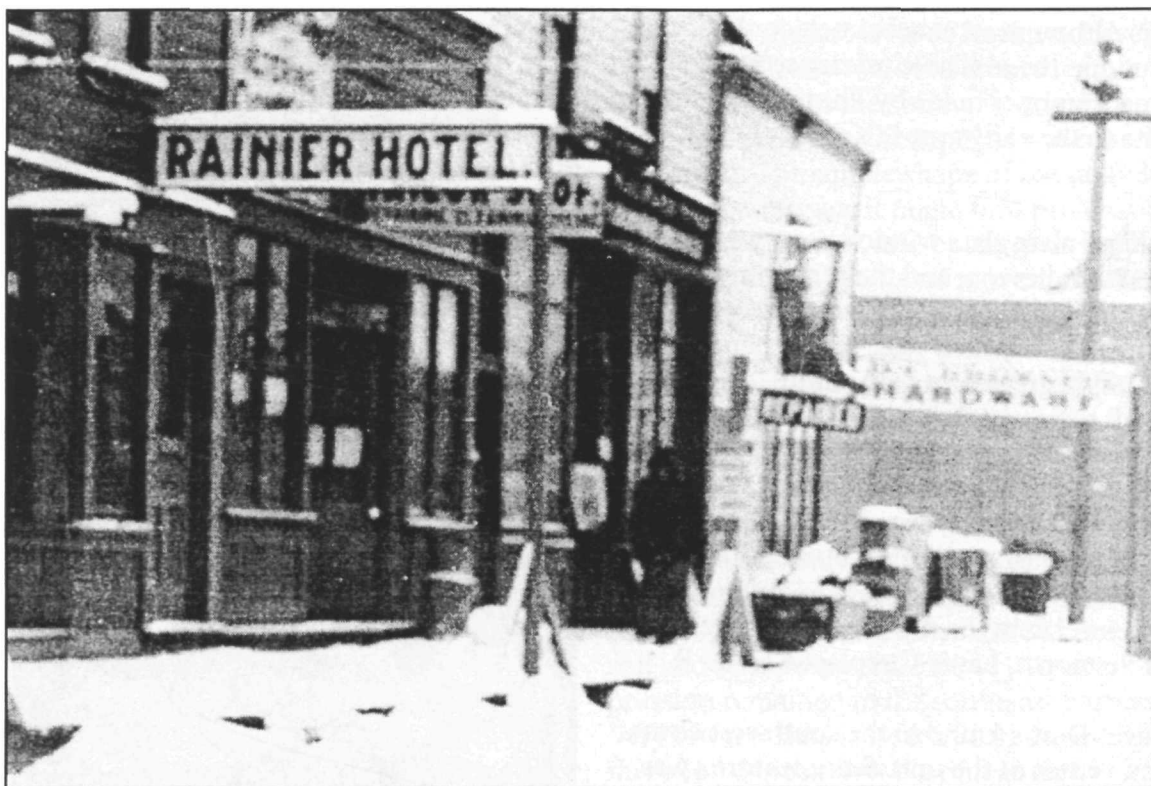


Figure 62: Winter of 1899 or 1900 (KLGO B1-67 [2567]) Yukon Archives, E. A. Hegg Collections, #2683

Level 2 was a 0.3-foot-thick layer in feature 1. At the top of Level 2 of feature 1 in the northeast corner was a very heavy concentration of soda bottle glass, with rounded bases (Wilson 1981). Only fragments that could be identified as coming from a bottle were kept. Other artifacts include more seed beads, cut leather and sole material for shoes, one intact heel, and coal in large amounts throughout the level (n=126 mni). The coal was seen in profile as a layer just underneath the glass deposit.

Portions of at least three spalled and broken ceramic plates were recovered. The plates were deposited in a stack and the pressure from the overburden crushed them. The plates were thick and heavy, indicating that perhaps they came from a ho-

tel. Some of the plates were patterned with a simple, blue, underglaze transfer print.

One ironstone plate had a maker's mark from Thomas Hughes of England (figure



Figure 63: Thomas Hughes Mark

63). Although an exact match could not be found in the available reference material, most ceramics made by Thomas Hughes date to the early 1900s (Kovel & Kovel 1986).

A large plate glass windowpane was found in situ in Level 2, and the remaining portion was broken by pressure from overburden. The outer 0.5-inch edge of this pane was gilded in green and gold paint.

In Level 3 of feature 1, Layer C in the south was found to be overlying Layer D (figure 61). Layer D was a burned red-orange layer with coal, ash, and other burned material. Layer C was removed in the south until it was level with the top of Level 3 of feature 1. In the north, Layer C replaced Layer B.

Layer D was found in the southwest corner and center of the unit. Since feature 1 was designated as a midden, it was thought best to maintain the designation for Layer D, which also appeared to be a midden deposit. Seed beads and shoe leather scraps were not found in the lower deposit. Cut bones, brick, tin can, and bottle glass fragments were found in the level (n=260 mni).

Level 4 of feature 1 was an extremely dense layer of mostly fragmentary artifacts from the center of the unit to the southern boundary (n=315 mni). Artifact fragments were so numerous in the screen that it was impossible to recover



Figure 64: K. T. & K. Graniteware Mark

everything, only large or diagnostic pieces were kept. Ceramic sherds and spalls make up most of the artifact assemblage with 293 fragments. One maker's mark was recovered from the Knowles, Taylor & Knowles Company (figure 64) of East Liverpool, Ohio, and dates from ca. 1890 to 1907 (Kovel & Kovel 1986). A hand-painted ceramic bowl was also found. Blue paint was put on underglaze and green, orange, and red paint were put on overglaze (figure 65). The painting on the bowl was Chinese in style.

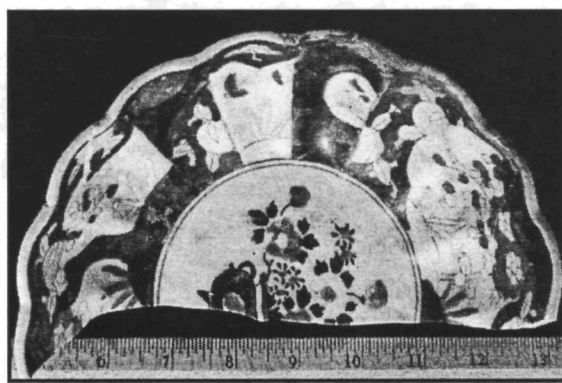


Figure 65: Decorated Bowl

Many pieces of painted window glass were also recovered. The edge pieces were gilded green and gold, and words were painted in pink, blue, and red. Unfortunately, there were not enough fragments of letters to make any words. Other artifacts from Level 4 include tin can fragments, nails, bottle glass, egg shell, bones, and utensils.

Level 5 of feature 1 had a smaller frequency of ceramic spalls and sherds than Level 4, with 243 fragments. One maker's mark from J & G Meakin in England was found (figure 66), a mark first used circa 1890 to the present (Godden 1964). Fragments from a panel bottle embossed with "Scott's Emulsion" on the front side, "Cod Liver Oil" on one side, and "With Lime & Soda" on the other side were recovered. The em-



Figure 66: J. & G. Meakin Mark

bossing on the bottle dates it to the turn of the century (Wilson 1981; White 1974).

Tin can fragments were numerous throughout the level; only large and diagnostic pieces were saved ($n=183$ frags). More fragments of painted windowpane glass were found ($n=48$ frags). The shards again had letters painted on them in pink, red, and blue paint. Edge pieces were painted with green and outlined with black paint. In the southwest corner of the unit near the base of the level a seed deposit was found that appeared to be an isolated excrement soil deposit.

In Level 6 of feature 1, Layer D disappeared in most of the unit except in the southeast corner (figure 62). The artifacts are infrequent in this level with only 106 recovered fragments ($n=31$ mni). A few more isolated pockets of excrement soil were found in the level. Coarse-grain sand with cobbles was present in the southwest corner and the center of unit. The artifacts from Level 6 included nails, ceramic plate fragments, bottle glass, and tin can fragments. A carved bone object that resembled a small finial was recovered in Level 6.

Level 7 was the last level of feature 1. Layer D was completely removed from the unit. Below Layer D in the southeast corner a layer of excrement soil deposits was found (feature 2). The square shape of the deposit suggested that it might be a privy. Cut bones, nails, tin can, and bottle glass fragments were found in Level 7, overlying the excrement soil.

Level 1 of feature 2 was excavated into the privy-like deposit. However the soil in the feature did not resemble any of the other privy deposits that have been excavated by the author in Skagway. It was possibly an area where only chamber pots from the Rainier Hotel were emptied and not a full-fledged outhouse. After the excrement soil had been removed, a bowl shaped depression remained in the southeast corner. Very few artifacts were found in the excrement soil deposit. Level 2 of feature 2 was excavated in the depression area to investigate if any more pockets of excrement soil would be discovered. The base of Level 2 found no artifacts and only outwash sediments.

After feature 2 was fully excavated, work began on the unexcavated berm layer to the north that was outside of feature 1. The soil from the berm in the north was coarse-grain sand with pebbles and cobbles. The presence of artifacts in the soil indicated that it was used as fill. Fill layers for this unit were labeled Layer C. Cut bones and a blob top bottle finish was found at the top of the soil berm. At the base of the first level, a horizontal wooden post was uncovered that measured 3 in. x 5 in. x 16 in. The post probably measured 4 in. x 6 in. before decomposition.

Level 3 consisted mostly of till in the west and fill material in the east. Recovered

artifacts came from the southern edge of the berm. At the bottom of the level a small thin area of excrement soil deposit was found near the southeast corner of the berm. The excrement soil was found on a sloping surface that was very near the same elevation as the deposit in feature 2. Level 4 was the last level excavated in the unit. The thin, isolated excrement soil deposit was removed, and glacial sediment was found no more than 0.1 foot below the deposit. No artifacts were found in Level 4.

Artifacts recovered from feature 1 dated it to between 1898 and 1923. Unfortunately, too few artifacts were recovered from feature 2 for dating purposes. An historic photograph shows that the area was occupied by a privy-like structure (figure 8). The lack of a thick excrement deposit may indicate that perhaps it was removed once the area began use as a general-purpose trash dump.

An excrement soil sample from Level 3 in the berm was analyzed for pollen (appendix L) (Cummings and Moutoux 1998). The sample contained alder, pine, spruce, hemlock, and pine family. Possible native plants included only *Poaceae* (grass family). Other weedy plants were Low-spine *Asteraceae* (ragweed), *Erysimum*-type (treacle mustard), Chenopods (amaranth), and *Phacelia* (no common name). Pollen from cereal grains was the only identified food remains. A large number of fern spores were also recorded. The larger number of weed plant pollen as opposed to food pollen might indicate that the midden was an open pit with grasses growing around and in the trash. The sample was not subjected to a phytolith analysis.

Two samples from Level 1 of feature 2 and Level 5 of feature 1, were sent for macrobotanical analysis (appendix M) (Martin and Popper 1998). Feature 2 had the largest

amount of seeds of any sample analyzed by both absolute count and density. The largest numbers of seeds were from raspberries, figs, tomatoes, grapes, strawberries, and a weed plant (*Cyperaceae*). The sample from feature 1 included raspberry, figs, tomatoes, strawberries, grapes, and a weed plant (*Cyperaceae*). Virtually all the identified seeds were non-native to the region. Only raspberries and strawberries were native to the region, but it is unknown if they were available in the wild in Skagway during the gold rush.

Feature 5, Unit 4N59W - Rainier

This unit was in the parking lot, south of the Pantheon, nine feet west of the midden dump (3N50W) and one foot north of the south property line (figure 31). A previous auger test in the area had uncovered a large amount of butchered bones and other artifacts that suggested an extension of the dump or possibly a privy. Figure 67 is the profile drawing for the east wall of this unit. One feature (5) was designated in this unit (table 2).

The unit was three feet square. The first level was the hard packed parking lot fill. No artifacts were kept from this layer. Level 2 was also defined as parking lot fill. Layer B was found near the base of Level 2. It consisted of a fine-grain sand matrix with pebbles and cobbles. Cut leather and rubber fragments from shoe repairs were found in this level. Other artifacts found were nails, bottle glass, and cut bone.

The soil color change and abundance of faunal remains identified feature 5, a midden or trash dump. Level 1 of feature 5 was a very thin soil layer that was characterized as an intermediate level between the parking lot fill and the actual trash deposit. The soil was a sandy loam that contained pebbles and cobbles. At the base of Level 1,

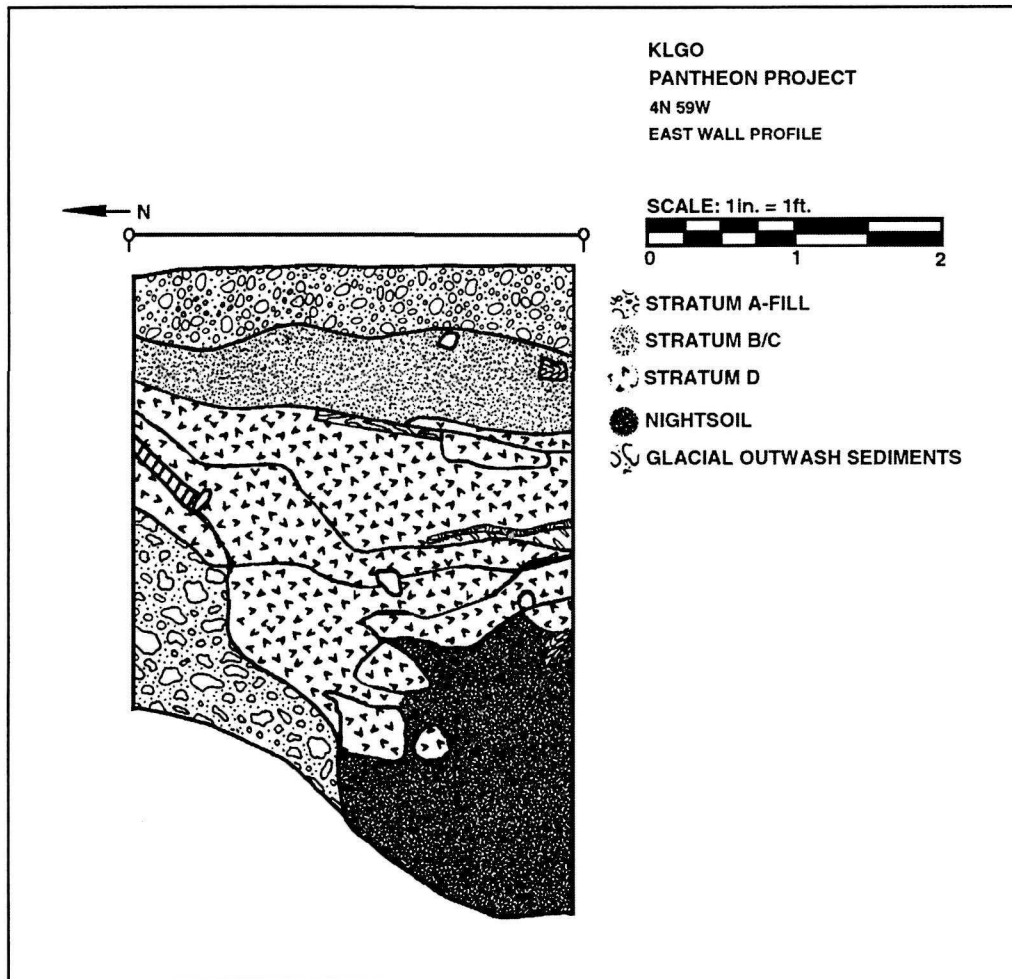


Figure 67: 4N59W East Wall Profile

wood planking was found across the unit. However, the placement of the wood was haphazard, suggesting that it was not a cap. Level 1 was completed after the wood was removed.

Level 2 of feature 5 contained Layer D, a very fine-grain loam that had some clay (7.5YR 2.5/1 black). An ashy burned layer was found in the southwest corner of the unit on top of a wood plank that ran across the southern portion of the unit out to

about 0.4 foot. Two ceramic maker's marks were found in this level from an unknown vessel form. The first mark was from J & G Meakin from Hanley, England (figure 66). The other mark is partial, but indicates that it is from the Charles Meakin pottery in Hanley, England (Kovel & Kovel 1986) (figure 68). Figure 68 shows what the complete mark may have looked like.

A large number of bones were found in Level 2 of feature 5 (n=389). Many of the

bones were cut and some show signs of burning. Hollow carbon tube fragments were also found in the unit. One intact tube is ground down on both ends into a shape of a cone. A fragment of movie film was found that appears to be a format larger than 35 mm. It possibly came off the leader portion of a movie reel. Nails were abundant in the level with 716 fragments. Other artifacts found include bottle glass, window glass, a bone button, an unfired Winchester Repeating Arms Company cartridge (caliber unknown), marine shell, and a hard rubber or plastic pipe stem with a threaded metal screw for connecting to the bowl. A large metal serving spoon was also found in the level.

Level 3 of feature 5 had a slightly different soil texture. At the base of the level most of the unit was covered with pieces of wood. There was a sharp drop in both the number of faunal remains and nails recovered ($n=99$ and 124). The bones were concentrated in the northern portion of the unit. Other artifacts found in the level include

cut leather scraps, window glass, bottle glass, ceramic sherds, and a small (0.5 inch) porcelain doll. The doll was naked except for a molded bonnet.

Level 4 of feature 5 saw a sharp increase over the previous level in the number of bone (817) and nails (512). A trough-like formation was found in the center of the unit running east and west. Till appeared in the northern portion of the unit. Charcoal, wood and a large number of eggshell fragments were found in this level. Other artifacts found include bottle glass, window glass, light bulb fragments, and portions of a scalloped milk glass. Also, different caliber shells with the headstamp from the Winchester Repeating Arms Company were found. One is a rim fire .22 caliber and the other, while only partly legible, is possibly a .30 caliber center fire cartridge (Logan 1959). The large amount of butchered bone recovered indicates an association with the Rainier Hotel and Restaurant. It is not clear if other businesses also used the dump.



Figure 68: Charles Meakin Mark

Level 5 of feature 5 was excavated in the north side of the unit following the contours of the deposited soil layers. A seed deposit was found in the southeast corner of the unit near the bottom of the level. In the north, glacial sediment was found at the bottom of the level, which ended at 2.62 feet below the unit datum. A whole glass medicine bottle was recovered in this level. A few bone fragments were burned, while the majority showed signs of knife or saw marks.

In the southeast corner of Level 6 of feature 5, a thin, excrement soil deposit was found. Reddish clay covered the south half of the unit, which was over a layer of charcoal

about 0.04 foot thick. Two intact bottles were found in clay near the southeast corner of the unit. One was an embossed medicine bottle. The embossing on one side read "PAINE'S" and on the opposite side "CELERY COMPOUND" (figure 69). The second bottle was bulbous with a tooled and threaded finish. Embossed on the side was the non-registered trademark from "DODSON - HILS MFG. Co. ST. LOUIS" (figure 70). A small amber jar (1.25 in. H x 1.5 in. diam.) was found with a preserved portion of the cardboard liner that fit into the lid. One rim-fire .22 shell casing was found with an "H" stamped on the head, indicating that the Winchester Repeating Arms Company manufactured the cartridge. The "H" was registered as a trademark in 1897; however, it was used as a stamp since 1858 (Cooper and Sanders 1995:97).

Level 7 of feature 5 began with reddish soil on the south portion of the unit. A fine, sandy loam was found in the center of the unit running east to west. Glacial outwash sediments took up much of the north portion of the unit. A wood board was protruding from the east wall near the southeast corner and extending to within a foot of the west wall.

Near the southeast corner a pumpkinseed/picnic flask was recovered intact with glass stopper. No markings were found on the bottle or the stopper. A maker's mark from Knowles, Taylor & Knowles, which dates from 1890 to 1907, was found on a 6-inch diameter whiteware saucer that was not otherwise decorated (Kovel & Kovel 1986: 146).

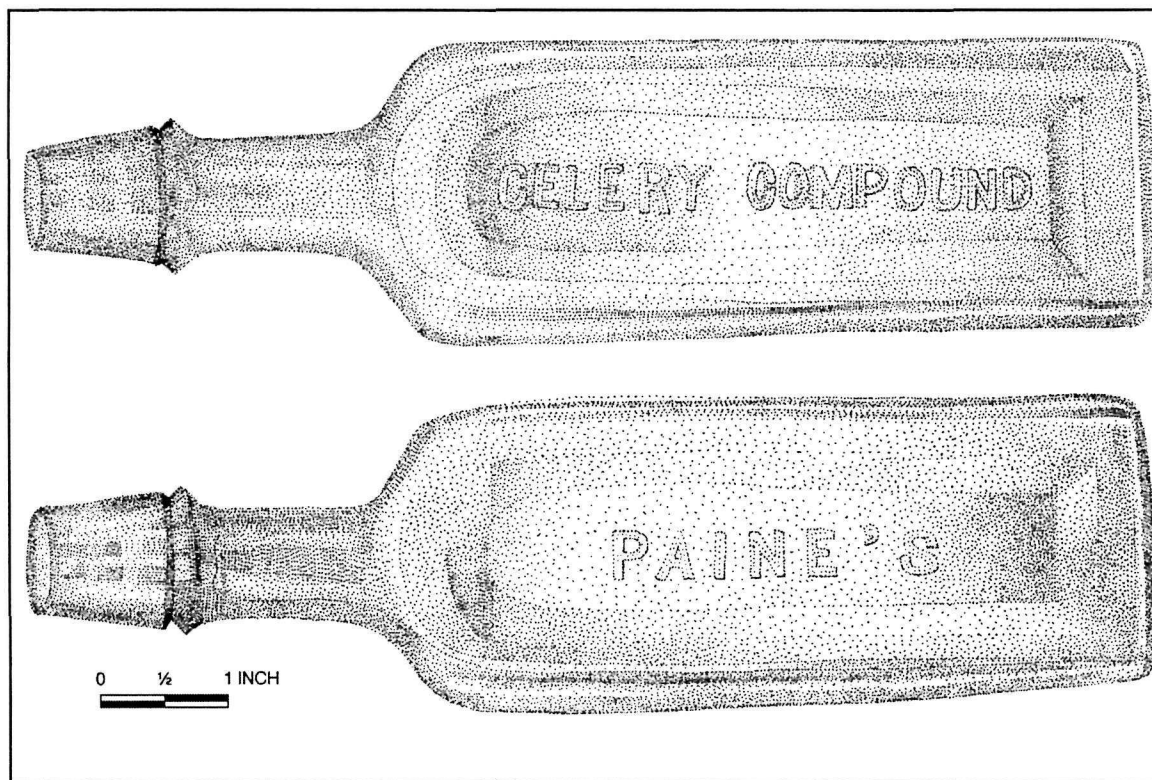


Figure 69: Paine's Celery Compound Bottle Drawing



Figure 70: Dodson-Hills Mustard Bottle

A bottle base was found with a pontil mark on the bottom, but the exterior of the bottle was irregular and rough. No seam marks were present on the fragment that was recovered. The dates for this type of manufacture were from circa 1840 to 1913 (Cooper and Sanders 1995:61). A broken, black glass bottle was found with all the fragments together in a confined area near the middle of the east wall. The bottle was blown into a half-height mold with a high kick-up. The manufacture technique suggests a date from the 1840s to circa 1913, and the black glass dates the bottle circa 1815 to 1885 (Cooper and Sanders 1995:56,61). Level 8 of feature 5 was the last level of the unit. Glacial outwash sediment was still present on the north, and it sloped down to the south. Excrement soil became

more concentrated in the south and was excavated down to sterile soil, which revealed two depressions, one in the southeast and the other in the southwest corner of the unit. A trough that was also filled with excrement soil deposits connected the depressions. The deposit does not resemble privy deposits found on the Moore House property or Block 39, where the author has firsthand experience.

On the south wall near the bottom of the unit a full bottle of red wine was found. The cylindrical bottle was claret style, about 12 inches tall, with a high kick-up on the bottom and a pontil mark. The lack of seams on the bottle suggests that it was hand-blown. The cork was intact and still held the wine inside (figure 71). Preservation was aided because the bottle was deposited upside down. The manufacturing technique for hand producing the bottle predates the gold rush, although the technique is still in use today. A bone toothbrush was found with several marks carved on the handle. Other items recovered included fruit seeds, tin can fragments, a globe glass from a lantern, a metal wick control also from a lantern, and several large fragments of cut bone.

The unit revealed an extensive midden deposit, which overlay what appears to be a two-hole privy pit. This privy can be seen in historic photographs in roughly the same location (figure 8). The number of bones found supports the claim that the Rainier Hotel and Restaurant extensively used the area near the alley as a dumpsite.

The datable artifacts from feature 5 indicate a date range between 1902 to 1914.

This range is within the dates of operation for the Rainier Hotel and Restaurant. An earlier date range was expected because of the depth of the deposit and the correspondence with early structures as indicated by historic photographs.

Two samples from feature 5 were sent for macrobotanical analysis, from Levels 4 and 6 (appendix M). The samples turned out to be quite different in the number of recovered seeds (Martin and Popper 1998).

The seeds identified from the Level 4 sample from highest to lowest were raspberries, figs, strawberries, tomatoes, and grapes. The seed count for this level was 447. The seeds from Level 6 were raspberries, figs, strawberries, tomatoes, grapes, nightshade family, and *Cyperaceae*. The total count for this level was 2,414. The seed densities (counts/liter) showed nearly equal number of seeds coming from each sample (Level 4 - 2235; Level 6 - 2195).

A sample from Level 4 of feature 5 was analyzed for pollen and parasites (appendix L) (Cummings and Moutoux 1998). Tree pollen was found from *Alnus* (alder), *Betula*-type (birch), *Pinaceae* (pine-family), *Picea* (Spruce), *Pinus* (pine), *Cupressaceae* (cy-

press family), and *Tsuga* (hemlock). Native plants were represented by High-spine *Asteraceae* (sunflower family), *Epilobium*-type (fireweed), *Lathyrus*-type (vetchling, wild pea), *Poaceae* (grass family), and *Polygonum persicaria*-type (knotweed/smartweed). Weedy plants found include Low-spine *Asteraceae* (ragweed-type), *Brassicaceae* (mustard family), Chenopods (amaranth/pigweed), and *Erysimum* (treacle mustard). Not much in the way of food pollen was found other than *Eugenia* (cloves), and some starch granules. Monolet spores from fern plants were abundant, but no parasites or fungal spores were found.

The sample was also subjected to a phytolith analysis. Elongate dendritic forms were found, which are indicative of cereal or grain chaff. Elongate smooth and spiny forms are not useful for determining types of plants. Local grasses were indicated by the festucoid type phytoliths. Sponge spicules and diatoms were found, indicating the intrusion of seawater at some point.

Features 6 and 7 - Units 47N31W and 46N34W - Rainier

Unit 47N31W was a 4-ft. x 2.5-ft. rectangle located four feet south of the wood shop (figure 31). It was placed in this area for the purpose of clearing the south perimeter around the building for the new foundation. An auger hole test excavated in the area showed a number of artifacts that suggested a deep deposit rather than sheet midden material. Figure 72 is a profile drawing for the west wall. Feature 6 was initially found in this unit.

The top 0.5 foot of material removed was parking lot fill. None of the material was screened for artifacts. Level 2 included three layers: B, C, and D. All the layers were very thin, together only 0.15 foot thick over the unit. The artifacts recovered from Level

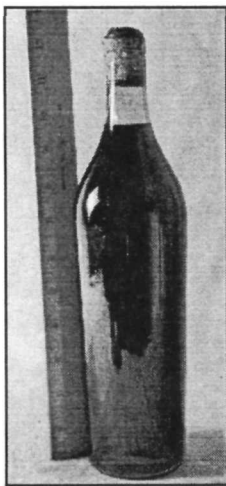


Figure 71:
Intact Red Wine Bottle

2 came mostly from Layer C and consist of small bottle glass fragments of different colors, window glass, coal, leather, slag, and a button.

Below Layers B and C was Layer D, which was medium-to-coarse sand with pebbles and cobbles throughout the soil. Level 3 was a thin stratigraphic layer of D with few artifacts. Level 4 started with Layer C, mottled fine grain sand matrix very few pebbles and many small roots. The artifacts appeared to be from a mixed context because magnetic tape from cassette tapes and seed beads were found in Level 4. At the base of Level 4 pockets of sand and cobbles were found. In Level 5, the soil was mottled by a lighter soil that resembled Layer B. A lens of burned ashy material was found in the east wall and extended out 0.5 foot west. The artifacts from this level no longer appeared to be from mixed contexts. The artifacts recovered include ceramic sherds, buttons, tin can fragments, marine shell, melted glass, and window glass.

The soil was basically the same for Level 6 except that powdery glacial silt was found in pockets along the east wall. The soil was very fine grain, powdery silt. Many more artifacts were found in this level, and they appear to be from earlier occupations. The artifacts found were shoe grommets,

ceramic sherds, cut bones, a pearl stickpin, bottle glass, tin can fragments, window glass, and nails.

Level 7 was the last level in this unit. Glacial sediment was found along the east wall, but did not extend across the unit. Layer C continued down beside sterile sand until it encountered the glacial outwash sediments. On the west wall feature 6 was identified. This was a structural feature consisting of two planks of badly deteriorated wood. The planks formed a corner edge, which extended to the west. Once the wood was removed, cobbles were found with no soil matrix in between. The cobbles were left in

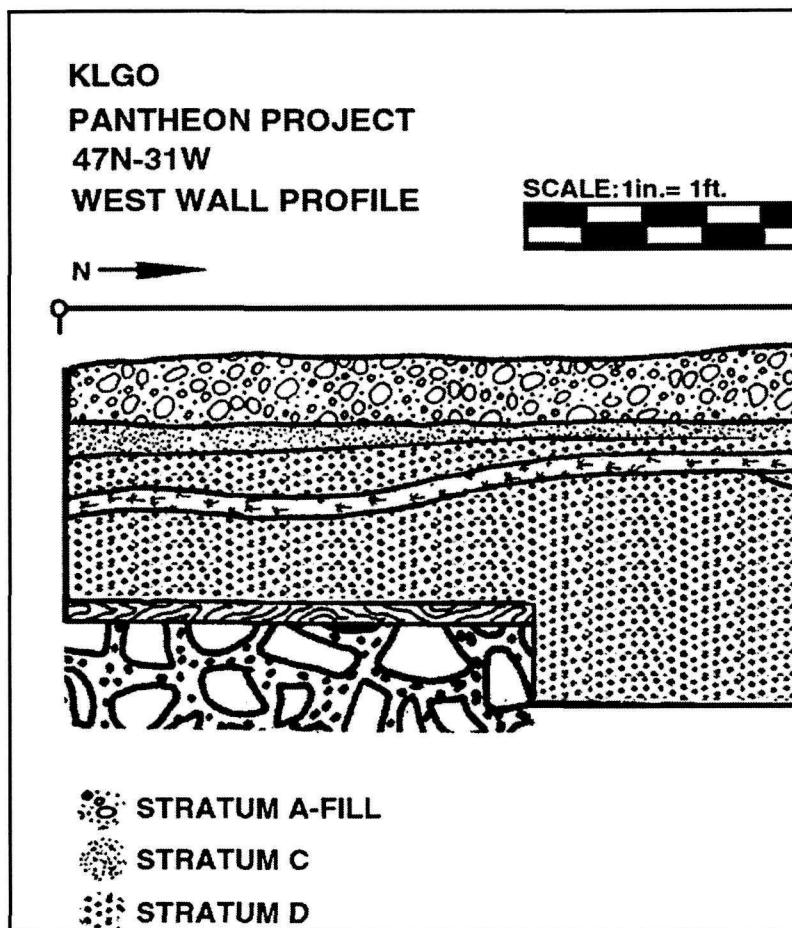


Figure 72: 47N31W West Wall Profile

place until another unit could be opened to expose more of the feature.

Feature 6 - Unit 46N33.5W - Rainier

The unit measured 4 ft. x 2.5 ft. and was placed one foot to the south, relative to 47N31W (figure 31). This unit was placed to expose more of feature 6. Figure 73 is a profile drawing of the feature on the east wall. Level 1 consisted of parking lot fill, which was removed with a Pulaski and a shovel. The parking lot fill was roughly 0.3 foot thick across the unit.

In Level 2 a small lens of Layer C was found in the northeast corner with Layer D under and covering the rest of the unit. Layer B was absent from this unit. A sand berm was found near the center running the length of the unit from north to south, which dipped down to the west wall. This soil feature was designated as feature 7.

The first level in feature 7 contained many small roots and compact grass in a silty matrix. This root layer was about 0.1 inch thick across the unit and resembles an old topsoil layer. The artifacts from the berm area include Styrofoam, plastic, and foil and were probably on the ground surface before the parking lot fill was put in.

Level 2 was the last level of feature 7. The use or function of the feature or how it related to feature 6 was never determined. More pebbles and cobbles were showing up in the fill, and the root layer was disappearing. Few artifacts were recovered from Level 2 of feature 7.

Below the old topsoil layer was Layer C that formed the base of feature 7. An arbitrary level (3) was excavated into Layer C after the last trace of feature 7 was excavated. The soil became progressively poorly sorted as the level went down. Charcoal

chunks were found in fine sand pockets. The soil became loosely consolidated as the interface with feature 6 approached. The next level was designated as feature 6 with loose cobbles at the base of Level 3 (figure 74).

The first level in feature 6 was filled with cobbles. Some artifacts were found in the spaces between the cobbles. In the middle of the east wall two 2-in. pipes were found that would have emptied into the cobbles. One pipe extended about one foot into the cobbles and was angled toward the north-west corner of the unit. The second pipe was found directly on top of the other pipe; however, the second pipe did not extend into the unit (figure 73). Wood lining was found on the east and extended across the entire east wall of the unit. The material recovered consisted of bottle glass fragments, nails, ceramic sherds, burned bones, a padlock, a glass bead, a pendant, a shoe grommet, and a fragment of flashing. Level 1 of feature 6 was completed at this point to record the pipes and map their positions.

The amount of artifacts found in the cobble fill and the presence of two pipes that were obviously for waste water suggest that the box was used for a cesspool and not a water supply box, which had been postulated when the feature was originally found in unit 47N31W. Level 2 of feature 6 was a continuation of the cobble deposit. Little or no soil was found in the spaces between the cobbles as the deposit went down. The artifacts found indicated a mixed assemblage composed of plastic, foil, nails, wire, a saw blade, angle iron, terra cotta fragments, bottle glass, window glass, railroad spikes, and a 35mm film leader.

The bottom of the cobble fill was well below 4 feet, and an auger test showed that cultural deposits went below the level

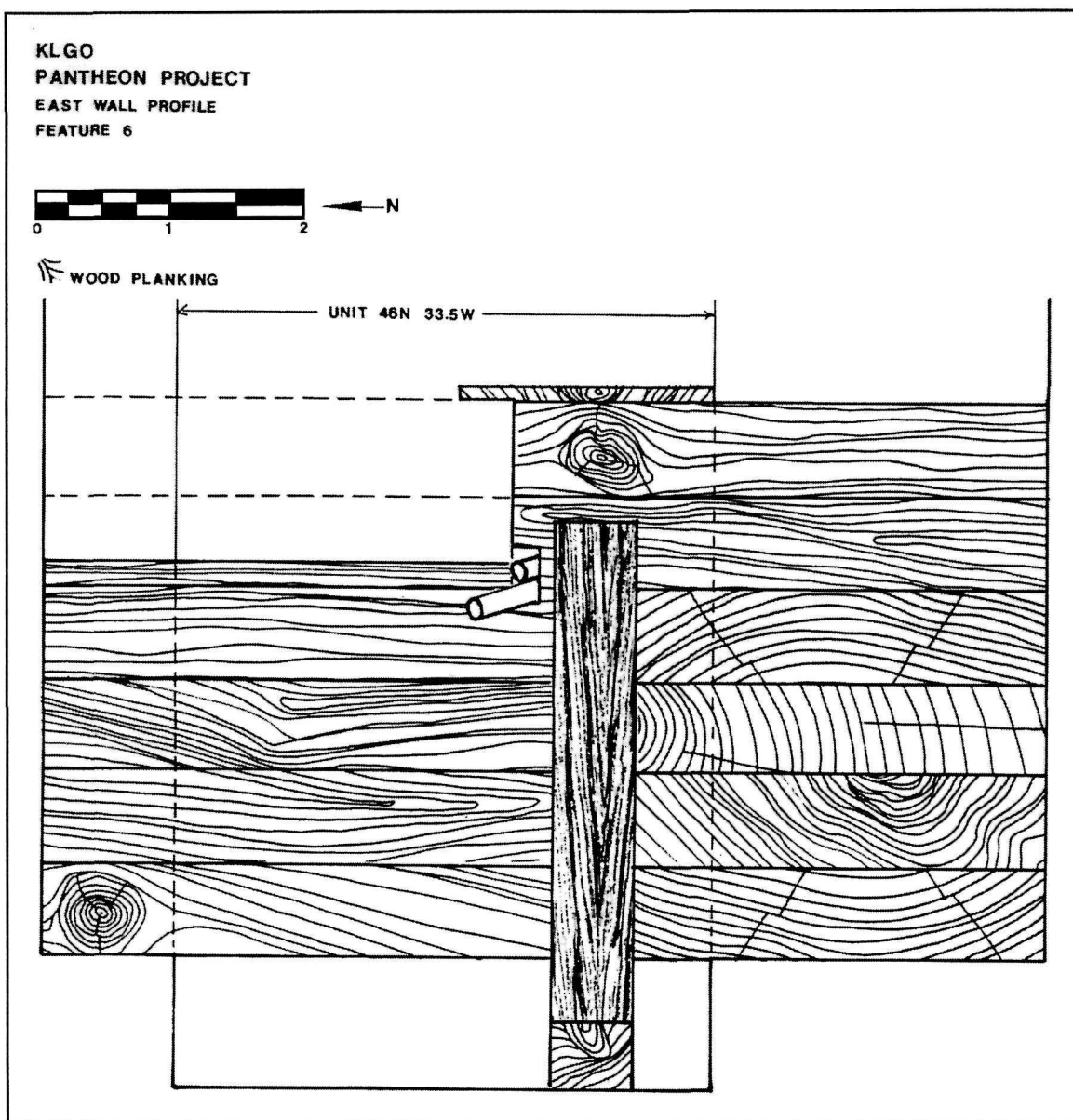


Figure 73: Feature 6 East Wall Profile

of the cobbles. The depth of the cobble feature caused the walls to become very unstable. To minimize the potential for harmful cave-ins, it was decided to use a backhoe to remove the cobbles, widen the hole, and create more stable walls. The backhoe revealed a large metal 4-inch diameter pipe in the east wall that appeared to be coming from the location of the former

Rainier Hotel. This finding confirmed that feature 6 was a cesspool. As the backhoe widened the hole to the western edge of the feature, a deposit of bottles was found that would have been just outside the west wall of the feature. The bottles were probably disturbed when the hole was originally excavated for the cesspool. Twelve whole bottles, two ceramic sherds with maker's

marks, and several glass bottle finishes were recovered from the backhoe excavation.

Of the known dates for the bottles, 11 end around the time of WWI. Two bottles date from after 1935, and one bottle was after at least 1940. These data indicate that the installation of the cesspool disturbed older

deposits and mixed them with the cobble fill. The latest date of 1951 roughly coincides with the occupation of the site by the apartment complex.

After the enlarged hole was cleaned out, the unit was re-established, and Level 3 of feature 6 was excavated. Level 3 started 5.02

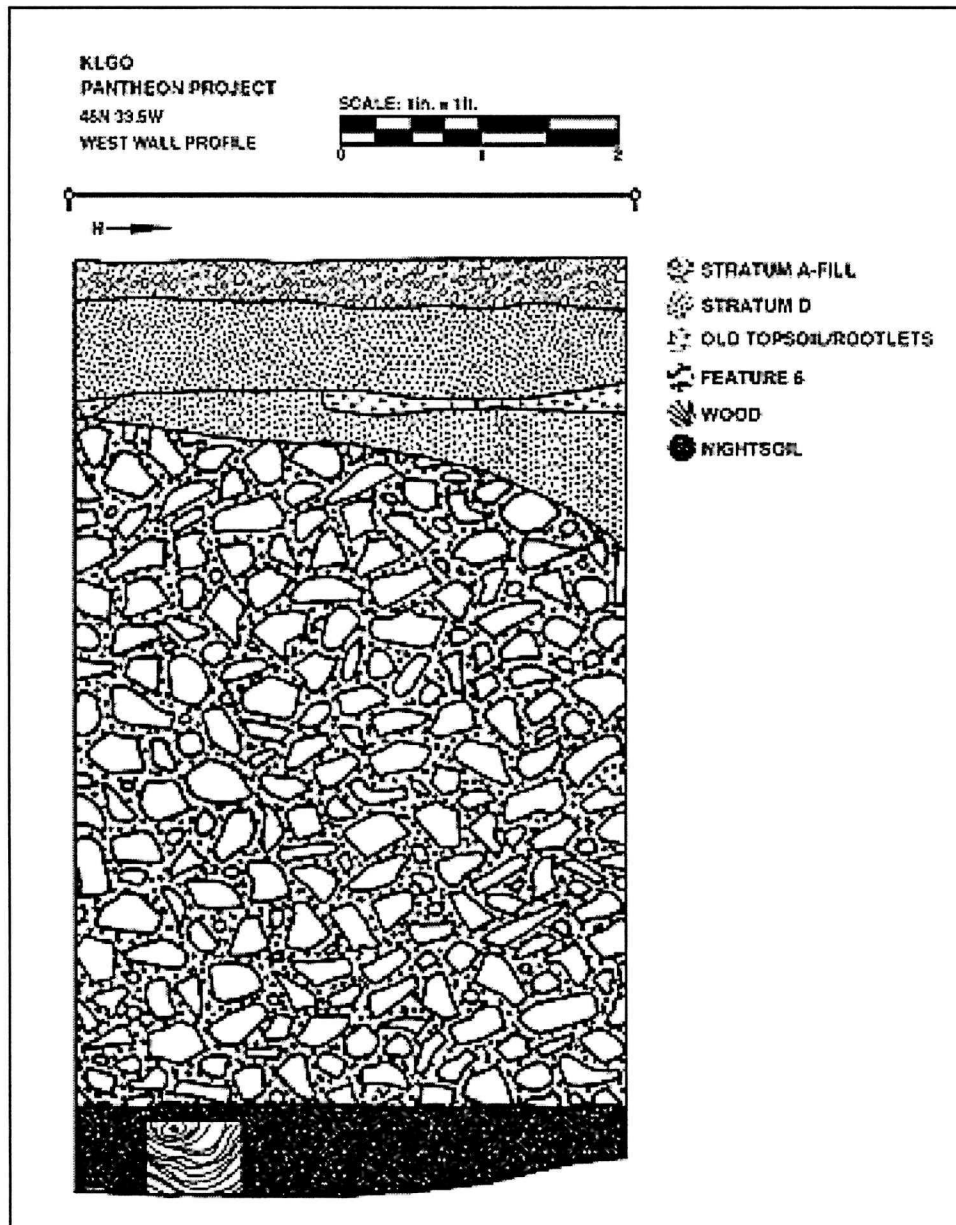
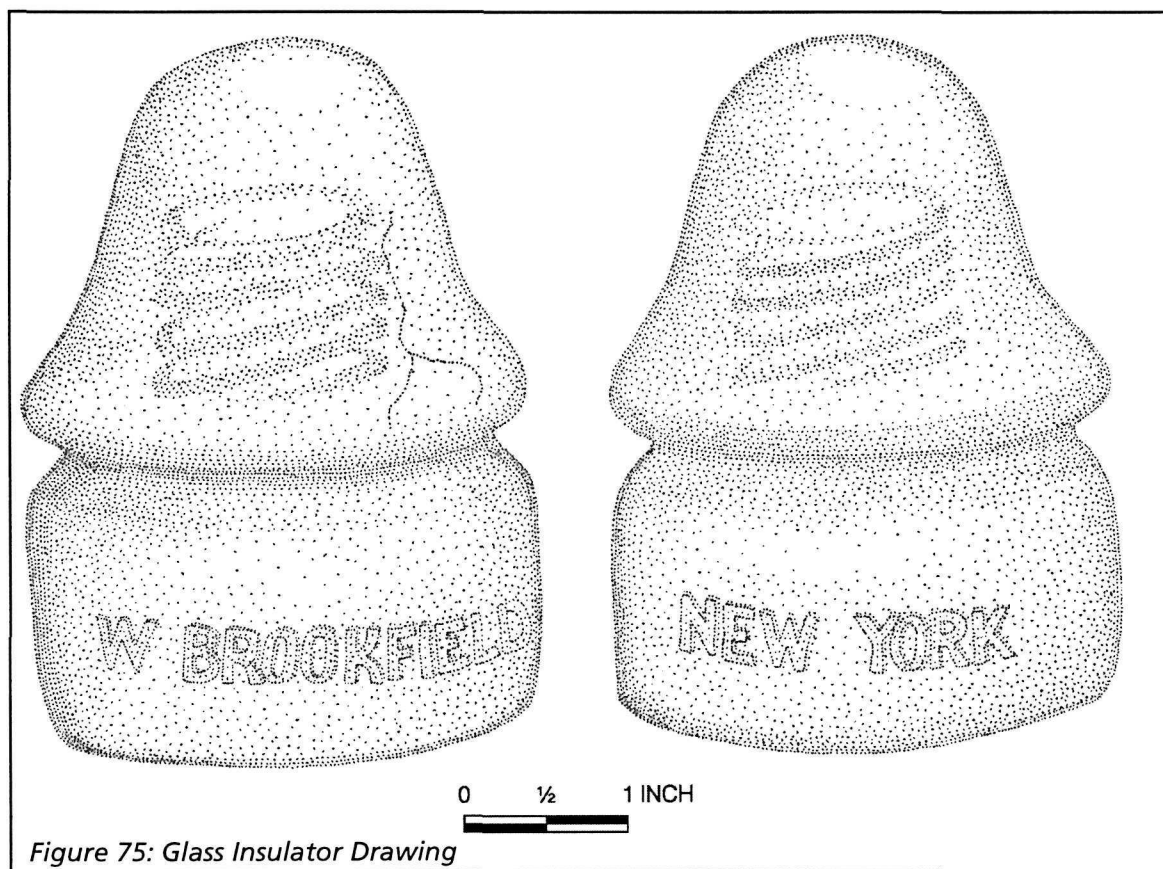


Figure 74: 46N33.5W West Wall Profile

feet below the unit datum. The soil in this level was medium to fine with pebbles and cobbles. Level 4 continued down to a hard packed layer of excrement soil that was concentrated in the north and south portions of the unit at the base of Level 4.

One whole metacarpal was found along with a crown cap bottle finish with foil remnants. The foil obscures the neck seam that would determine if the finish was applied or made by an automatic bottling machine. A garment support was found in an excellent state of preservation with a readable patent date. The patent was filed on September 17, 1897, and was approved (605,225) on June 7, 1898 (United States Patent and Trademark Office 1898). The rest of the artifacts are small fragments of either unidentifiable metal or glass bottle fragments.

Level 5 of feature 6 was the last level excavated in this unit. It was started at 5.95 feet below the unit datum, and it ended 6.52 feet below the datum. After the hard-packed excrement soil was removed, a railroad tie lying east to west butted up against the vertical timber in the east wall and was joined with railroad spikes. The railroad tie in the floor of the unit was found to be resting directly on top of outwash sediments (figure 74). The box (feature 6) was roughly 7 ft. x 5 ft. on a side (figure 73). A blue-green glass insulator was found near the bottom. The insulator was identified as a double petticoat pony, based on its shape. It was embossed on the skirt with "W. BROOKFIELD" and on the opposite side with "NEW YORK" (figure 75). A metacarpal and a femur from an herbivorous sub-adult were also found in the level.



CHAPTER 6: ARTIFACT DESCRIPTION AND PRELIMINARY ANALYSIS

After four non-contiguous years of excavations at the Pantheon complex, a large number and variety of artifacts have been collected. However, out of necessity some of the data has been excluded from analysis in this chapter. All the 1987 data has been removed due mainly to the lack of features. The field notes were read extensively to try and assign groups of artifacts to different time periods, but ultimately not enough information was available to make any assignments. Material from overburden and non-feature layers has also been excluded. Perhaps later researchers will have the time to work with the entire data set.

The artifact frequencies in the following descriptions and tables refer to the minimum number of individual (MNI) artifacts present, not the total number of artifact fragments. The process of determining MNI is easily accomplished with nails; however, other artifacts such as ceramics require more time and attention. Comparative collections of the major classes of artifacts were used for identification and for determining MNI when it was possible.

The system used for classification of the artifacts is adopted primarily from Catherine Blee (1983, 1988), who modified Sprague's classification system (Sprague 1981). The method used for presenting the data followed Diane Rhodes' Peniel Mission report (1988). An in-depth statistical study was conducted using both the Blee and

Sprague classification systems (Gould 1998). Statistically both systems have problems. Gould did state, however, that research should continue along the same line to develop a classification system adequate for describing behavior. The purpose behind using these systems is to maintain continuity with previous reports from Skagway. This categorization system will facilitate the synthesis of information across the various sites in Skagway. For analysis purposes the features are divided by general time periods and then associated with buildings that existed either during the gold rush or after the gold rush. The six building/businesses used to divide the features are the Brownell, Fasel, Rainier (gold rush), Pantheon, Wood Shop, and Rainier (post gold rush) (table 3).

The artifacts are classified according to their primary function. This classification system is constructed with the knowledge that many material items have more than one function. The system relies heavily on the context of the artifact to determine the last possible use before discard. The artifact functions are broken down into one of five basic groups; structural, domestic food/drink, household, specialized activities, and unknown. Each group is further subdivided into specific functional categories (table 4).

The structural group is subdivided into five categories. The first category is *construction materials*, which is limited only to those artifacts that are considered debris from construction or destruction. These materials consist mainly of wood scraps, flashing,

Table 3: Distribution of Features by Time Period and Building Areas

Gold Rush			Post Gold Rush		
Brownell	Fasel	Rainier	Pantheon	Rainier	Wood Shop
21	8	2	3	1	9
22	27	14	19	5	10
		15	23	6	20
			24	7	
			25	11	
			26	12	
				13	
				16	
				17	
				18	

roofing, paint, and other related materials. The *utility* category is limited to electrical, water, or sewer artifacts found within a building, excluding public services. Artifacts in the *public service* category are defined as water/sewer pipes for which the city would have maintenance responsibility, generally limited to the pipes leading up to the building. *Hardware* is the next functional category and includes fasteners other than nails, door parts, and other large-scale hardware for structural rather than household purposes. *Nails* and *windowpane* fragments are given their own separate categories because of their potential to distinguish construction or destruction phases.

The *domestic food/drink* category includes household items that are directly involved in either the storage, preparation, or cooking of food. Bottles and containers for beverage consumption are also included in this category. The largest part of this collection is the remains from the preparation and cooking process, including animal bones, eggshells, marine shells, and tin cans. The five sub-groups are divided into four food groups and one beverage group.

The *household* category is subdivided into 12 categories (table 4). Except for the medicine bottle and lighting subcategory, the household artifacts are not well represented. This is perhaps due to the short amount of time that any of the buildings operated as residences.

The *specialized activities* category is subdivided into 13 groups. This group is even less well represented than the household group artifacts. Some of the categories in this group contain no artifacts at all. An unknown group is used for all artifacts that could not be functionally identified. This group is not used for description or analysis in this report.

Structural Artifacts

Nails

Nails are first divided by whether they are complete or not. They are further subdivided by manufacturing technique (wrought, cut, wire), pennyweight, type (common, finish, roofing), and alteration (straight, pulled, clinched). The use of pennyweight categories assumes that certain

Table 4: List of Classification Groups and Categories

Structural	Domestic Food/Drink	Household	Specialized activities	Unknown
Window glass Nails Structural Building Mat. Utility	Food Storage Food Prep. Food Serving Food Remain Beverage	Pharmaceutical Furnishing Housekeeping Personal Grooming/Hygiene Leisure Children Female Male Int. Lighting Heat/Cooking Clothing	Hunting/Fishing Public Services Communication Office Supplies Transportation Bulk Storage Military Religious Entertainment Sexual Commerce Economic Exchange Construction Tools Farming/Ranching	What-is-it Unknown Func. unk.

sizes served different functions. Nails are grouped by intended function, such as 2D-5D (1"-1.75") nails used for roofing and finishing; 6D-10D (2"-3") for siding, interior fittings, flooring, and light framing; 12D-16D (3.25"-3.5") for light to heavy framing; and 20D (4"-6") spikes for heavy framing and other heavy construction (Teague 1980:91).

A total of 4,595 nails and fragments comprise the study group (table 5). For identified nails, the most frequent are in the 6D-10D size range (n=1,115), which is one-third larger than the next closest grouping. The 6D-10D group also has a wider range of possible uses than other pennyweight groupings. The 12D-16D group, as well as the 20D+ group, number 87% less than the 6D-10D group. Perhaps the large percent difference between the three groups represents a price break which separates the large pennyweight nails based on their being relatively more expensive. The large number of nails found associated with the post gold rush Rainier seems to indicate that either major construction or demolition is taking place. Looking at nail

alteration could identify which activity dominates over the course of time. Using ethnoarchaeological and experimental archaeology data from Young (1994) we can compare the Pantheon Complex Assemblage and determine if a specific activity can be identified.

In her article, Young interpreted assemblages from nineteenth and twentieth century sites in East Tennessee. Data from both a construction and disposal site are used for comparison. In order to discern which of the building assemblages conforms to the comparative collection, it was necessary to convert the frequencies into percentages (table D-5). The percent was calculated by dividing each individual alteration type within a building by the total number of altered nails for that particular building. To compare the construction model data against the disposal model and the Pantheon Complex data, it was necessary to subtract the percentages derived from the construction model from the other data sets. The resulting percent differences are graphed in order to see how the building

Table 5: Summary Catalog of Nail Pennyweights

Pennyweight	Gold Rush			Post Gold Rush			Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	
2D-5D	89	76	8	14	518	44	749
6D-10D	209	147	63	47	543	106	1,115
12D-16D	13	14	62	7	42	8	146
20D+	8	20	5	3	97	18	151
Unknown	464	264	89	52	1,361	204	2,434
Total	783	521	227	123	2,561	380	4,595

areas and disposal model deviate from the construction model (figure 76). The same method is used for the disposal data. The data that deviates the least could suggest a likely explanation for the particular building assemblages.

Altered nails are classified as pulled or straight; and if bent 90 degrees or more, then the nail is considered clinched. As seen in table 6 (not including the data from Young), the highest frequency of altered nails are pulled (n=2,663), with straight (n=1,531) or unaltered nails second, and clinched nails third (n=401). The post gold rush Rainier has by far the largest assemblage of altered nails (n=2,561).

In Appendix Table D-5, the altered nail frequencies have been converted into percentages. In Appendix Table D-6 and D-7, the construction and disposal model percentages are subtracted for each building, which leaves either a positive or negative difference. The resulting data is graphed to facilitate analysis (figures 76 and 77).

From the graph in figure 76, it appears that the post gold rush Rainier and the Wood Shop buildings deviate the least from the construction model. While the data from the Rainier and Wood Shop do not fit perfectly to the construction model, they

do suggest that the nail deposits were made primarily from construction activities. The disposal model shows the only negative percent difference in the number of clinched nails. This means that the clinched nails represent a larger portion of the disposal assemblage than the construction assemblage. The disposal model also is the only assemblage to have a positive percent difference in pulled nails. This means that the pulled nails represent a smaller portion of the disposal assemblage compared to the construction model. All the gold rush assemblages and the Pantheon appear to be very different from the construction model. In these four samples the straight and pulled nails appear to deviate to roughly the same degree. The clinched nails are more variable among the assemblages. These assemblages also do not match the differences from the disposal model, which could indicate that there would not be a match with the disposal model.

The data graphed in figure 77 is from the percent differences using the disposal model as the standard. Immediately it can be seen that none of the data sets matches the disposal model. All the pulled nails have negative differences, and all the clinched nails have positive differences. A comparison can again be drawn with the construction model, the Wood Shop, and post

Table 6: Summary Catalog of Altered Nails

		Clinched	Pulled	Straight	Total
Gold Rush	Brownell	24	567	192	783
	Rainier	57	346	118	521
	Fasel	7	163	57	227
Post Gold Rush	Pantheon	7	92	24	123
	Rainier	289	1,294	978	2,561
	Wood Shop	17	201	162	380
	Total	401	2,663	1,531	4,595
Young Data	Disposal	132	127	83	342
	Construction	33	116	98	247

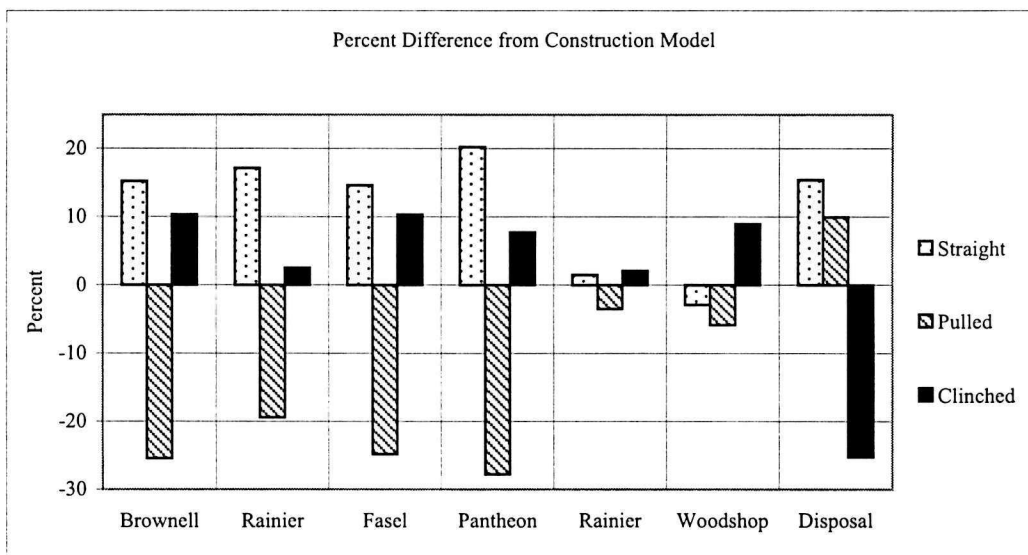


Figure 76: Construction Model Comparison Data

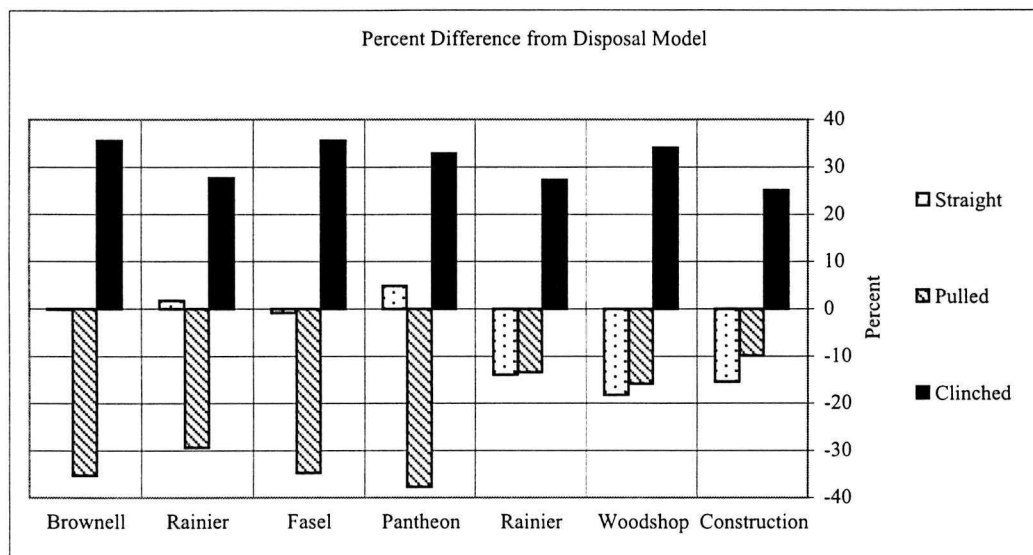


Figure 77: Disposal Model Comparison Data

gold rush Rainier data. These three data sets appear to have the same degree and direction of percent difference from the disposal data. Perhaps the nail assemblages from all three gold rush and Pantheon deposits reflect different kinds of behaviors than can be tested for at this time.

Another method of looking at the nail data is to examine the density of nails per cubic foot of excavated soil. It appears that all the gold rush buildings have higher densities than the later period buildings (table 7). The Fasel Building has the highest density of nails during the gold rush period and experiences the largest drop in density after the gold rush during the Wood Shop phase. The density for the Rainier drops very little over time, however, the later period assemblage does resemble the pattern for a construction deposit.

Window Glass

Flat glass, like nails, is separated from other structural artifacts because they are often deposited differently from other build-

ing materials (Rhodes 1988). Breakage is the main cause for window glass to enter the archeological record at a faster rate than other structural materials. That being the case, it is difficult if not impossible to reconstruct the total number of panes that are present in a particular assemblage. For example, the Fasel Building has 677 fragments. The total number of fragments, however, will never be known because the tremendous volume of shards made it unfeasible to collect 100% of the deposit (table 8). More important is if the interpretation of the deposit alone would lead to the conclusion that a business or hardware store was present. Together with the nail density information a case can be made, independent of the historical record, that the Fasel deposit came from a hardware or similar business.

The Brownell and post gold rush Rainier are the only other buildings that have densities higher than one fragment per cubic foot. Perhaps this reflects that many of the windows, especially on the main road, were large plate glass picture windows for

Table 7: Calculation of Nail Density

Building Era		Total Vol. (Cu. Ft.)	Total Nails	Density (Nails per Cu Ft)
Gold Rush	Brownell	64.1	783	12.2
	Rainier	133.7	521	3.9
	Fasel	6.0	227	37.8
Post Gold Rush	Pantheon	177.1	123	0.7
	Rainier	740.7	2,561	3.5
	Woodshop	41.7	380	9.1

Table 8: Window Glass Count and Density by Building

	Building	Window Glass Total	Total Volume	Density (cu/ft)
Gold Rush	Brownell	406	84.5	4.8
	Rainier	101	133.7	0.8
	Fasel	677	6.0	112.8
Post Gold Rush	Pantheon	67	156.7	0.4
	Rainier	913	740.7	1.2
	Wood Shop	7	41.7	0.2
Totals		2171	1163.3	1.9

display purposes. A broken display window would yield many more fragments than a typical residential windowpane.

Building Materials

The majority of the brick fragments (n=36 mni) recovered are quite small and eroded. Whole bricks are only found under and near the Wood Shop (table E-2). Mortar-fragments are found as well, but not always in association with brick. The bricks consist of two main types, soft, orange clay and a red, dark-brown, hard-fired structural brick. In early 1900, the city enacted an ordinance requiring all new chimneys to be made of brick. However, all the buildings on lot 1 and 2 were built by that time (DA 27 March 1900).

Concrete fragments found near the ceramic sewer pipes was probably used to seal joints. Two large areas of dumped concrete are under the north wall of the Pantheon Building. Since the concrete was poured without forms to contain the mass in a useful shape, it could represent a haphazard attempt to fix the sagging north wall. The large concrete slab for the bakery oven is not counted among the artifacts.

After brick, milled wood (n=35 mni) is the largest class of artifacts in the building material category. The frequency of milled wood is evenly distributed except for the Fasel Building, which only has one fragment. The wood in this class cannot be distinguished from either the construction

or demolition phases. Much of the wood consists of trim pieces or small fragments of framing wood.

Recovered paint lumps are few and found mostly on wood or glass. The fragments from Feature 27 represent the only substantial samples found on the site. The paint and associated casks relate directly to the Fasel Paint and Wallpaper Store.

The post gold rush Rainier (n=36 mni), Woodshop (N=26 mni) and gold rush Brownell (n=27 mni) have the largest number of building material artifacts. The Fasel assemblage has very little other than paint lumps to identify the former paint and wallpaper store.

Utilities

This category contains artifacts that relate to water, sewer, or electrical service (table E-3). Numerous intact sewer pipes are found throughout the site. The most frequent type of sewer pipe is ceramic or clay (n=5 mni). The Feature 11 pipe was the only intact metal pipe found. The fragmentary ceramic pipe remains could have come from activities relating to the intact pipes, such as patches or repairs. Feature 23 of the Pantheon Building is the only confirmed water delivery pipe found at the site. The other water pipe fragments are likely related to water delivery as well. Some larger pipes (>2 inches), however, may have functioned as gray-water outlets. A few pieces of copper tubing were found below the Pantheon, and this could have also been for water delivery.

The electrical hardware at the site consists of ceramic insulators, wire, wire insulation, fuses, electrical tape, circuit breakers, fixtures, wire nuts, and conduit. The ceramic insulators are found in three different style knobs, cleats, and tubes. All the insulators

are made of porcelain. The largest number of insulators was found below the Wood Shop floor. Most of these are knobs or split knobs (n=10). The other areas generally only have tube or cleated insulators. One cleat insulator from under the wood shop is molded with text on the top: "IMP. B. & B./PAT. SEPT 3 07." The patent dates the cleat from 1907 to 1921 (United States Patent and Trademark Office 1907:92). From under the Pantheon floor a cleat has the text "Peru" molded on the top, and one tube has "E. R. O." molded on the side. No information about either mark was found.

The first evidence of modern indoor plumbing is from excavations into the floor cuts in the eastern portion of the Pantheon Building (figure 78). A toilet float assembly was found among a large concentration of artifacts on the north side of the Pantheon Building. No manufacturing marks are on any part of the float assembly.

Creating the infrastructure to deal with unpleasant issues such as garbage was usually last on the list for a booming town like Skagway. Not until there was a recognized health hazard were systems created to manage the massive amounts of material garbage as well as human waste. By mid-1899, the fire warden had prohibited dumping at all locations except for the tidal flats (DA 19 May 1899 4:3). Garbage removal was advertised at least as early as March of 1900 (DA 21 March 1900 2:3). The excavations into the vacant lots at the Pantheon Complex revealed a number of ways that waste was removed or covered. Privies were found from the earliest occupations as well as an indoor version, the water closet, which were used for much longer lengths of time. Water service was in place during the gold rush, but the first ceramic sewer pipes were much later. The three ceramic pipes found in 1987 represent the first infrastruc-

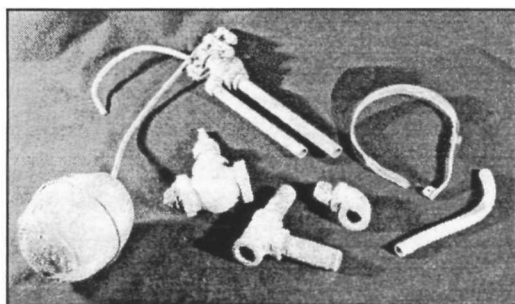


Figure 78: Toilet Tank Parts

tural improvements, which led to indoor plumbing. The rest of the recovered pipes were metal/cast iron and dated from the early 1940s. The ceramic pipes might have bridged the gap from privies to a citywide system. All of these were major investments because it required excavations in and around extant structures just to install.

The progression of sewage removal from this site was: outdoor/indoor privies (1897-1910s?), ceramic and metal pipes connecting to large cobble cesspools (1898-1940s), and then finally cast iron pipes connecting to a city maintained system (1940s-present).

Structural Hardware

This category is composed of fasteners such as screws, bolts, and door hardware. The artifacts are generally not diagnostic of any specialized activities. Nail caps ($n=19$ mni) and Wood screws ($n=16$ mni) are the two largest groups in this category (table E-1). The post gold rush Rainier has by far the largest frequency of structural hardware ($n=43$ mni). No other building has more than 12 (Brownell) artifacts in this category.

Hinges and knobs are the most frequent kind of door parts ($n=7$ mni). One “Yale” deadbolt was found below the floor of the Pantheon. The trademark on the bolt dates from 1883 to the present (United States Patent and Trademark Office, n.d.). Other artifacts recovered in this category are metal

brackets, clamps, straps, and bands.

Domestic Food/Drink

This category is divided into five subcategories: beverage, food storage, food preparation, food serving, and food remains. The *beverage* subcategory consists entirely of glass bottles.

Beverage Bottles

A minimum of 398 bottles is represented in the collection (table F-4). The largest group is unidentifiable for contents ($n=120$).

Liquor and beer bottles are the two largest groups, respectively, with identifiable contents ($N=101$ & 79). Feature 21 from the Brownell Building has the largest number of bottles by provenience. Feature 26 from the Pantheon Building contains literally thousands of bottle caps, and only a sample was collected ($N=297$). Caps are also useful for determining the number of bottles consumed. Color is used to separate bottle shards into content categories. Amber is nearly exclusively used for beer bottles. Soda bottles tended toward the greens, emerald green, aqua, and green. Liquor bottles are more diverse in the color of bottle.

The Pantheon area has by far the largest number of beverage items ($n=387$). A large majority of the beer bottles from the Pantheon come from Feature 19, which dates to the WWII era Pantheon ($n=65$). Nearly 300 bottle caps come from Feature 26, which dates to the first Pantheon Saloon from 1903 to 1917. Liquor bottles, as distinct from beer bottles, make up a small portion of the sample from the Pantheon. The Pantheon appears to have been a full-service bar with a variety of liquors and beers during its first era and primarily a beer bar during its second era. The post gold rush Rainier has more than 13 times the number of liquor

bottles and 43 soda bottles compared to zero for the Pantheon.

What may not be evident in the assemblage was that the drinking habits seemed to have changed before and after Prohibition. The Pantheon Saloon was one of the few bars to re-open in the same location after Prohibition. This gave us a unique view of how the drinking habits changed. During the first incarnation of the Pantheon, liquor bottles, including whiskey or bourbon bottles, dominated the assemblage. This finding was at odds with national data from the late 1800s, which showed that the “annual per capita absolute alcohol consumption was fairly evenly balanced between beer (45 percent) and spirits (47 percent), with wine in a distant third (7 percent).” (Lender and Martin 1987:145) The presence of three breweries in Skagway also seemed to conflict with the data, especially when considering the shipping costs associated with transporting alcohol from the south.

After Prohibition, the saloon went almost exclusively to beer. Distilled spirit bottles were found in the later assemblage, but in much smaller numbers. This trend was identified on a national level in 1919 when “[...]for absolute alcohol] the figures read 55 percent for beer and only 37 percent for spirits...” (Lender and Martin 1987:146). During Prohibition, however, the estimates were that at least 75 percent of the alcohol consumed was from spirits. This seemed less about consumer choice and more about the economics of liquor purchase during Prohibition.

“The middle classes and wealthier drinkers, who could best afford to imbibe at high prohibition prices, shifted their habits relatively little—they had always been the greater spirit drinkers. On the other hand, blue-collar work-

ers and poorer groups, who usually preferred beer, generally could not afford the higher prices; consequently, they apparently drank less. So the higher proportion of spirits consumed did not necessarily mean that vast new legions of people were now drinking distilled beverages—only that fewer Americans, particularly former beer drinkers, could afford to buy preprohibition amounts of liquor and that among those who continued to drink *proportionally* more preferred spirits.” (Lender and Martin 1987:146) (*Italics in original*)

Another consideration was that when the Pantheon Saloon was reopened, it catered to the army personnel stationed in Skagway. Demographically the army personnel were probably not a representative cross-section of the usual saloon patrons, in either age or alcohol choice. Any number of reasons could be postulated for this shift in drinking habits; however, more research would be required to adequately answer the question.

Catherine Spude et al. (1993) had an extensive discussion of pre-Prohibition and Prohibition era Skagway in Father Turnell’s Trash Pit. Skagway was the second town in Alaska to go “dry” in a June 6, 1916, vote. The issue the voters were asked to decide was whether the saloons’ liquor licenses should be renewed. The dry advocates felt it would be easier to close the saloons than to stop liquor consumption (Spude et al. 1993:105). The saloon owners were given until August 21 to dispose of their stock of liquor and close business (DA 22 August 1916 1:3). Congress passed a much more restrictive law for the territory, known as the Alaska Bone Dry Law. This law made it illegal to possess, make, transport, or in anyway distribute alcohol. It was even

considered harsh by some of the “dry” proponents (Spude et al. 1993:91-92). Prosecution of alcohol-related offenses was spotty throughout the Prohibition era in Skagway. Court records show that most of the people prosecuted were “...unemployed Euroamericans, newly-arrived laborers, and Tlingits...” (Spude et al. 1993:105)

There was a conspicuous lack of back bar bottles in the saloon collection. The reason for this is unknown. One would expect that in 18 years of operation a few of these bottles would have been broken and discarded. There was a possibility that the bottle dump for the Pantheon was not found or was removed from the site.

Soda Water Bottles

The majority of soda bottles were found at the post gold rush Rainier (n=43 mni). These bottles are green to aqua with thick collars, necks, and bodies. The bases are rounded and thick as well (figure 79). The bottom of the base usually has a small indentation with embossed lettering such as “I95” or “I51”.

All body fragments are either not embossed or do not have paper labels. The bottles have a rounded, “torpedo” style bottom. The thick walls are intended to withstand the pressure of the carbonization, and the rounded bases ensure that the bottles are shipped and stored on their sides. This prevents the stopper from drying out and releasing the pressure (Wilson and Wilson 1971). A full discussion of “torpedo” bottom bottles can be found in Rhodes (1988: 236,238).

When the backhoe expanded the Feature 6 walls, a small collection of bottles was found. One is a Hires Root Beer concentrate bottle. It is aqua colored with a tooled lip and embossing on all four sides. Hires

first began producing root beer in 1876 (Zumwalt 1980:240). Aqua bottles were phased out by other techniques for coloring glass around 1910 (Cooper and Sanders, 1995). The date also corresponds to when Charles Hires’s three sons joined the family business (Zumwalt 1980:240). This indicates the bottle pre-dates 1910.

In Feature 21, an embossed aqua bottle was found (figure 80). A horizontal slug plate seam is on the heel as well as three vent

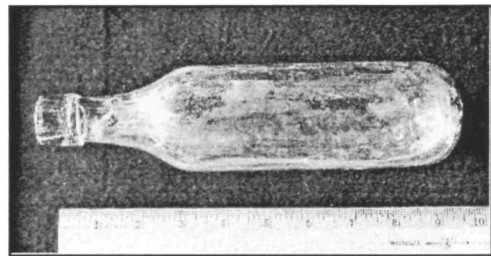


Figure 79: Soda-Water Bottle

holes, but no seams are on the body. The embossed text is oriented vertically on the bottle and it reads: “[S]HASTA/GINGER ALE.” On the heel of the bottle in horizontal letters is: “N.B.B.G.CO.” and on the base is an “A.” The Shasta Water Company was located in Seattle, Washington. The company began bottling in 1899 and continued until 1918 (Hurst n.d.). The heel mark is from the North Baltimore Bottle Glass Company. The “A” on the base indicates that the bottle could have come from the Albany, Indiana, plant. The Albany plant was in operation from 1895 until 1903 or 1904 (Toulouse 1971:379).

Liquor Bottles

Liquor bottles were recovered in both bottle (n=101 mni) and flask (n=37 mni) form. Most of the flasks are made from clear glass, although one orange-colored “picnic” flask was found near the base of Feature 5 (figure 81). The bottle is not em-

bossed, but a space is available for a paper label.

A glass stopper of the same color was found near the flask, the cork seal missing. The flask is a flattened oval shape with side seams that run from the base to the neck. A tool applied the finish and a bead was added below. None of the flasks in the collection have base marks, embossing, or paper labels.



Figure 80: Shasta Ginger Ale Bottle

Three bottles under the Pantheon floor-cut and one bottle from under the Wood Shop are from a company called National Distillers. On the shoulder of the bottles is the embossed phrase "FEDERAL LAW FORBIDS." This is an abbreviation of the entire phrase, "Federal law forbids sale or reuse of this bottle." Federal law required the phrase to appear on liquor bottles after January 1, 1935 (DePuydt et al. 1997:72). No information on the history of National Distillers was located. The style of the bottles is called tourist or dandy (Putnam 1965). A single tourist or dandy flask was found under the Wood Shop. The plastic screw cap on the bottle identified the bottler as the "B (British). C (Columbia). Distillery Co., Ltd." Below the text is a shield divided into four parts and the letters "B. C. D. Co." are divided into each section. Further information on this Canadian Company could not be located.

Fragments from at least six bottles are identified as coming from the Jesse Moore-

Hunt Company, based on embossing from the body and base. The bottles contained bourbon/whiskey, bottled in or shipped from Kentucky and distributed from San Francisco. All the bottles are amber with embossing on body and heel fragments (figure 82). The fragments from three bottles are from the post gold rush Rainier and one from the Pantheon. George and Jesse Moore in Louisville, Kentucky, originally founded the company in 1853. Distribution from San Francisco did not begin until 1867 (Thomas 1977:29). Henry Hunt joined in a partnership in 1875 and the company was formally consolidated in 1896 or 1897 and continued until 1918 (McGuire 1967:25; Wilson and Wilson 1968:87). Therefore, the bottles post-date the consolidation of the company in 1896.

An amber liquor bottle was found in Feature 21 with an "H/482" embossed on the base. According to details in Toulouse (1971: 231) it most likely came from the Holt Glass Works, located in West Berkeley, California. The amber whiskey bottles were the biggest seller for the glass company. The plant was in production on and off from 1893 until the San Francisco earthquake of 1906.

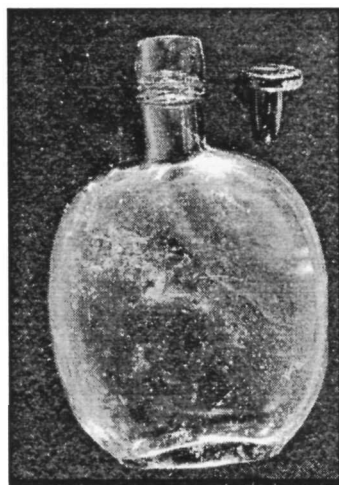


Figure 81: Picnic Flask

An amber liquor bottle base was found in a small bottle dump near Feature 6. Embossed on the base is "R & Co.," which was from Roth & Company located in San

Francisco. They marketed varieties of whiskey and other liquors in the area of San Francisco. The manufacturer of the bottle is unknown, but was suspected to be the San Francisco & Pacific Glass Works. The mark on the bottle dates from 1879 to 1888 (Toulouse 1971:438). There was some contention that the mark belongs to different companies (Hurst n.d.).

In Feature 16, an olive-green base is embossed with "C S & CO. LD/2658," for Cannington, Shaw & Company. The plant was located in St. Helens, England. The mark was used from 1875 to 1913. The plant specialized in whole and partial hand-blown bottles (Toulouse 1971:147-150). This represents one of the few beverage bottles that originated outside the U.S.

A possible liquor bottle was found in Feature 21 with the mark from the Maryland Glass Company. The mark is an "M" inside a circle. The mark was in use after 1916; however, any liquor bottle from this company would most likely post-date the Prohibition era (Toulouse 1971:339).



Figure 82: Jesse Moore-Hunt Whiskey Bottle

Wine Bottles

Wine bottles comprise a small portion of the total beverage bottles (n=5 mni). All the bottles are either green or olive green. The bottles are either handblown or mold-

blown. Both time periods for the Rainier have bottle glass, while the Pantheon has only wine bottle caps/foil.

Near the bottom of Feature 5, a full bottle of red wine was found (figure 71). The bottle is close to 12 inches tall with a high kick-up and a pontil (bull's-eye) mark. The bottle is handblown, and the finish is applied. The bottle was deposited upside down, which kept the cork wet and maintained the seal. The foil cap and paper label are missing from the bottle. The contents were not sampled for analysis, and no other information was collected from the bottle.

Beer Bottles

A base fragment from Feature 5 is embossed with a forward slanted "A" and a backward slanting "B." This mark is from the Adolphus Busch Glass Manufacturing Company, operating out of Belleville, Illinois. The mark was in use from 1904 to 1907. The glass company was created by Busch for the sole purpose of supplying beer bottles for his brewing company (Toulouse 1971:26-27). The bottle is aqua and has mold seams, but the exact manufacturing technique was not determined.

Beer bottles from Northwestern Glass Company are identified six times in the collection; three from Feature 6 and three from Feature 19. The mark consists of an "N" and a "W" connected by a bar at the top. The company started using the mark in 1931 and continues to the present (Toulouse 1971:390).

The Streator Bottle and Glass Company is represented by two bottles from Features 6 and 17. The base mark text is "S B & G Co." The mark was used from 1881 to 1905. The company was a long time supplier to the Adolphus Busch brewery. In fact, Busch has always had financial involvement with the

glass house (Toulouse 1971:461-463).

Three beer bottles from the Fidelio Brewery were found under the Wood Shop and in Feature 19. The bottles are embossed on the heel or shoulder with "Fidelio Brewery, Inc. New York." No information on the brewery was located. The base marks are from the Knox Glass Bottle Company. The mark is a keystone outline with a "U" in the center, which stands for the Sheffield, Pennsylvania, plant. The mark was used from 1932 to 1951 (Toulouse 1971:293).

A beer-related item from Feature 1 is a red and yellow foil seal with the text "E. & J. Burke, Dublin, Ireland & Liverpool, England" around the outer edge. Below that is more text "E. & J. Burke/(Cat figure)/ Trade E&JB (in monogram) Mark/Dublin." On the side of the foil is "...[W]A.../Betts.../ Trade..." (W. A. Russ Bros., Liverpool). E. & J. Burke was an exporter of Guinness stout and Bass ale. W. A. Russ is the name of the bottle manufacturer. The script and style of the printing changed frequently and is impossible to date with any certainty (Toulouse 1971:176-178).

One bottle artifact shows clear signs that it had been intentionally altered (figure 83). The amber bottle was recovered from Feature 21. The finish, neck, and partial shoulder are intact; but at the shoulder the bottle appears to be cut by either a hot wire or glasscutter. The smooth edge indicated that it was probably cut by something hot enough to melt the glass. No known purpose could be found for altering the bottle in this fashion. It is suggested that perhaps it functioned as a funnel. In which case the bottle was not modified expediently, but was planned and well thought out. It is also possible that the neck was never intended for use and the bottom of the bottle was reused as a jar.

Seventy-three bottles from 25 different manufacturers are represented in the collection. The Owens-Illinois Glass Company has the largest number of marks with 21. The Owens-Illinois mark was used from 1929 to 1954 (figure 36). The name "DU-RAGLAS" was added to the mark after 1940 (Toulouse 1971:403). The mark is generally a large flattened diamond with a circle around the center portion of the diamond and an "I" is in the center of the circle or "O."

Nine of the manufacturers were in business before Prohibition. Liquor bottles are the primary product from these companies, as represented in the collection. Beer bottle manufacture dominated the post-Prohibition collection. A clear distinction can be seen in the drinking patterns from before and after Prohibition. The reason is unknown for the popularity of beer over hard liquor after Prohibition.

Bottle Closures

The total number of bottle caps in table F-4 is 422; however, the actual number is far larger. Feature 27 contained thousands of caps, but it was impossible to collect all the caps, so a sample was taken. All the caps are "crown" with various liners, mostly cork. The crown cap was patented in 1891 by William Painter and in 1893 was ready for wide spread use (Lief 1965:17-20). Not until the invention of the automatic bottling machine in 1904 was the crown cap ready for the market place.

At least nine cork wine stoppers are represented in the collection and fragments from at least four foil covers. One foil cover from Feature 5 is embossed with a circular leaf design and below that is embossed text "/AC REVETE/.G.D.G." (in small letters) and a large "O." No further information on the embossing could be found.

Six metal crown cap openers are identified in the collection. Three of the openers are multifunctional. One end is flat like a screwdriver, presumably for prying off lids. A cork stopper was fitted around the middle, possibly for a replacement cork if the original was lost. The opposite end is a looped crown cap opener.

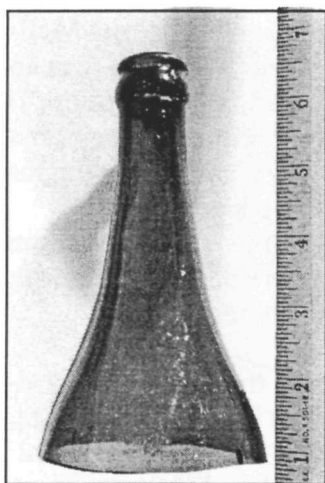


Figure 83:
Modified Bottle

Food Storage

Storage artifacts are divided from other preparation artifacts because of the length of time that items are retained. The implication is that foodstuffs in storage vessels are not meant for immediate use, but rather to be curated for times of seasonal shortage or other factors that prevent fresh food from being used. The artifacts included in this category are glass and ceramic jars, and tin cans of various sizes.

Jars

Nineteen glass jars were recovered from the excavations. Jars are found in every building area except the Wood Shop (table F-1). The Rainier area had by far the largest sample of individual food storage artifacts ($n=28$). None of the building areas had more than seven storage artifacts.

In Feature 14, twenty-seven fragments from one Ball/Mason jar were found. It is an aqua jar with a continuous threaded finish, a ground lip, and mason shoulder seams. The embossed text on the jar is: "THE"; "BAL.../...AR/...SO.../S/[PA]TE..." The jar dates from 1888 to 1893. The Ball Bros. Glass Manufacturing Company in Muncie, Indiana, made the jar (Creswick 1995:11).

Three fragments of one ceramic storage jar are from Feature 14. The jar is a whiteware cylinder with black transfer print overglaze. The remaining text is "MA"[RMALADE] "ONLY PR"[IZE MEDAL...]. The full text on the jar would have been "GRAND MEDAL OF MERIT/ JAMES KEILLER & SONS/ DUNDEE/ MARMALADE/ ONLY PRIZE MEDAL FOR MARMALADE/ LONDON, 1852(?)/ GREAT BRITIAN." The firm was established in 1797 (Herskovitz 1978:111). An identical jar was found at the Peniel Mission (Rhodes 1988:261).

Cans

Cans in the storage category are placed here because they did not appear to be opened when they were excavated. Only nine cans are identified as not having been opened and all come from the post gold rush Rainier Building.

Other artifacts in this category are unidentified glass containers, plastic wrapping, aluminum foil (not from bottles), and a small cork stopper.

Food Preparation

This category includes condiment bottles and other utensils that are used for preparing meals. Out of 27 individual food preparation items, 14 are from condiment bottles (table F-2). Eight of the bottles come from the post gold rush Rainier Building, which also has the largest number of food preparation items ($n=14$ mni).

Condiment Bottles

A barrel shaped condiment bottle was found in Feature 5 (figure 70). It is made from SCA glass with a large threaded bead finish and another bead below. In the center of the bottle is an embossed monogram with a superimposed “D” and “H.” Around the outer edge of the monogram is the embossed text “DODSON-HILS MFG.CO./ST. LOUIS.” The company began in the 1870s producing condiments. The first trademarked product was in 1892, but the mustard was not trademarked until 1898. In 1897, Dodson changed partners, and Braun joined the company (Zumwalt 1980:121).

Three small, 3.75-in. tall bottles were found, two from Feature 26 and one from Feature 3. The bottles are colorless SCA, with tooled finishes. Embossed on the side is “FOX,” and below that is “trademark.” An embossed likeness of a fox is over the word FOX (figure 84). John G. Fox & Company began business as “The Fox Oyster Company,” selling oysters wholesale and retail in 1897. In 1904 the name was changed when the company acquired a bottling plant for producing oyster cocktails, clam tea, beer, and soda water. The company switched to strictly soda water during Prohibition (Zumwalt 1980:155).

In Feature 6 is a colorless SCA bottle base with embossing. The base text is “H.J.HEINZ-PATD-145.” The date for the patent could not be found; however, the Heinz Company was issued a license for the use of an automatic bottling machine in 1909 (Scoville 1948). The manufacturing technique of the bottle base indicates that it post-dated 1909, but by how much is unknown.

Fragments from two different condiment bottles were found in Feature 13. One bottle fragment from Feature 13 is embossed with

“...IRE SA...” and the other bottle fragment has “J74D/S” on the base and “SAU...” on a body shard. Salem Glass Works, which made bottles with “JDS” embossed on the base, was in business from 1895 to 1937 (Toulouse 1971:458-459). The company stopped embossing in 1920 or 1921, and the glass stoppers with cork liners were used until 1957 (Zumwalt 1980:269).

Two bottle fragments are from the McIlhenny Company, one from Feature 14 and the other from under the Wood Shop. The base fragment from Feature 14 is embossed with “...ILHENNY/9.” The body fragment from the Wood Shop has the text “...ERY...” Due to the fragmentary remains of the marks, a secure date for the bottles could not be determined.

A single bottle from the T. A. Snider Preserve Company was found in Feature 14. The 16-oz. colorless bottle is cylindrical with a continuous threaded finish. The top of the finish is tooled flat. The embossed text on the base reads “THE T. A. SNIDER PRESERVE CO.-CINCINNATI, O.” The base mark is a diamond with an “S” inside. The mark was in use from around 1900, but no end date was established (Toulouse 1971:449-50). The company was known as the T. A. Snider Preserve Company from 1884 to 1923 (Creswick 1995:196).

In Feature 17, a whole bottle with base markings was found. The bottle is colorless, cylindrical, and has a continuous threaded finish. The base mark is an “O” inside a square. This mark is from the Owens Bottle Company. The mark itself was used on bottles from 1911 to 1929 (Toulouse 1971:393).

Fragments from at least two coffee pots were found in Features 21 and 27. The fragment from Feature 21 is an enamel-coated

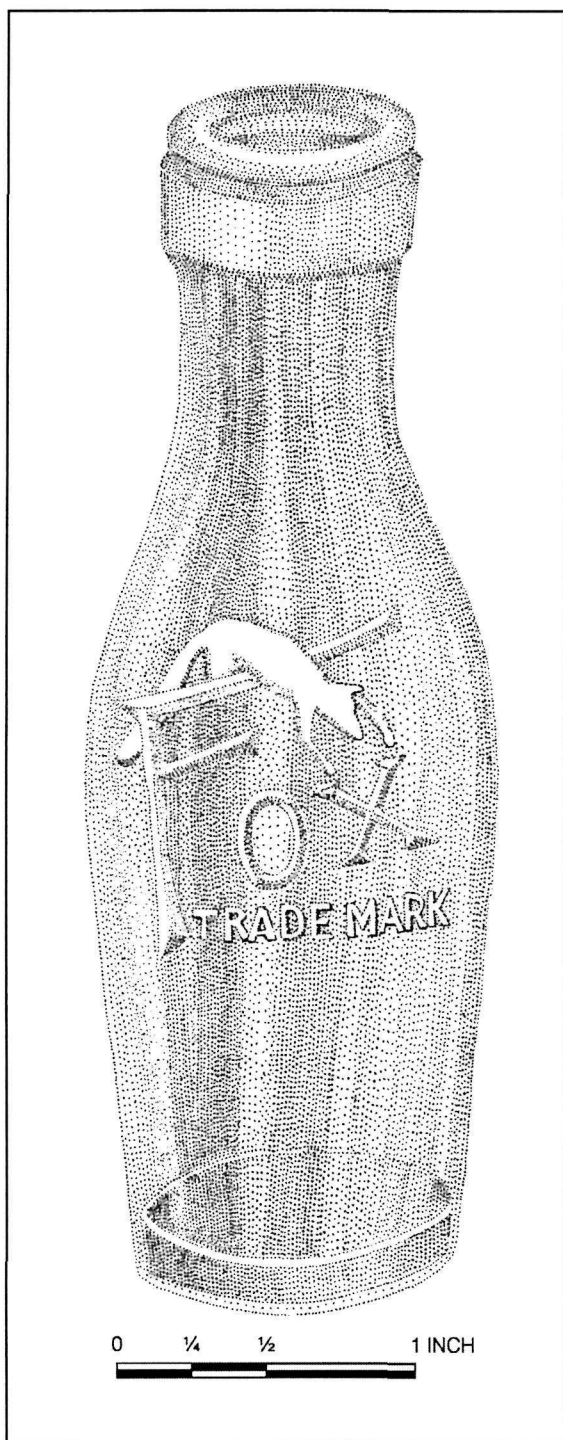


Figure 84: Fox Clam Juice Bottle

tin coffee pot lid. A nearly whole coffeepot was found in Feature 27. The pot has a 2-quart capacity and is tapered gray enameled-tin with a rolled rim and a U-shaped spout. A hinge for the lid is attached to the rim just below the mouth of the pot.

Food Serving

This category is composed largely of ceramic vessels (n=161 mni) (table F-3). Other serving items include tumblers, mugs, cups, stemware, and utensils (n=103 mni). Pressed and cut glass fragments are in the household furnishing category. During the cataloguing process ceramics were identified and sorted first by their ware type (i.e., earthenware), then decoration, and vessel form. Maker mark information was noted for both dating and place of origin.

The majority of the ceramic sherds are undecorated and fall into the general dish vessel form (n=57 mni). Vessel forms, such as plate (n=54 mni) and bowl (n=31 mni), are well represented. The decorated vessels are usually under-glaze transfer prints, and many of the porcelain vessels are over-glazed and handpainted.

In the collection 15 different maker's marks are identified from 36 different vessels. At least 10 of the marks come from English potters and the rest from American potters in the Ohio region.

Under the Pantheon floor, a whole china coffee cup was recovered. The vessel has two green stripes near the rim. The mark is a seated figure decorating a jar with the text "SHENANGO CHINA/ NEW CASTLE, PA." below (figure 35). The mark dates anywhere from 1915 to 1940 (DeBolt 1994:132).

In Feature 25, under the two-story addition of the Pantheon, a whiteware bowl has a partial maker's mark. The bowl has a poly-

chrome transfer print applied under the glaze. The rim has a brown diamond pattern with orange zigzag line below. A blue edge line is below the orange. The mark is an anchor chain circle with a three-mast ship in the center (figure 85). Above the

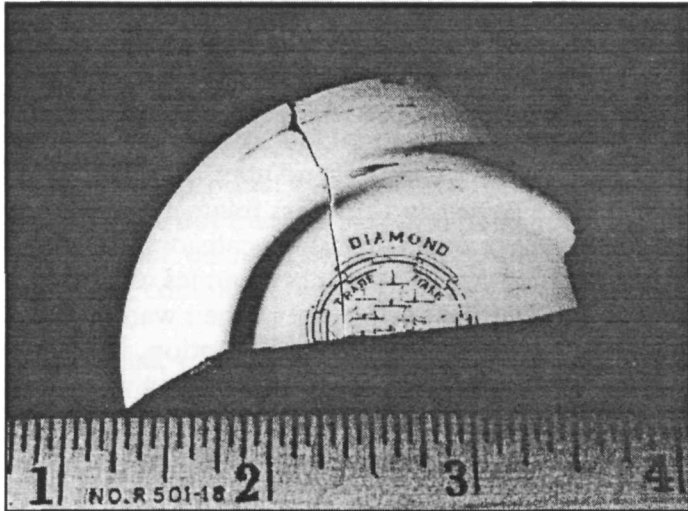


Figure 85: Adderleys Maker Mark

ship is the text "TRADE-MARK," separated by the center mast. Above the chain circle is the text "DIAMOND." Three different companies used the same mark from 1869 through 1926 (Godden 1964:24,341). The companies are Hulse & Adderley, William Alsager Adderley & Co., and Adderleys Ltd. The text, "Diamond," above the mark most likely refers to the pattern.

Another dish with a mark is also found in Feature 25. The whiteware dish fragment is flat, possibly from a large plate or platter. The maker's mark is a brown transfer print under the glaze. At the top of the mark is the text "WATERLOO POTTERIES/ TRADE MARK" in two semi-circles over a crown and shield emblem (figure 86). Below the shield is the text "ROYAL PREMIUM/ SEMI-PROCELAIN/ T. & R. BOOTE./ENGLAND." Printed marks from this company were used from 1890 to

1906 (Godden 1964:84).

Six marks from the Knowles, Taylor & Knowles pottery in East Liverpool, Ohio, are found on the site. One mark comes from under the Wood Shop floor and the others are from the Rainier Building. Two different styles of marks are represented.

The first style is from a thick and heavy whiteware or ironstone bowl below the Wood Shop floor and has a printed mark with the text "K. T. & K./CHINA" with a horizontal line between the words. The mark is stamped in red ink. The dates for the mark are from 1890 to 1905 or 1910, depending on the source (DeBolt 1994:73; Gates and Ormerod 1982: 125).



Figure 86: T. R. Boote Mark

The second mark style is found twice in Feature 1 and once each in Features 5, 6, and 14. The mark is stamped on the base under the glaze. All five granite-ware dishes are undecorated.

The mark is a circle of five crowns joined by a wreath of leaves (figure 64). In the center of the circle is an eagle with arrows and olive branches in the talons. Above the circle is the text "WARRENTED" and below is "K. T. & K./GRANITE." Sources

are consistent with 1890 as a start date for the mark; however, they differed for the end date from either 1900 or 1907 (DeBolt 1994:71; Gates and Ormerod 1982:119; Kovel and Kovel 1986:146). Vessel forms are two bowls from Feature 1, a saucer from Feature 5, a plate from Feature 6, and a bowl from Feature 14.

A partial mark produced by W. H. Grindley & Company of England is found below the floor of the Wood Shop. The whiteware fragment is possibly from a plate or large bowl. No decorations were found besides the mark, which was printed or stamped under the glaze. The text of the mark is "...GRINDLEY &..." with a wreath wrap-

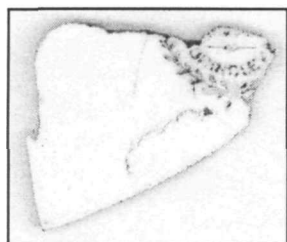


Figure 87:
W. H. Grindley Mark

ping around the outside (figure 87). The mark dates from roughly 1914 to 1925 (Godden 1964:294).

A ceramic sherd with a partial mark from Dresden Pottery of East Liverpool, Ohio, was found in Feature 14. The ceramic sherd is from a plain whiteware vessel, possibly a plate. The mark is stamped under the glaze in orange or umber. The text "...DEN" is in the center of a circle with horizontal and vertical lines meant to represent a globe (figure 88). The mark dates to the 1890s, but would have been in use until at least 1915 (DeBolt 1994:42-43).

Sherds that crossmend are found in two different features from 6N35W. Two fragments are found in Feature 14 and four in Feature 16. The mended dish is either a small bowl or a deep saucer. The dish is a semi-porcelain with molded decorations on the rim, but no color decoration except for the stamped underglaze mark. The

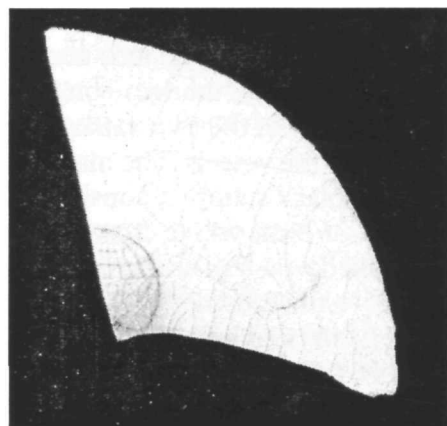


Figure 88: Dresden Pottery

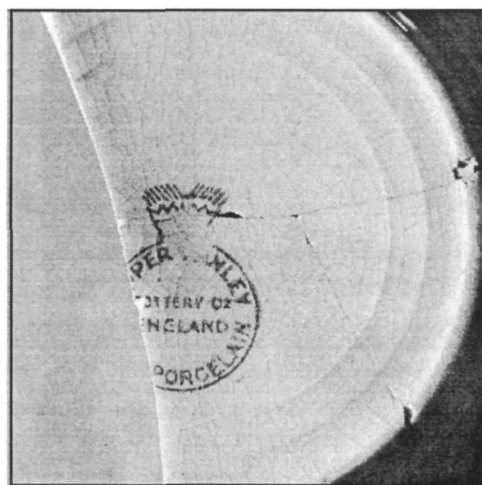


Figure 89: Upper Hanley Mark

dish comes from the Upper Hanley Pottery Company of England (figure 89). The mark did not exactly match any example from the resource materials. The mark consists of a circle with a crown on top. The crown differs from the examples as well by the lack of an inner circle and two decorative filigrees inside the inner circle. The text inside the circle is "UPPER HANLEY/ POTTERY Co/ ENGLAND/ SEMI-PORCELAIN." The mark with the closest resemblance dates from 1895 to 1900; however, the company produced ceramics only until 1910 (Godden 1964:632).

Six different vessels are found with the Johnson Bros. (England) mark. Two different styles of mark are on these vessels. The older of the two marks is found on four of the vessels. The mark is an underglaze black stamp. It consists of a central coat-of-arms with a crown on top and flanked by a lion and unicorn (figure 90). Above the crown is "ROYAL IRONSTONE CHINA" and below "JOHNSON BROS/ ENGLAND." This mark dates from 1883 to 1913 (Godden 1964:355). Two of the ves-



Figure 90: Johnson Bros. Mark

sels represent thick and heavy plates, or hotel china. The third dish is a small oval shaped bowl; however, the walls are very thick in proportion to the overall size of the vessel. The last vessel is a cross-mend between Features 1 and 14. Approximately 15 feet separate the two features. Also, both fragments differ in color and general wear, which would indicate they were subjected to different environments while buried.

The second mark is an underglaze brown stamp mark. It consists of a central crown with "ROYAL/ SEMI-PORCELAIN" arching over the crown. Below the crown is a scroll with "JOHNSON BROS." inside the scroll and "ENGLAND" below the scroll. The mark has a long date range from 1900 to the present (Godden 1964:355). The vessel fragments with this mark come from Features 14 and 16, respectively.

The Feature 14 fragment is from a large plate or platter. It is either an ironstone or semi-porcelain with no decoration. The vessel from Feature 16 is whole, but in three fragments. When mended, the vessel is a saucer six inches in diameter.

Feature 1 contains three different maker's marks. The first is from James Gildea of the Dale Hall Works in England (Toulouse 1964:273). The mark consists of a central figure inside a circle, unfortunately only the back and head remain (figure 91).

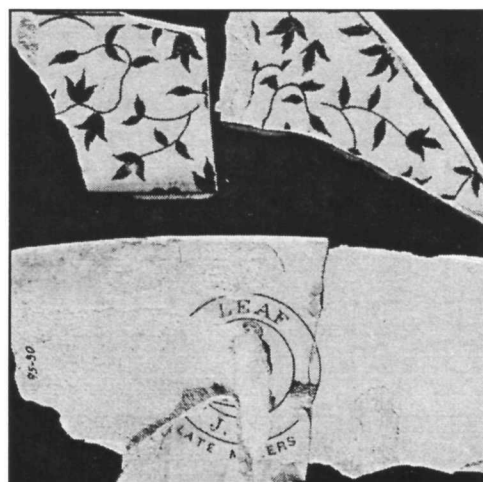


Figure 91: James Gildea Mark

On top of the inner circle is the text "LEAF" and "J [G]" at the bottom. Outside the outer circle is the text "LATE M [AY] ERS." Between the circles are bold wavy lines with small lines below. Another impressed mark is found on the three fragments with the very faint text "[I]VORY," "[G]ILDEA," and a very small fragment with an "I" over "B."

More than 300 fragments crossmend to form at least two plates with the James Gildea mark. The plates are a heavy white-ware with clear glaze. A brown floral transfer print is applied under the glaze to the rim area. The large number of fragments is

indicative of both the harsh depositional environment and the disturbances before burial.

The second mark found in Feature 1 is from Anthony Shaw & Company of England (figure 92). The same mark is also found at the Peniel Mission site (DePuydt et al. 1997: 90). The mark consists of a central globe with a crown on top and the text “PARI [S WHITE]” above the crown. Below the globe is the text “ANTH [ONY SHAW & CO./ ENGLAND WARRENTED].” The dating for the mark is between 1898 and 1900 (Godden 1964:571). The mark is stamped under the glaze. The dish fragment is too small to determine the original shape.

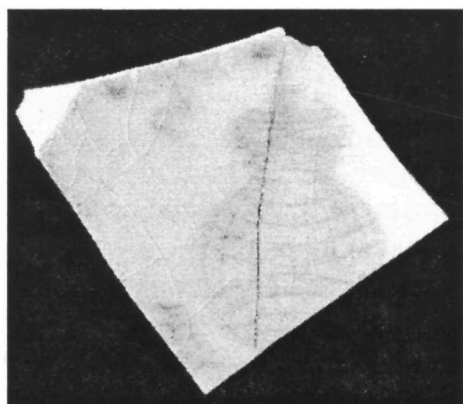


Figure 92: Anthony Shaw Mark

The last maker's mark from Feature 1 appears to be an undocumented mark from Thomas Hughes of England. The complete mark is a central coat of arms surrounded by a scroll and topped with a crown (figure 63).

The mark is a lion and unicorn flanking a crown with the text “ROYAL PATENT IRONSTONE” arching above the crown. At the bottom of the mark is the text “THOMAS HUGHES/ ENGLAND.” The name Thomas Hughes was first used from

1860 to 1876 at the Waterloo Road, Burlsem site. Starting in 1872 production shifted to the Top Bridge Works, Longport, Burlsem and the Staffordshire Potteries (Godden 1964:339).

In 1894, the name of the company changed to Thomas Hughes & Son (Ltd.). The mark in the collection therefore predates 1894. Twenty-two fragments are recovered from the ironstone dish. The vessel is not decorated and is in the shape of a shallow bowl.

Four different vessels are found with the mark from J. & G. Meakin of Hanley, England. Features 1, 5, 6, and 21 each contain one vessel. Of the four marks, one differed slightly from the others (figure 66). The central portion is the same as the Thomas Hughes mark with the coat of arms and flanking lion and unicorn. Both marks have the text “IRONSTONE CHINA” above and “J. & G. MEAKIN” below. The one mark has “EASTWOOD WORKS/ HANLEY, ENGLAND” below J. & G. Meakin and the rest has “HANLEY/ ENGLAND” below the name. The marks, although slightly different probably all date from the 1890s (Godden 1964:427). No end date is specified for either mark. The four marked vessels are briefly described below.

Twenty-one cross-mended ceramic sherds are from in Feature 21. The vessel is an undecorated bowl or deep saucer. The Feature 5 fragments are from the base of a plate that is probably not decorated. Feature 6 contains a small saucer roughly three inches in diameter. The saucer is not decorated. The last vessel is from Feature 1 and it closely resembles a “baker”, presumably used in an oven (Montgomery Ward & Co. 1895). The vessel is also not decorated.

The last ceramic mark is from Charles Meakin of Hanley, England. The printed

mark is found on five vessels from Features 5, 14, 16, and 27. The mark consists of the familiar coat of arms and crown on top with the flanking lion and unicorn. Below this is the text "CHARLES MEAKIN/ HANLEY/ ENGLAND." Two small fragments come from Feature 5, but they are too small for determining the original vessel shape. Fragments from Feature 16 indicate that the original vessel is perhaps a large bowl. Feature 27 contained two fragments of an undecorated saucer about six inches across. The four vessels date from 1883 to 1889 (Godden 1964:426).

The mark on the fifth vessel is from an ironstone bowl that is fragmented, but enough pieces remain allowing it to be mended. It comes from the Feature 14 privy. The bowl is not decorated, except for the printed underglaze mark. The mark has "ROYAL IRONSTONE CHINA" arcing over the top (figure 68). Below is the text "CHARLES MEAKIN/ ENGLAND." The marks without Hanley came from an earlier potter in Burslem, England, and dated from 1870 to 1882 (Godden 1964:426).

In Feature 14, thirty-four fragments of a ceramic pitcher mend together to create a whole vessel. The whiteware pitcher is oval and holds roughly 20 ounces of fluid. The glaze is a cream color that has darkened from burial. The exterior is decorated with a floral decal pattern over the glaze. No maker's mark is on the base.

In Feature 27, a heavy whiteware pitcher was found. The pitcher held roughly 2+ quarts. The exterior is molded with raised leaves, and the handle is molded into the shape of sticks or branches (figure 93). The body has a slight green glaze, and the leaves are painted a dark green. The handle is painted brown to resemble branches, and the ends of the sticks are painted yellow.

The flat base has a wide shallow footring. The spout is "U"-shaped and forms a raised round rim. No maker's mark is associated with the pitcher.

The cups and mugs found in the collection are usually thick walled and heavy, which is expected in a hotel setting. The glass servingware is composed of tumblers and stemware for wine or liquor.

The majority of the tumblers are small, 4-oz. – 6-oz., clear, and without decorations. Some large glass mugs are found as well. The stemware consists solely of bases. The tumblers are found more often in the Brownell Building (n=31 mni) and equal amounts in the Pantheon and post gold rush Rainier (n=14 mni).

Only portions of eight utensils are found in the collection. All the utensils are heavily corroded, and none appears to have been silver or silver-coated. Most of the utensils are found in the Rainier Building in both time periods'.

Food Remains

This category comprises animal or vegetal material that was discarded during or after

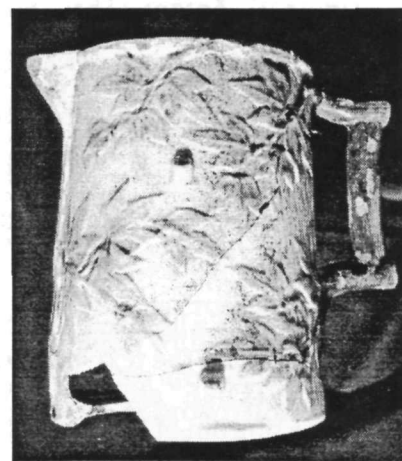


Figure 93: Pitcher

meals. This includes containers (cans and wrappers), seeds, shells (both egg and marine), and bones.

Faunal

The faunal assemblage from the Pantheon Complex excavations is the largest from any site in Skagway. A total of 4,423 specimens weighing 59,260 grams was analyzed by Dr. Thomas Wake from the Institute of Archaeology at the University of California at Los Angeles (UCLA) (Appendix K). Of the total collection 2,864 were found in features and are included in this report. Fishes, mammals, and birds are represented in the collection, but no amphibians or reptiles. The bones come from a very focused group of animals. The diversity of species is quite low. Bones from domesticated species such as cow, sheep, pig, chickens, and turkeys dominate the assemblage. All the fish and a small portion of the birds came from locally available species.

The total fish sample is 89 specimens with halibut/sole (n=33 frags.) and pollock (n=15 frags.) comprising the two largest groups of fish (table F-6). Cod (n=8 frags.), herring (n=6 frags.), and salmon (n=6 frags.) are roughly equal in size. Nineteen (19) bones are unidentifiable to species.

Six fish species are positively identified: Herring (*Clupea pallasii*), Pacific Cod (*Gadus Macrocephalus*), Pacific Tomcod (*Microgadus proximus*), Walleye Pollock (*Theragra chalcogramma*), Halibut (*Hippoglossus stenolepis*), and Sand Sole (*Psettichthys melanostictus*). Genera level identifications are for Salmon (*Oncorhynchus* sp.), Greenling (*Hexagrammos* sp.), and Mackerel (*Scombrid*).

The Rainier Building contains the bulk of the fish material from both time periods

(n=67 frags.). The Brownell Building has the second largest sample of fish bone (n=19 frags.). Only one fish bone, from a halibut or sole, is burned. Cut marks are found on nine bones primarily from flounder and cod. One halibut vertebra is sawed into a 1-in. length, presumably for a steak cut. No other fish bones reveal saw marks.

A total of 196 specimens are identified as bird (table F-7). The six identifiable species are, Canada goose (*Branta canadensis*), Goose (*Anser* sp.), Mallard (*Anas platyrhynchos*), Chicken (*Gallus gallus*), and Turkeys (*Meleagris gallopavo*). There are also categories for unidentified *Aves*, large *Aves*, and medium *Aves*.

Chickens by far made up the largest group of bones (n=107 frags.) (table F-8). The unidentified bird category is the second largest group (n=80 frags.). Turkeys are the only other group with more than two bones (n=6 frags.). Skull fragments are in the collection, which would indicate that the birds were either raised nearby or were purchased whole. The Rainier has the largest sample of bird bones for both time periods. The Brownell and Fasel Buildings have the same number of bird bones (n=16 frags.). A single burned chicken bone is from Feature 21. Very few bird bones exhibited cut marks (n=13 frags.), and most of those are chicken (n=9 frags.). Three chicken bones are found with saw cuts. Twenty-five bird bones exhibited gnaw marks from rodents and other animals. Chickens and unidentified birds comprise the majority of the gnawed bones (n=19 frags.).

Eleven species of mammals are identified in the collection (table F-9). They include snowshoe rabbit (*Lepus americanus*), hoary marmot (*Marmota caligata*), rats (*Rattus norvegicus*), cats (*Felis domesticus*),

red fox (*Vulpes fulva*), cattle (*Bos taurus*), sheep (*Ovis aries*), pigs (*Sus scrofa*), and deer (*Odocoileus hemionus*). Cattle, sheep, and pigs dominate the assemblage. Cattle have the largest number of fragments with 350. A general goat/sheep category has 283 fragments, and 79 other fragments are positively identified for sheep. There are 67 identified pig bones in the collection. The unidentified mammals are divided by size into mammalia-unidentified (n=226 frags.), mammalia-small (n=3 frags.), mammalia-large (n=1,131 frags.), and mammalia-very large (n=340 frags.). The large and very large category most likely contains elements from cattle, which could add another 1,471 fragments to the cattle total. Fifteen fragments comprise the total collection of locally available mammals.

Two interesting butchery patterns are identified in the collection. First, the butchers who split the carcasses into two halves consistently missed the center of the vertebral column and were left with uneven loins and chops. Secondly, the shank portion of the carcass was cut differently from today. Normally the distal metapodial is left off the shank as waste, but Skagway butchers left it on.

The only mammals with sawed bones are cattle, sheep, and pig. Cattle dominate with 305 sawed bones, then sheep (n=127 frags.), and pigs (n=16 frags.). The rest of the sawed bone is from unidentified mammals, primarily large and very large (n=379 frags.). Cattle body parts are well represented and evenly distributed over the animal. The hindquarters are found more often than the forequarters, and the higher quality cuts of meat from the vertebrae dominated in secure feature contexts. Sawed bones from sheep and pigs are primarily from the upper limbs with some cut ribs from sheep. The 0.5-inch cut is the most common from

steaks and round steaks. Larger cuts tend to come from the lower lumbar vertebrae and pelvis.

Knife cuts are found on 256 mammal bones, with sheep the most frequent at 72. Cattle are second with 67 cut bones. Large unidentified mammal bones are just as numerous with 68 specimens.

Gnaw marks are found on 328 mammal bones. Sheep are represented by 126 bones with gnaw marks, and cattle are second with 97. A number of burned bones were found across the site (n=547 frags.). The majority are small broken pieces from unidentified large mammals (n=460 frags.). Feature 5 by far contains the largest number of burned bones (n=427 frags.).

Cans

Tin can fragments were found across the site; however, they are concentrated in two areas, Feature 1, and under the floor of the wood shop and Pantheon (table F-5). The largest number of can fragments come from food cans (n=433 frags.). Sardine cans (n=20 mni) have the largest number of identifiable fragments, followed by milk cans (n=13 mni) (figure 94). Cans that contained unknown liquids are represented by 31 fragments.

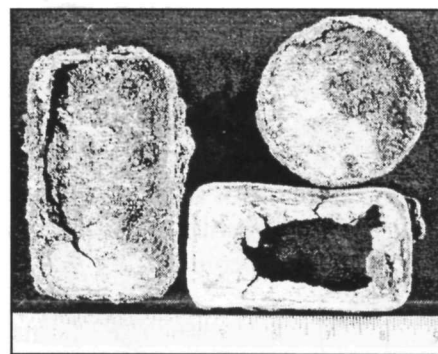


Figure 94: Assorted Cans

Shells

The reported number of eggshell fragments is based on a sample (n=942 frags.) (table F-5). On some occasions the large number of eggshell fragments did not allow for complete recovery in the field. In some cases the membrane from inside the egg was also found. It is assumed that the entire eggshell came from chickens or possibly geese.

Clams dominated the marine shell group. Only two varieties were found on the site, the steamer clam (*Protothaca staminea*), and the butter clam (*Saxidomus giganteus*) (Barr and Barr 1983:124-25). Eight oyster shell fragments were found mostly in Feature 21.

Seeds

Of the 146 recovered seeds or hulls, 130 are identifiable to species (table F-5). Seed pits are from peaches, apricots, and cherries. Nut hulls are from pecans, walnuts, peanuts, filberts, Brazil nuts, and fragments from coconut husks. Whole and fragmentary peach pits are the most common type of seed or nut found at the site (n=77 frags.). The Pantheon contains the largest number of peach pits (n=29 mni). The widest variety and largest number of seeds and nuts come from Feature 21. The coconut husk fragments come from Feature 12. Other food remains include wrappers, foil, and straws. Nearly all the wrappers are from candy.

Household Artifacts

This category consists of artifacts that are used in the home or furnished the home. In order of discussion, the functional categories are medicine bottles, interior lighting, heating and cooking, housekeeping, clothing, child related, furnishings, grooming and hygiene, leisure, male-female related, and personal artifacts.

Medicine Bottles and paraphernalia

This category is composed of mostly glass bottles, both plain and embossed, usually containing patent medicines. There is a total of 567 shards of bottle glass. Body fragments (n=181 frags.) are the most common, followed by fragments with more than one part of a bottle or combination fragments (n=172 frags.). Base fragments (n=148 frags.) also comprise a significant portion of the collection. The Pantheon area (n=265 frags.) had the largest sample of bottle fragments, followed by the Rainier (n=151 frags.).

Vials are the second most numerous pharmaceutical related artifact after medicine bottles (n=36 mni). The vials are generally one ounce in volume and measure roughly 3.0 inches long and 0.5-inch in diameter (figure 95). The majority of vials are found in the Brownell and Pantheon assemblage (table G-1).

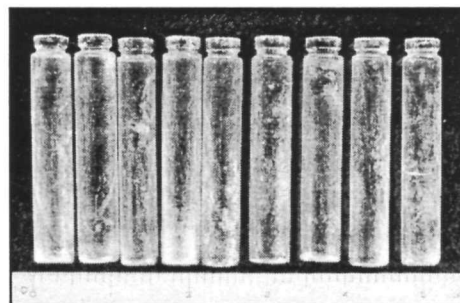


Figure 95: Vials

A majority of the bottles are plain and not embossed. The size and shape of the bottle are the criteria used for determining its original function. The typical plain bottle is a "Philadelphia oval," which means that the back and sides are rounded and the front is flat with a slightly inset arched panel for a paper label (Fike 1987:10). The bottles are made from machine molds with tooled finishes. All the bottles are clear glass with manganese or selenium used as a clarifier.

The embossed bottles are the most useful for dating. Unlike the beverage bottles, which are dated by the glass manufacturing house, the embossed medicine bottles are more often dated by the maker of the product.

In Feature 14 a colorless lead glass bottle was found. It is a squat cylinder, about a third of an ounce in volume with a bead thread and a ground-top lip. The text on the bottle is "ALBOLENE/ ATOMIZER/ A." A reference to a different Albolene bottle is found in Fike (1987:151).

An embossed panel fragment was found in Feature 14. The bottle is SCA, rectangular with chamfered corners. The front panel text is "...IA F..." / "...AN..." This matched with a California Syrup Company bottle. The whole text for the bottle would have been "CALIFORNIA FIG SYRUP CO/ SAN FRANCISCO, CAL// SYRUP OF FIGS// SYRUP OF FIGS." W. Penninger and R. Queen first produced the syrup around 1878. The company moved to San Francisco in the 1880s and was later bought by the Sterling Drug Co. (Fike 1987:225).

A Feature 14 bottle is SCA glass with a tooled prescription finish. The bottle is cylindrical and holds roughly 10 ounces. The text on the body is "PEACOCK CHEMICAL CO." No information could be found from the available reference material.

From Feature 1 is an embossed, aqua-colored bottle with a ring or oil finish, three indented panels, and a rectangular base with chamfered corners (Fike 1987:196). On the front panel is SCOTT'S/ EMULSION, and the side panels have "COD LIVER OIL// WITH LIME AND SODA." On the base is a man carrying a fish on his back. New York businessmen Alfred Scott and Samuel Browne introduced cod liver oil in

1876. The trademark man carrying a fish was introduced in 1886 and was embossed on bottles starting in 1890. The phrase "with lime and soda" was not added until around 1899 (Fike 1987:196).

Four Vaseline jars are found in the post gold rush Rainier assemblage. The jars are SCA, cylindrical, and have applied finishes. One jar is three to four ounces in volume and another is one ounce. The text on the jars is "CHEESEBROUGH MFG CO (arched)/ VASELINE (centered under arched text)." Robert Cheesebrough began production of Vaseline in 1872 and first put it in bottles in 1887. The jar style dates from 1894 to 1900 (Wilson and Wilson 1971:110). An amber jar has the same text style as the other jars. Amber jars were first introduced around 1896.

Three plain bottles with base marks are from Features 6 and 15. The Feature 15 bottle is an 8-ounce "Philadelphia Oval" with a tooled prescription finish. On the base is the text "IGCO" (inside a diamond). The mark is from the Illinois Glass Company and dates from 1900 to 1916. The bottle was produced in the Alton, Illinois, plant (Toulouse 1971:264). The Feature 6 bottle is a base fragment from an oval bottle. The base mark is an "I" inside a diamond. The Illinois Glass Company used the mark from 1916 to 1929.

In Feature 14 a whole medicine bottle was recovered. The bottle is rectangular with an indented front panel and tooled packer finish. It resembles a "Philadelphia Oval" in overall appearance. The embossed text on the base reads "PAT. MAY 2, 1899." In the middle of the base is a star with an "M" inside. The patent is in the name of Frank Schilling of Muncie, Indiana. He assigned the patent to the Muncie Glass Company. The patent was filed on May 20, 1899

(United States Patent and Trademark Office 1899:878). The Muncie Glass Company was in business from 1895 to 1910, when fire destroyed the plant (Toulouse 1971:346-7).

In Feature 6 a whole “Listerine” bottle and another base were recovered. Normally the bottles would have been presented in the grooming section; however, the product was available only by prescription until 1914 (Fike 1987:67). The bottle is SCA, cylindrical, roughly 2 ounces in volume, and has a tooled collar. Remnants of a foil band are on the neck. On the body of the bottle is “LISTERINE/ LAMBERT/ PHARMACAL COMPANY.” The base mark is a circle with an “N” inside. This mark is from the Obear-Nestor Glass Company. The mark was copyrighted in 1895 and was used until 1915, when automatic machines were installed (Toulouse 1971:373).

Two base marks from the Parke, Davis & Company were found in Features 17 and 23. The embossed marks are “P D & CO./ 84” and “PD & CO / 16.” Both bottles are amber and the whole bottle from Feature 23 has a tooled finish. The manufacture of the bottles dates between 1875 and 1920, when automatic bottling replaced tooled finishes (Toulouse 1971:417).

Three cobalt blue Bromo-Seltzer bottles are from Features 14 and 15. All three bottles have cylindrical bodies with wide tooled necks and a rolled lip. On the body is the text “BROMO-SELTZER/ EMERSON/ DRUG CO./ BALTIMORE, MD.” Numbers found on the bases of all the bottles date them before 1907. Some discrepancy exists among the different sources, however, as to who made the early bottles. Eastin (1965:16) and Fike (1987:III) state that the Hazel-Atlas Company made the early Emerson bottles from 1889 to 1907. Toulouse (1971:162,339) states that the Cum-

berland Glass Company first produced the distinctive blue bottles. It was not until 1907 when the Maryland Glass Corporation was built for the Emerson Drug Company by Philip I. Heusler, who then became president of Maryland Glass, that bottles from Cumberland were no longer used. According to Toulouse (1971:239), the Hazel-Atlas Company was not formed until 1902, well after Bromo-Seltzer was on the market. The history of Hazel-Atlas does state that they had a blue glass bottle machine, but not until 1904 (Toulouse 1971:241).

In Feature 14 a colorless bottle from the Maryland Glass Corporation was found. The bottle is rectangular with chamfered corners and is 6 ounces to 8 ounces in volume. The tooled finish is packer style. The base mark is an “M” inside a circle. This particular mark was used after 1916 (Toulouse 1971:339).

Under the floor of the Pantheon an embossed bottle fragment was recovered. The fragment is from a square, SCA bottle with chamfered corners and an applied prescription finish. On one indented panel is the text “LACTOPEPTINE/ NEW YORK/ PHARMACAL/ ASSOCIATION.” John Carnick established the New York Pharmaceutical Association in 1877 (Fike 1987:170). The square bottles were not used until roughly 1880 (Wilson and Wilson 1971:124).

At the top of Feature 14 was a colorless bottle with a “Philadelphia Oval” shape. The bottle holds about 3 ounces. The bottle finish is threaded. The base mark is “OWENS/ 4 [diamond with circle and “I” in center] 3.” One corner of the bottle is chamfered and has embossed graduated marks with numbers. Embossed on the heel of the bottle is “3 III.” The basic mark dates from 1929, but information on the addition of the word “OWENS” to the mark

is not found in the available source material (Toulouse 1971:403).

A base fragment from a rectangular bottle was found in Feature 6. The corners are chamfered and the base is slightly concave. Four vent marks are in each corner of the base. The base mark is “W.[T.&] CO./ 2/ U.S.A.” This mark is from the Whittall-Tatum & Company from New Jersey. The company dates from 1857 to 1938 (Toulouse 1971:544).

A fragmented aqua bottle was found in Feature 16. The rectangular paneled bottle is 8 ounces in volume and has an applied prescription finish. The vertically oriented text on the front panel of the body is “WHIT-TEMORE/ BOSTON.” An octagonal shape is molded in the base with “14” embossed in the center. The exact mark or text could not be found in the available source material.

In Feature 6, a rectangular, panel bottle was recovered. The corners are deeply chamfered which gave the bottle the appearance of having 8 sides. The base is embossed with a “W.” It is thought that this mark represented the Wood Bros. Glass Company of Barnsley, England. The mark possibly dates up to 1905. The mark changed after 1905 (Toulouse 1971:529). The text on the paneled bottle is “[E]NOS FRUIT SALT// DERIVATIVE// COMPOUND.” (figure 96). The stopper found with the bottle is embossed around the edge with “PREPARED BY/ J. C. ENO LTD.” (figure 97). Jonathan Eno of England founded the Eno Company. He devised the

compound for upset stomachs. He began marketing the product in the 1880s (Wilson and Wilson 1971:113).

In Feature 5 was an amber 16-oz., square bottle. The corners are chamfered, and the finish is an applied brandy with bead. The body panels are beveled and sunken. The base mark is a “29” in a circular depression. The embossed body text is “PAINE’S// CELERY COMPOUND” (figure 69). Milton K. Paine of Vermont first bottled the product in 1882. Wells, Richardson, & Company took over the brand name in the late 1880s (Wilson and Wilson 1971:130). Other artifacts included in this category are one syringe, two applicators, and one thermometer.

Interior Lighting

The category is divided into lightbulb and oil lamp fragments and other lighting related artifacts. Lightbulbs are divided into bulb or base fragments. The post gold rush Rainier assemblage has 12 of the identified lightbulbs.

The majority of the bases are in non-feature contexts (table G-7). The kerosene oil

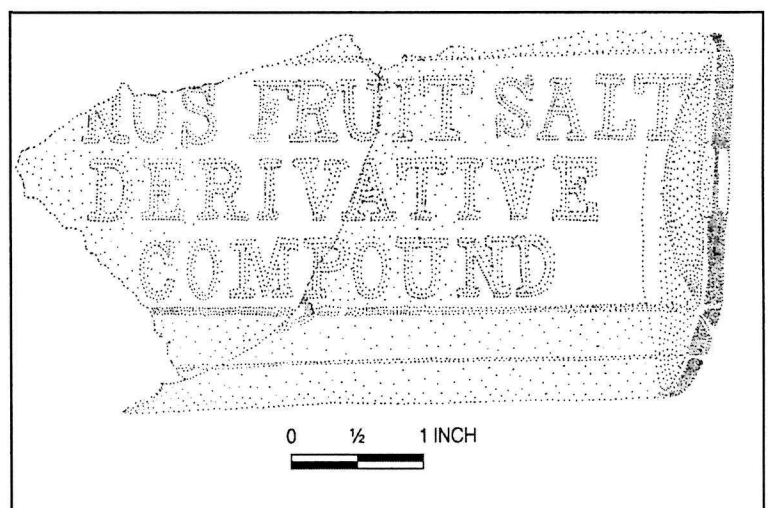


Figure 96: Enos Fruit Salt Bottle Drawing

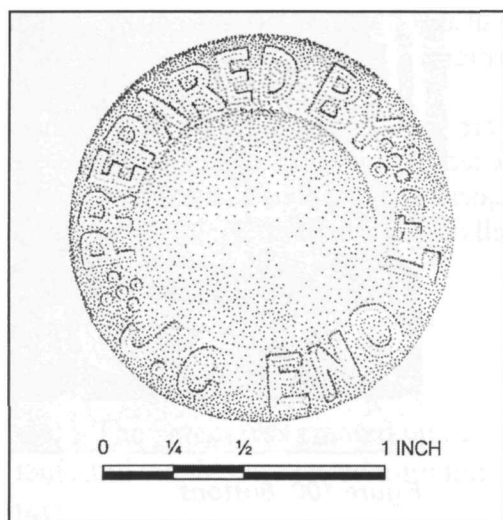


Figure 97: Enos Bottle Stopper Drawing

lamps also include shades and globes from electric lights. At least 34 glass chimneys were found throughout the site. Most of the lamp chimneys (n=32 mni) are recovered from the Rainier from both time periods. Two oil lamp wick assemblies are also associated with the Rainier.

The chimneys are in general very thin walled and made from lead glass. Usually the top rim is crimped to resemble a piecrust edge or is beaded on top of the rim (figure 98). The lamp globes are made of colored glass such as white or pink. Lampshades are exclusively white glass. Two distinct varieties were found. The first is a half

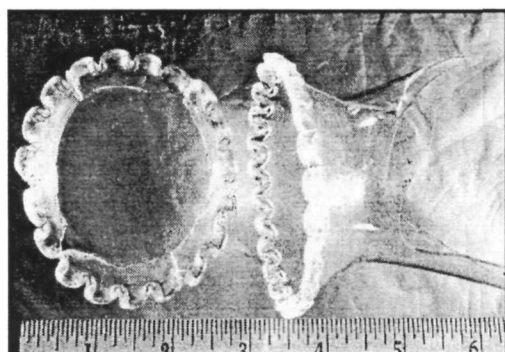


Figure 98: Oil Lamp Chimney

globe that is either plain or painted with a floral pattern. The second is a wavy/ribbed pattern that is horizontal with the floor.

An intriguing find is the 23 carbon rods, concentrated at the Brownell and post gold rush Rainier (table G-7). The rods are tapered on one end and flat on the other (figure 99). They measure 0.5 inch in diameter by roughly 4 inches long. The six rods in a mug from Feature 21 were discarded unused. Other unused rods were also found in Feature 21. They were used in outdoor arc lamps and are not preferred indoors; however, miniature models are available (Woodhead et al. 1984:75-6).

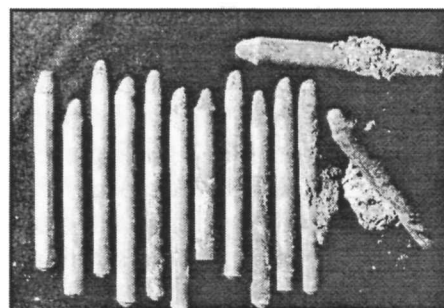


Figure 99: Arc Lamp Electrodes

Heating and Cooking Artifacts

This category consists of stove parts, coal, charcoal, and oil cans (table G-8). Coal was the heating fuel of choice across the site (n=48 mni). Identifiable stove parts are infrequent (n=2 mni). A few identifiable oil cans have been found across the site (n=5 mni).

Housekeeping

This category consists of artifacts that relate to household cleaning or upkeep. Cleaning supplies such as chemicals, mops, and brooms, are considered items necessary for the upkeep of a household. The assemblage is composed of 31 artifacts (table G-3).

The bottles from this category are either amber or colorless-SCA. The majority of amber fragments are from Clorox bottles. Fragments from a total of eight Clorox bottles were recovered. The bottles are amber, cylindrical, and roughly 16 ounces in volume. They have collar finishes with one bead below the finish. Rubber stoppers are used as closures for the bottles. The base mark is "CLOROX/REG" inside a diamond. Clorox was not marketed in glass bottles to households until 1918. The bottles were plain until 1928. The bottles in the assemblage date between 1929 and 1930 (The Clorox Company n.d.). All glass bottles from this category come from the Rainier in both time periods.

Lime chunks were from the Feature 21 privy. The lime was used to mask odor from the privy and to help break down the night soil. The three clothespins recovered consist of the spring portion of the pin. The other artifacts consist of a mop handle, safety pin, and a broom rack.

Clothing

A total of 140 artifacts were placed into the clothing category. The artifacts consist mainly of buttons, shoe fragments, cloth, and other miscellaneous items (table G-9).

Recovered from the excavations were whole shoes and scrap leather material from repair or construction. Historic photos show that Fasel advertised shoe repair for a short time. Other shoe related artifacts include eyelets/grommets, a shoehorn, and two jars of shoe polish.

Cloth fragments from at least 19 garments were found. Most of the fragments are from wool and cotton clothes. Most came from the area of the Rainier. The fragments are from dark colored cloth, both blacks and browns. The cloth fragments are too

small and fragile to determine the type of garment.

There were 42 holed buttons and 13 shank-backed buttons in the collection. The majority of the holed buttons are either shell or glass (figure 100). Less common are



Figure 100: Buttons

plastic, metal, and bone buttons. Shank buttons are predominately metal, but glass and plastic are also present. Shirts or blouses are the most common type of garment associated with the buttons, followed by jackets and coats.

In Feature 6 a non-ferrous metal snap button was found with the text "PAT. JUNE 11.1889." The patent records showed that it was a snap with interlocking spring receptacle composed of a depressed dome with radial arms. The patent was in the name of Pierre Raymond of Grenoble, France, and was assigned to Perrin Frebres. The date range for the patent was 1889 to 1903.

The term "fastener" applies to both garter and suspender supports. A total of 12 were recovered from the site. The majority was found in Feature 14. The fasteners are either wholly made or plated from non-ferrous metal (figure 101). One garter support was stamped with "HOFFMAN ROTHCHILD & CO" on the back. No information was found on the company. Another support was stamped with "PAT./ SILK LOOP/ 6.7 98." Patent records revealed that Myron B. Hammond of Bridgeport, Connecticut, applied for the patent on September 17, 1897 (United States Patent and Trademark Office

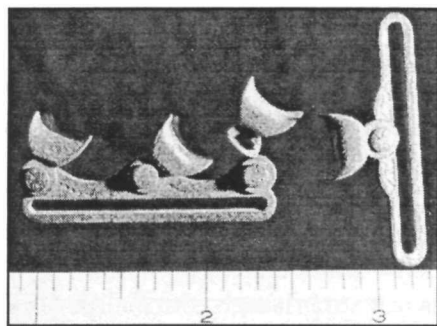


Figure 101: Suspenders Supports

1898). The patent was granted on June 7, 1898, and would have lasted until June of 1912.

Two cans and six jars of shoe polish were recovered from the Rainier. The cans are square and flat with a faint painted leaf and vine design on the outside. The jars are round and squat and made from white glass. An applicator was found with one jar from the gold rush Rainier. The same jar is embossed with "EAGLE BRAND SHOE CREAM." No information on the company was located.

The assemblage of clothing and related artifacts from the Rainier area is the largest and most diverse. The other building areas combined only contain 18 artifacts. The tailor shop adjacent to the Rainier and Fasel buildings could have contributed artifacts to the assemblage of the Rainier.

Child Related Artifacts

Only nine artifacts could be placed in this category with some confidence. Two, one-inch ceramic dolls were recovered from Feature 5. The dolls are molded with bonnets or hats, but no clothes. A doll head was found in Feature 14 (figure 102). The head is bisque with painted eyes, eyebrows, and lips. On the back of the head is the

incised script "5/o," which is the size of the head.

The rear portion of a toy oil tanker was found in Feature 6. On each side of the tanker is stamped "SIN-CLAIR." On the inside is stamped "Tootsietoy" and "MADE IN U.S.A." No information was located for the toy maker.

Three whistles were found under the floor of the Pantheon (figure 103). These are presumed to be toys, but no corroborating information could be found. The greenish color indicated that the whistles are made from a copper alloy.

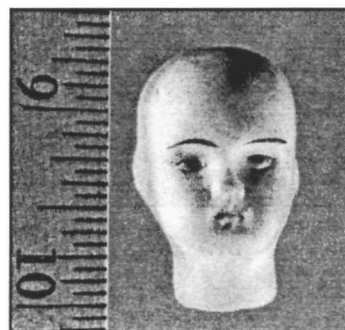


Figure 102: Doll Head



Figure 103: Whistles

Furnishings

This category consists of furniture, furniture parts, decorative glass and ceramics, mirrors, and any associated hardware for hanging or mounting the furnishings.

A total of 74 artifacts fit into this category (table G-2).

Four ceramic dishes, not related to food serving or preparation, were recovered from the site. From Feature 14 is a white porcelain commemorative plate. The plate is highly decorated with a gold gilded scalloped rim, powder blue glaze on the rim, a second gild line above the base, and a black overglaze decal. From Feature 1 is a hand-painted porcelain bowl (figure 65). The paint was applied over the glaze to the interior and exterior surfaces. The colors used are dark blue, red, orange, white, and gray. Flowers and animals are frequently used in the design.

A total of 14 decorative glass panes were found. Most are small, possibly used for windows or lampshades. The glass is usually opaque with wavy lines or other designs. The most frequent colors were green, orange, and red.

A wide variety of furniture fragments were found. The artifacts are clustered in the post gold rush Rainier assemblage. It also has a wide variety of artifacts. Knobs and drawer pulls are found in the Rainier area. They would have been used for dressers or other furniture requiring handles. A fragment from a cushion fiber and three spring coils are possibly from a mattress.

The Fasel area has a large concentration of the decorative plate glass, which came from Feature 27. The gold rush Rainier has a number of miscellaneous furnishing artifacts, such as shelving brackets, coat hooks, and small padlocks (n=13 mni).

Grooming

This category contains artifacts that are useful for maintaining appearance and/or hygiene. A total of 31 artifacts fit into this

category (table G-5). The majority of the artifacts are glass bottles and containers (n=19 mni) and to a lesser extent powder cans, a hairpin, combs, and toothbrushes. All of the combs were made from some form of plastic, either Bakelite, acrylic, or polyethylene.

Perhaps not surprisingly, the Rainier had the largest assemblage of grooming artifacts (table G-5). More than half the artifacts come from Feature 6, of which many date to the gold rush. However, the original context was disturbed by the cobble cesspool.

Two bone toothbrushes were found in Features 5 and 7 (figure 104). The brush from Feature 5 has a horse head carved in the handle with

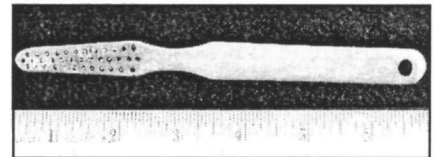


Figure 104: Toothbrush

“JAPAN” carved below the head perpendicular to the handle and “EISNINSHA” below the head and parallel to the handle. The brush from Feature 7 was undecorated.

Fragments from three bottles were found in Features 6 and 13. Both bottles were cylindrical SCA glass and would have contained from 3 ounces to 12 ounces of liquid. The body fragments appeared to be machine mold. The embossed text on the body was “[NEWBRO’S/ HERPICIDE/] K[ILLS TH])E/ [D]AN[DRUFF] GERM.” The text on the second bottle was “[4 F]L.[OZ]/ [N]EWBR[O’S HERPICIDE/ FOR THE SCALP].” Since the text was very fragmentary the association with Newbro’s was tentative (Fike 1987:103).

From Feature 14 was an SCA paneled bottle. The bottle would hold about five ounces. The front panel is sunken and the

finish is tooled/prescription. The embossed text on the body panels was "HOLMES' FRAGRANT// FROSTILLA// FOR THE TOILET" (figure 105). The base mark was a triangle with an "H" in the center. Clay W. Holmes of New York developed Frostilla in the 1870s. The bottle embossing dates to around 1899 (Wilson and Wilson 1971: 120). The bottle manufacturer was J. T. & A. Hamilton of Pittsburgh, Pennsylvania. The base mark was in use from 1900 to 1943 (Toulouse 1971:290).

Three pale aqua toiletry bottles were found in Feature 6. The bottles are cylindrical with tooled brandy finishes. One has glue residue on the neck. A "3" is embossed on the base. On the body of the bottle is the text "FLORIDA WATER/ MURRAY & LANMAN/ DRUGGISTS/ NEW YORK." David Lanman and Lindley Murray were in business together until 1854, at which time George Kemp became a silent partner. Florida water was produced in the Murray & Lanman name until 1901, when the company merged with Barclay & Company (Fike 1987:244).

Also in Feature 6 was an SCA toiletry jar. The jar had a threaded finish. A "5" was embossed on the base. On the body of the jar was "POMPEIAN CREAM/ MADE BY/ POMPEIAN MFG. CO./ CLEVELAND, OHIO." Pompeian was first introduced in 1901 (Herberta 1986:3). The massage cream enjoyed its widest distribution from 1909 through WW I (Sobolewski 1986:3).

In Feature 27 was a whole SCA toiletry bottle. It has a "Philadelphia Oval" shape with a tooled prescription finish and cork stopper. The text on the body is "RUBIFOAM/ FOR THE/ TEETH/ PUT UP BY/ E. W. HOYT & CO./ LOWELL, MASS." (figure 106) Embossed on the base was a "15." E. W. Hoyt started in the drugstore business

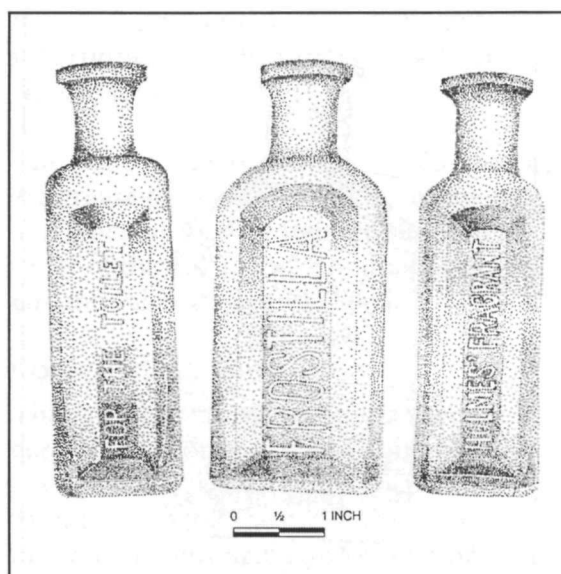


Figure 105: Frostilla Bottle Drawing

as a clerk in 1852. He became partner and eventually sole owner in 1861. In 1870, he began selling cologne with his partner Freeman Shedd. In 1887, Rubifoam was put on the market. The product enjoyed a wide distribution (Frace n.d.).

Three similar colorless bottles were found in Feature 6 and Layer B. The bottles have packer finishes capped with metal dispensers. The metal dispensers have threaded caps. Embossed on the metal cap is the text "ED. PINAUD PARIS B[TE] S.G.D.G." The base mark on the bottle is "ED. PINAUD." The text on the bottle is "ED. PINAUD/ PARIS." Pinaud started the company before 1840 in Paris. In 1850, he took Emile Meyer as a partner. Meyer was sole owner from 1868, when Pinaud died, until 1883. The company changed names after Meyer died, but that date was unknown. The company name was changed back to Ed. Pinaud after 1931 (Eastin 1965: 45). The bottles in the Pantheon collection were first introduced in 1875 and continued in use perhaps through the early 1900s.

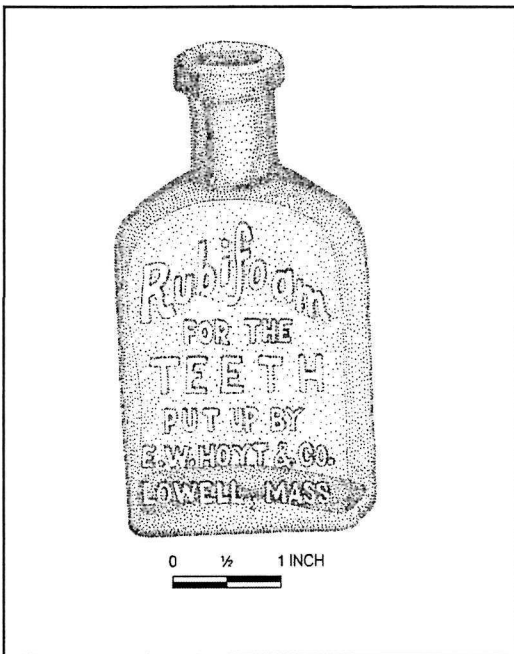


Figure 106: Hoyt's Rubifoam Bottle

Leisure

Of the 16 artifacts assigned to this class, 11 are paraphernalia related to smoking (table G-6). Fragments from eight pipes consisting of clay stems and bowls were recovered. The privy in Feature 21 contained the largest number of pipe fragments. One bowl is stamped with "...PEAL..." and a stem is stamped with "...78 C." Other smoking paraphernalia includes plastic cigar holders, an ashtray, and cigarette filters.

Fragments from three snuff cans were recovered from Features 21 and 27. The cans are less than two inches tall, roughly one and a half inches in diameter, cylindrical, and have slip lids. During the monitoring phase, two whole snuff cans were recovered.

Fragments of 35-mm film were recovered primarily from units excavated in 1987. All the film is exposed, however, it appears the film is from the beginning or end of

a roll. Four non-ferrous metal film roll holders were found in Features 6 and 20. The end disk of each holder was roughly one and a quarter inches in diameter and was stamped with "KODAK" and "TOP" on one side. Information on a specific date could not be located, but it is thought that they generally dated to the 1940s.

Male - Female Specific and Personal Artifacts

An artifact was placed into gender categories only when the function was positively identified. The associated female artifacts were the easiest to identify. Only five artifacts are identified as having a female only function, a curler, bracelet, and high-heel shoe fragments. The associated male artifacts are two suspender supports and one boot fragment.

A total of 51 personal artifacts were identified. Most of the artifacts are seed beads from a possible garment (n=37 mni). Otherwise very few artifacts were found from this category. Virtually all the beads came from the Feature 1 midden. Since the beads were not found in a concentration it was difficult to distinguish how they were introduced into the archeological record. The other personal artifacts recovered are hat and lapel pins, one ceramic bead, eyeglass fragments, charms, and an earring. Except for the seed beads, all the areas have about the same number of personal artifacts.

Specialized Artifacts

Artifacts in this category are related to a specific activity or function, whether in the home or office. The 10 categories are bulk storage, communication, construction tools, economic exchange, entertainment, farming/ranching, hunting/fishing, office supplies, public services, and transportation.

Bulk Storage

The artifacts in this category usually relate to the containers that held bulk materials, rather than the bulk material itself. A total of 17 storage artifacts were found across the site (table H-6). The most common storage artifacts are ferrous metal barrel bands (n=10 mni). Wooden barrel slats and one-barrel bung were also found. Other artifacts included metal buckets, string, plastic bags, and a tin can.

Communication

This category contains artifacts that were used to convey information, such as pens, inkbottles, and newspapers (table H-3). Twenty-nine artifacts are represented in the collection. Pencils and inkbottles are the most common type of artifact (n=16 mni).

An SCA inkbottle was found in Feature 16. The bottle is cylindrical, squat, one ounce in volume, and had an applied tooled bead finish with ring. The diameter of the base was 1 13/16". The embossed text on the base is "SANFORD'S (curved around half the base)/23." The bottle postdates 1913 (Sanford Manufacturing Corporation 1914), but predates 1916 when manganese was no longer used to clarify glass (Cooper and Sanders, 1995:64).

An amber conical inkbottle was found in Feature 27. The finish is a tooled bead with a ring on the neck. A cup-bottom mold was used to make the bottle. The base is shallow and concave with the embossed text "CARTER'S/ 1897/ MADE/ IN USA." The diameter of the base is 2 3/8".

William Carter started Carter Ink in 1858 in Boston. The product was sold nationwide by 1864. Various brothers and cousins were admitted to the company, which changed the name frequently between 1863 and

1901. Not until 1901 was the company finally incorporated as The Carter's Ink Company (Eastin 1965:4751).

The other artifacts found in the assemblage are grease pens, slate, chalk, newspaper, and clock parts. The Rainier has the majority of the collection, dominated by pencils and inkbottles (table H-3).

Construction Tools

This category consists of tools used for construction or occasional household maintenance. A total of 18 artifacts were found across the site (table H-9). Metal files are the only artifacts found more than once. Three different kinds of files were found, flat, triangular, and round. The list of artifacts was quite varied and evenly spread across the site.

Economic Exchange

A total of 12 coins were recovered from six different proveniences across the site (table H-8). Five coins were found in two different privy contexts, one in Feature 14 and four in Feature 21. A small coin purse was found in the 1987 excavations from Unit 4.

A Mercury Head dime was found in the first level of Feature 14. The date on the coin is not entirely legible, but it appears to be "194_." The coin was minted in San Francisco, California. This particular design was minted from 1916 to 1945 (Friedberg 1988:72-3).

Two nickels and two pennies were found in Feature 21. Both nickels are Liberty Heads, one from 1895 and the other from 1905. The Liberty nickels were made from 1883 to 1912 (Friedberg 1988:62-3). Both pennies were Indian Heads, one from 1893 and the other from either 1891 or 1897. This type of penny was made from 1864 to 1909 (Friedberg 1988:55-6).

The 1987 units on the south side of the wood shop produced three coins. Two Lincoln Head cents were found, one dating to 1974 and the other to 1978. Both were made in Denver. These types of coins are first made in 1909 with a design change in 1959 that effected only the back (or reverse) (Friedberg 1988:58). A 1975 Canadian penny with Queen Elizabeth II was also found. The date of the coins supports that the south side deposits were recently disturbed.

Entertainment

This category consists of artifacts related to either saloon drinking or gambling. A total of 56 artifacts are in this category (table H-7). Many of the artifacts are from Features 21 and 26. Shot and bar glasses and poker chips are frequent types of entertainment artifacts (figure 107).



Figure 107: Drinking and Gambling Artifacts

Four whole dice were found at the Pantheon. All but one was made of bone. The poker chips are made of an early plastic called "Bakelite." It should come as no surprise that nearly every artifact in this category came from the area of the Pantheon. Even without the historical record, these artifacts would have indicated that gaming of some variety was happening at the Pantheon.

Farming/Ranching

This category consisted almost entirely of flowerpot fragments (table H-10). A horse-shoe found in the 1987 units could indicate its reuse as a charm or gaming piece. The garden hose in the 1987 units was a small cut section, used for an unknown purpose. All the building areas have roughly the same number of flowerpot fragments.

Hunting/Fishing

All but one of the 37 artifacts in this category relate to munitions, specifically cartridge casings (table H-1). The cartridge casings are divided between rim-fire (n=8 mni) and center-fire (n=19 mni). Rim-fire cartridges contain primer material on the rim of the base. The firing pin of the firearm, usually rectangular, strikes a small portion of the rim to ignite the primer. These cartridges are rarely re-used (Adkins 1997:13). Center-fire cartridges are designed with re-use in mind. The central portion of the base has a primer, which can be replaced multiple times.

Three 38-caliber Smith & Wesson (S&W) center-fire cartridges were found in Features 21 and 26. The Winchester Repeating Arms Company (WRAC) (Adkins 1997:12) produced two of the cartridges from 1877 to the present. The headstamp on the base reads "W.R.A. Co./38 S & W." This mark pre-dates 1900 (Adkins 1997:13). The Union Metallic Cartridge Company (UMCC) made the third cartridge. The headstamp reads "U.M.C./38 S & W." This cartridge predates the 1912 merger with Remington. Adkins (1997) indicates that this cartridge was popular for use with small pocket revolvers.

Three 45-caliber Colt cartridges were found in Features 21 and 26. UMCC made all three cartridges starting in 1873. The

headstamp on the base of the cartridges reads "U.M.C./ .45 Colt." The U.M.C. stamp predates the 1912 merger with Remington. Features 21 and 26 were both located under the two-story addition of the Pantheon.

Twelve center-fire cartridges were found in the area of the Rainier Building. The WRAC made three 32-caliber S & W cartridges found in Feature 5. The headstamp text reads "W.R.A. Co./ .32 S & W." This mark dates from 1878 to the late 1890s (Adkins 1997:7). The WRAC made a single 30-30-rifle cartridge found in Feature 16. It was considered the most popular cartridge of the gold rush era (Adkins 1997:9). The headstamp text is "W.R.A. Co./ .30 W.C.F." The cartridge was first produced in 1895, and the mark indicates that it was made before WWI.

A total of seven 45-70 rifle cartridges were found in Features 14 and 16. There are three different manufacturers of these cartridges. One 45-70 cartridge from the UMCC was found in Feature 14. It was in a state of advanced deterioration, making analysis difficult. Indications are that the cartridge pre-dates 1912 (Adkins 1997:10). One unfired 45-70-rifle cartridge was found in Feature 16 from the WRAC. The cartridge was at one time standard military issue. The headstamp text of "R /2-79/ W" indicates that it was made in February 1879 (Adkins 1997:9). This cartridge was special because in 1881 the military adopted a different standard for practice ammunition, which made everything before that obsolete. By 1884 the military would have run out of all pre-1881 practice ammunition (Adkins 1997:9). This suggests that perhaps the cartridge represents a keepsake or souvenir from military service.

Five 45-70-rifle cartridges from Features 14 and 16 were made at the Frankford Arsenal. The headstamps from the cartridges are "R /8-80/ F," "R /6-83/ F," "R /4-84/ F," and two with "R /1-86/ F." The cartridges were made in August 1880, June 1883, April 1884, and January 1886. All were, at one time, military issue. All the cases are made of copper and the cartridge from 1880 is made with "Bloomfield gilding metal," which is a very soft copper alloy (Adkins 1997:10). The military discontinued copper cases in 1888. The 1880 cartridge is internally primed, which was discontinued by the military in 1882. The other cartridges are externally primed and were the standard practice ammunition from 1882 until 1888 when brass was used in favor of copper for the casing (Adkins 1997:8-10).

A single unfired 20-gauge shotgun shell was found in Feature 14. The headstamp on the base is "F /11 97/ No 20." It was made at the Frankford Arsenal for military issue (Adkins 1997). The military used 20-gauge shotguns until 1904, when 12-gauges were issued. The shotguns could have been used until 1906 or at the latest 1908. The shells were designed for reloading, and an examination of the newspaper wadding inside the shell could provide the answer.

The WRAC made all of the rim-fire 22 caliber cartridges. Every cartridge is stamped with an "H" in the center of the base. WRAC started making the cartridges in the 1860s and continues to this day. The "H" was used in honor of the man who engineered the cartridge, B. Tyler Henry (Logan 1959:8). The ubiquity and uniformity of the rim-fire cartridges renders them useless for dating purposes.

Office Supply

A total of 14 artifacts from the excavations fell into this category (table H-4). The

artifacts would have presumably been used in an office environment, but they could have also been used in a home setting. The majority of the artifacts were staples and paper fasteners.

Public Service

Artifacts in this category are related to municipal utility services such as water, sewer, and electricity. Twenty-one individual items were recovered from the excavations (table H-2). The artifacts consist of ceramic sewer and metal water pipes, glass insulators, and electrical wire. The artifacts were fairly evenly divided among the proveniences. They are also evenly divided among the different buildings. Water and sewer pipes were found more often at the Pantheon and insulators were common at the Rainier.

The datable artifacts in the category are glass insulators found in Feature 5. W.

Brookfield of New York made three of the insulators. The company dates from 1865 to 1920 (Kareofelas and Cranfill 1969:14). An aqua glass insulator is embossed with the text "W. BROOKFIELD/NEW YORK." (figure 75). The insulators were made for single wires. They have two general shapes, either a shallow groove, single petticoat, or a deep groove, double petticoat.

Transportation

There are a total of 12 artifacts in this category (table H-5). Automobiles are represented by a tire valve, windshield wiper, and valve thread fragments. Four railroad spikes were found in the utility corridor trench, south of the Pantheon. A metal ring possibly from a horse harness was found in Feature 6. The artifact count is too low to make any substantive statements about how transportation impacted block 27.

CHAPTER 7: DISCUSSION, CONCLUSIONS, AND INTERPRETIVE COMMENTS

In previous chapters this report provided information on how the site was excavated and what was recovered. The work of historical archeologists is to move from the flat descriptions of units and artifacts to the behaviors that created the artifacts and the site in general. A common definition for Historical Archeology (although there are many others) is “the material manifestations of the expansion of European culture into the non-European world starting in the 15th century and ending with industrialization or the present depending on local conditions” (Schuyler 1970:84). Methodologically, historical archeology is a technique that “includes the careful use of several sources, many of which may be considered ‘nonarchaeological.’” (Orser 1996:24). Historic documents would count as one kind of ‘nonarchaeological’ source.

The careful use of historic documents is an important consideration, because of potentially false or misleading information recorded in the past. Also the poor, non-literate, and/or disenfranchised leave a proportionally smaller written history, which means that “neither the historical record nor the archaeological record alone can serve to reconstruct the past lifeways of such people, or to investigate their roles in the complex, interconnected modern world.” (Deagan 1988:9) Resolving issues about “inadequate documentation constitutes a valid and important focus in the field.” (Deagan 1988:9)

Discussion of Themes

The themes developed by Adams and Brauner (1991) were designed to assist archeologists completing section 106 compliance excavations. In broad terms, the themes are a set of hypotheses or questions specific to Skagway. The evaluation of the data collected from various sites would ascertain whether a hypothesis was valid. The archeology in Skagway was “conducted primarily for compliance purposes in reaction to various potential adverse effects caused by architectural rehabilitation” (Adams and Brauner 1991:32). Twenty years after the first such rehabilitation project commenced, many other sites in Skagway have been investigated. A very large body of data has accumulated, which should eventually be able to address many of the themes outlined by Adams and Brauner. The six themes restated from the first chapter are as follows:

1. Compare the material remains with those from other archeological investigations to increase our knowledge and understanding of the social interaction and economic similarities and differences in early twentieth century Skagway.
2. Examine and characterize how the material remains increase our knowledge and understanding of the similarities and differences between gender roles and ethnic groups during the gold rush and after.
3. Examine and characterize how the mate-

- rial remains increase our knowledge and understanding of the level of interaction between Skagway and world markets.
4. Increase our knowledge and understanding of environmental change in Skagway before, during, and after the gold rush by examining floral and faunal remains recovered from general excavations and privy or dump sites.
 5. Increase our knowledge and understanding of the diet and general health of the people in Skagway during and after the gold rush.
 6. Use the material remains to aid the park interpretive staff in describing to the general public everyday life during the gold rush period and after.

The major problem with data collection in Skagway is that decisions on where to excavate (or test as the case may be) are driven in large part by the restoration architects and not by archeologists. This generally means that testing and excavation is concentrated in areas to be impacted by building restoration, which leaves other areas untouched. This is not the preferred method archeologists use in excavating a site. The data is skewed by not having a representative sample of the whole site. Re-routing of utilities and other ground disturbing impacts could often not be moved to avoid sensitive areas due to the lack of space between buildings or other utilities.

Theme 1

The artifacts from all the sites excavated in Skagway in the past 20 years have been cataloged on a standard database used by the NPS; however, later collections were catalogued with an eye toward determining the minimum number of individual (MNI) artifacts. While fragment frequency (num-

ber of individual specimens [NISP]) can be compared across sites, the number of vessels or bottles represented by the fragments would be a more useful statistic. For example:

“Take a bottle, smash it into a thousand sherds, and scatter those across the site. The sample size of *sherds* is indeed quite high, but so what? This is a meaningless figure by itself. What you have is but a thousand sherds of a single bottle. There still was only one bottle, so the sample size is one.” (Adams and Brauner 1991:91) (*Italics in original*)

The majority of sites reported on in Skagway use NISP counts instead of MNI when addressing artifact functionality. As stated above, this method of analysis is fraught with problems. In order to retain comparability between reports, the NISP numbers will be presented in this chapter.

In table 9 the NISP data for each building, separated by time period, are shown for the architectural and domestic function categories. The raw data in table 9 do not readily reveal trends within functional categories. The functional categories will be combined into groups to compare assemblages through time.

First, we will take a closer look at the architectural related artifacts. Table I-1 in appendix I lists the percentages for the different architectural categories by building. The nails and window glass by far contributed the most artifacts for each building, excluding the Wood Shop, which has a higher percentage of building hardware than window glass. With such high numbers for the nails and window glass, perhaps it is possible to determine if one or the other category is contributing material that obscures analysis of the remaining categories.

The next table (I-2) is a percentage breakdown for nails and window glass only. Between these two, nails comprise 70% or more for each building, except for the Fasel and Pantheon. With nails contributing a much larger percentage of the assemblage even compared to window glass, the nail category has been pulled out of the architectural category and allowed to stand apart. The rest of the architectural categories are grouped into one category labeled Building 2. The new Building 2 category is shown in table I-3.

In appendix I, tables 4 through 6 show the percentage breakdowns for the domestic functional categories. Table I-4 converts the numbers from table 9 to percentages of the total domestic group for each building. The table shows large differences between the percentages of domestic categories from the gold rush Brownell and Fasel Buildings

to the post-gold rush Pantheon and Wood Shop. The differences reflect the changes in each building's use. Perhaps equally striking is the similar use of the Rainier both during and after the gold rush. The Rainier did experience the longest period of continuity of use as a restaurant. It was much later that its use changed to apartments and small businesses.

For further analysis the food storage, preparation, and serving categories are lumped into one category called Food 1. Table I-5 shows the composition of the new Food 1 grouping. The largest contributors to this grouping are the Food Serving artifacts, which include plates, saucers, cups, and mugs. The beverage and medicinal bottles have been grouped together to create the Bev/Med group (table I-6). Medicinal in this case does not refer to cough medicine bottles, but instead to elixirs and tonics,

Table 9: Summary of the Architectural and Domestic Function Groups (NISP)

	Gold rush			Post gold rush		
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Architecture						
Nails	783	521	227	123	2561	380
Window Glass	288	101	729	193	1088	17
Hardware	50	25	35	15	249	143
Utilities	6	11	0	5	20	37
<i>Subtotal</i>	<i>1127</i>	<i>658</i>	<i>991</i>	<i>336</i>	<i>3918</i>	<i>577</i>
Domestic						
Food Storage	18	45	1	6	72	2
Food Preparation	1	13	5	6	29	2
Food Serving	143	244	51	63	1230	3
Food Remains	385	740	112	172	2919	9
Beverage Bottles	212	328	21	442	1631	53
Medicinal	26	89	1	23	142	2
<i>Subtotal</i>	<i>785</i>	<i>1459</i>	<i>191</i>	<i>712</i>	<i>6023</i>	<i>71</i>
Totals	1912	2117	1182	1048	9941	648

which were popular at the time and consumed in much the same way as soda water today. The beverage category does include liquor, beer, and soda bottles.

In table I-7 all the newly formed grouped categories are shown as percentages for each building in both time periods. In this table the overwhelming influence of the nail and food remains categories has been reduced and now allows for reliable comparison. Since we were able to separate the assemblages into distinct time periods, it is now possible to compare the two. The percentages from the gold rush era buildings were subtracted from the post-gold rush era building equivalent. The resulting data is displayed in table I-8. A graph, using the same data (figure 108), better compares the results visually.

In the nail category for the Brownell Building, nearly 30% more were recovered than from the Pantheon. Perhaps this can be explained by the hardware store in the Brownell Building, but it should also be noted that the building itself was heavily remodeled during the Brownell era and again when the Pantheon was created. It is also possible that much of the debris associated with the Pantheon remodeling was removed from the site, therefore not allowing any record of this event to be preserved. The Wood Shop has nearly 40% more nails in its collection than from the Fasel era. The difference could be strong evidence that indeed the Fasel Building was demolished and an entirely new building was constructed, perhaps including some elements of the Fasel Building.

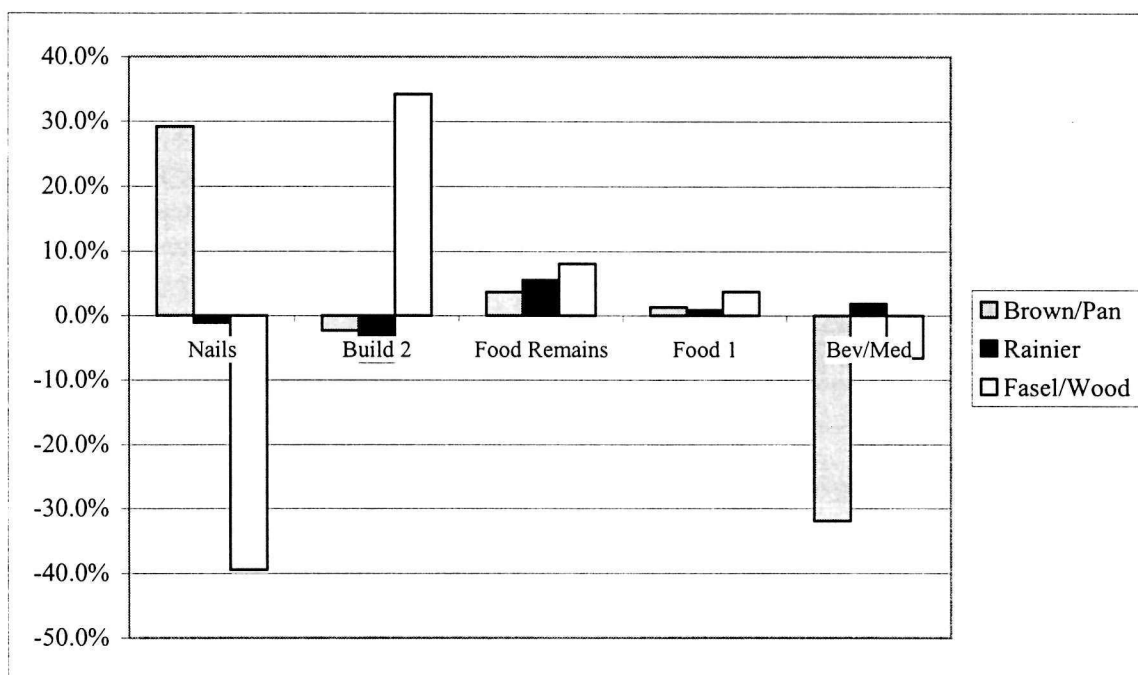


Figure 108: Comparison of Deviations Within Buildings Through Time

The Building 2 grouping (table I-3) shows little difference for the Rainier and Brownell/Pantheon Buildings. The Fasel Building does have a large advantage over the Wood Shop, which comes primarily from the window glass. The function of the Fasel Building as a hardware store can lead to a conclusion that what we are seeing is another example of lost stock similar to the nails from the Brownell. It may be impossible to resolve this particular problem because of the later demolition of the Fasel Building.

The Food Remains category and Food 1 grouping show very little difference in the deviation of artifacts both during and after the gold rush. Although interesting, any difference is in every case in favor of the gold rush era. The Bev/Med group has the largest deviation for the Pantheon and is surprising only in that the deviation is not larger, considering how much longer the building was used as a saloon or restaurant.

In order to complete the discussion of the first theme, it is necessary to compare the materials found at the Pantheon Complex to other excavations in Skagway. The numbers in table 10 are from various published reports in Skagway. Only the artifacts dating approximately to the gold rush era are used. The Railroad Depot was reported by Catherine Blee (1983), the Mill Creek by Rhodes (1988) and DePuydt et al. (1997), the Moore House was reported by Blee (1984), and Block 39 was reported by Cooper (1998).

Railroad Depot

During the gold rush, the Railroad Depot was the only place to load/unload passengers and cargo in Skagway. The building has two parts, an administrative section and a depot section. The two sections are

connected by a breezeway, which was made more substantial during the gold rush. The Railroad Depot report suggests that the building materials recovered, especially nails and hardware, are related directly to the construction of the building (Blee 1983).

The Mill Creek

The Mill Creek site was interesting because it represented a large-scale dump, which was used by a variety of people and businesses. This accounts for the high artifact frequency (table 10). Cross comparisons were difficult with the Pantheon assemblages because no one person, family, or business could be connected to the dump assemblage. However the dump was used to get a general idea of the range of materials consumed in Skagway during the gold rush era. Many of the same kinds of artifacts can be found in both collections. The bulk of the Mill Creek riverbed was filled by 1899 (Rhodes 1988:451).

The Moore House

The Moore House was the property of the founder of Skagway, William Moore, and his son Ben. The excavations around the original cabin and house provided a unique opportunity to track a single family dwelling through time. The data from table 10 came from the 1980-84 excavations, as reported by Blee (1988). The report suggests that the majority of the household refuse was tossed over the back fence into the Mill Creek.

Block 39

The Block 39 material postdates the gold rush a few years, but it represents the only excavation into residential blocks outside the core of the town. The deposits are divided among several different lots in the

Table 10: Summary of Gold Rush Era Deposits Excavated in Skagway

Gold Rush Era							
	Railroad Depot	Mill Creek	Moore House	Block 39	Brownell	Rainier	Fasel
Architecture							
Nails	1504	8579	135	1282	783	521	227
Window Glass	2056	2088	335	25	288	101	729
Hardware	206	531	3	46	50	25	35
Utilities	146	128	0	11	6	11	0
<i>Subtotal</i>	3912	11326	473	1364	1127	658	991
Domestic							
Food Storage	994	5754	56	6	18	45	1
Food Serving	174	749	6	18	143	244	51
Food Remains	51	2490	15	30	385	740	112
Beverage Bottles	410	4471	4	201	212	328	21
Medicinal	3	470	2	90	26	89	1
<i>Subtotal</i>	1632	13934	83	345	784	1446	186
Total	5544	25260	556	1709	1911	2104	1177

block and are therefore associated with multiple families. Block 39 was never as densely populated as the downtown area around Block 27, and many of the artifact categories would support this assertion. Certain classes of artifacts, such as medicinal, were expected to be found in domestic settings away from the business district. While there were no permanent residents on Block 27, the guests of the Rainier Hotel would have contributed domestic kinds of artifacts.

Without having post-gold-rush data, we cannot perform the same analysis that was used on the Pantheon Complex data. We can, however, group the categories in the same fashion and approximate the results using what is known about how the gold

rush era buildings at the Pantheon Complex compared to their post-gold-rush counterparts.

Table 11 reveals some similarities between the relative proportions of assemblages. The Fasel Building and Moore House site are surprisingly similar when comparing overall percentages, as well as the Rainier Building and Mill Creek site. What kind of material deposition at the Moore House would lead to a similar pattern from a wallpaper and paint store? Is it simply that the Moore House contained the same kinds of materials, only in smaller quantities, as the Fasel store. Considering the sheer volume and diversity of the Mill Creek site artifacts, it is surprising that the proportion of recovered artifacts is similar to the Rainier Hotel

Table II: Percentage of Architecture Function Categories by Site

	Railroad Depot %	Mill Creek %	Moore House %	Block 39 %	Brownell %	Rainier %	Fasel %
Building							
Nails	38.4	75.7	28.6	94.0	69.5	79.2	23.0
Window Glass	52.7	18.4	70.8	1.8	25.6	15.3	73.5
Hardware	5.2	4.7	0.6	3.4	4.4	3.8	3.5
Utilities	3.7	1.2	0.0	.8	.5	1.7	0.0
	100	100	100	100	100	100	100

and Restaurant. The Railroad Depot, Block 39, and Brownell Building are different not only from each other, but from the other sites and buildings as well.

Table 12 does not appear to show the same kinds of similarities seen earlier. In fact, all three Pantheon Complex buildings have much higher proportions of Food Remains and Serving artifacts than any of the other sites in Skagway. It is possible to pick out individual similarities between two or more sites, such as the similarity in the medicinal category for the Mill Creek Site and the Brownell Building. Since that is the only

similarity between the two, the value for interpretation is limited.

By rearranging the categories into functional groups, the bias from over-represented classes of artifacts will be lessened (table 13). The same groups used in table I-7, were duplicated in the table below. As in table 12, there are very few comparable functional groups between any of the sites or buildings. The kinds of differences reflected in the table indicate that the activities or behaviors that created the deposits were different, perhaps entirely different, from anything that occurred at the Pantheon Complex site.

Table 12: Percentages of Domestic Function Categories by Site

	Railroad Depot %	Mill Creek %	Moore House %	Block 39 %	Brownell %	Rainier %	Fasel %
Domestic							
Food Storage	60.9	41.3	67.5	1.7	2.3	3.1	.5
Food Serving	10.7	5.4	7.2	5.2	18.2	16.9	27.5
Food Remains	3.1	17.8	18.1	8.7	49.1	51.2	60.2
Beverage	25.1	32.1	4.8	58.3	27.1	22.6	11.3
Medicinal	.2	3.4	2.4	26.1	3.3	6.2	.5
	100	100	100	100	100	100	100

Table 13: Percentages of Functional Groups by Site

	Railroad Depot %	Mill Creek %	Moore House %	Block 39 %	Brownell %	Rainier %	Fasel %
Nails	27.2	34.0	24.3	75.0	41.0	24.5	19.2
Build 2	43.4	10.9	60.8	4.8	18.0	6.5	64.6
Food Remains	0.9	9.8	2.7	1.8	20.1	35.0	9.5
Food I	21.1	25.7	11.1	1.4	8.5	14.3	4.8
Bev/Med	7.4	19.6	1.1	17.0	12.4	19.7	1.9
	100	100	100	100	100	100.0	100

Theme 2

The second theme is to examine and characterize how the material remains increase our knowledge and understanding of the similarities and differences between gender roles and ethnic groups during the gold rush and after. It is still unclear if any of the remains positively identified a specific ethnic group. Only a few artifacts could be identified to a specific gender. Female shoe fragments from under the Pantheon second story were discarded during the last major renovation in 1905 or 1907. Females on the site also discarded hair styling accouterments. This, however, does not mean that the rest of the materials in the collection were identified as specifically belonging to or used exclusively by males.

Theme 3

The third theme is to examine and characterize how the material remains increase our knowledge and understanding of the level of interaction between Skagway and the world markets. This would apply not only to the gold rush, but also to the years after the boom. The major source of manufacturer information came from bottles.

Usually the dating and geographic information was from the maker of the bottle, not the maker of the product for the bottle. On the rare occasion when information from both was available, the product manufacturer information was used. Other manufacturer information came from ceramics, cartridge headstamps, patent dates, and miscellaneous artifacts.

The ceramics were an excellent example of how connected Skagway was to the world markets. Ten of the 15 makers' marks are from England, four are from Ohio, and only one is from New Jersey. These were more than likely catalog purchases. The Montgomery Wards & Company catalog from 1895 had 14 different sets of ceramics from England, two from France, two from Austria, and five from American manufacturers (figure 109). The American patterns were listed last in the ceramic section. Perhaps this reflects the general feeling that English ceramics were more desirable even when ordered from a catalog.

When the marks were divided by geographic region, some interesting patterns began to emerge (figure 109). During the gold rush era, slightly more than 70 percent

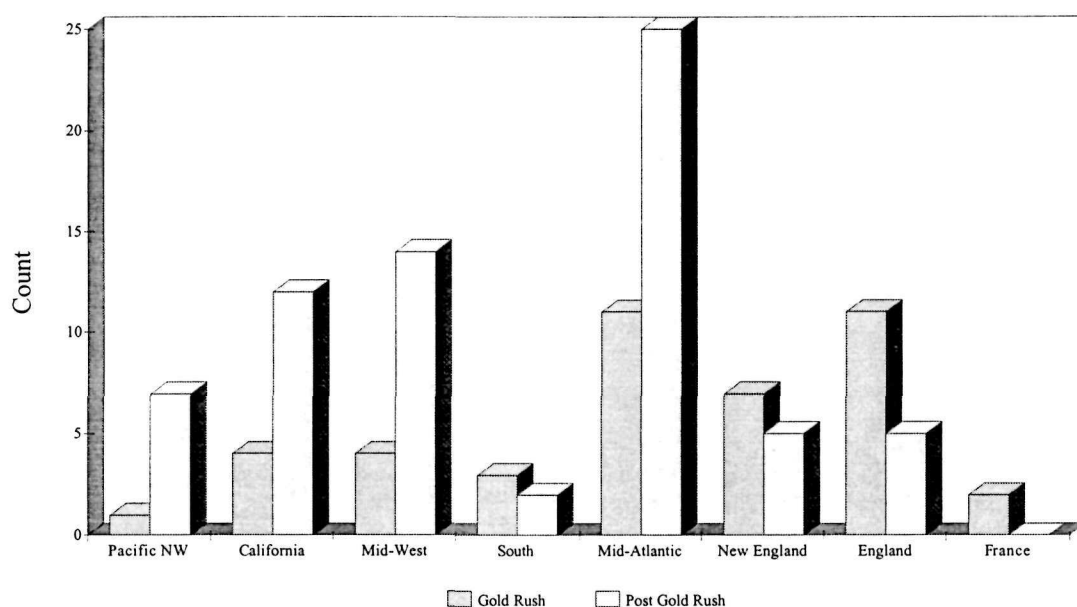


Figure 109: Frequency of Manufacturer Marks by Region

of the marks originated from East Coast or European potters. After the gold rush the same regions produced 50 percent of the marked ceramics. European marked goods dropped from 30 percent during the gold rush to seven percent afterward. The post-gold-rush marks from Europe were strictly from English ceramic vessels. Of the five American ceramic marks, four were dated to after the gold rush. A reason for the observed shift in the purchasing of foreign made products remains unknown and should be pursued by other researchers. The same type of shift was also seen in the Block 39 ceramic assemblage (Cooper 1998:254).

Products manufactured in California and the Midwest comprised a small percentage of the gold rush artifacts (figure 110). A dramatic increase was observed after the gold rush, not only in the number of marked artifacts, but also the diversity of products represented. The large number of preserved marks from the post-gold-rush era

is considered a function of the amount of time these artifacts were exposed to breakage in the archeological record.

The marks on the 45-70 cartridges are interesting because of their manufacturing dates. All of these cartridges were made in the 1880s for the U.S. military. They were types of ammunition used for target practice, but by the beginning of the gold rush all were outdated. The U.S. military had a nearly continuous presence in the upper Lynn Canal during the gold rush. In early February 1898, four companies from the 14th infantry were sent to the upper Lynn Canal (Bearss 1970:157). Companies B and H were sent to Dyea, and companies A and G went to Skagway. The Skagway companies made camp on the north end of town, near the river because of the poor sanitation conditions that existed in town (Bearss 1970:158). By April 1898, there was little need for all four companies, so the army recalled A, G, and H. Company H was left at Wrangell to deal with potential crisis or

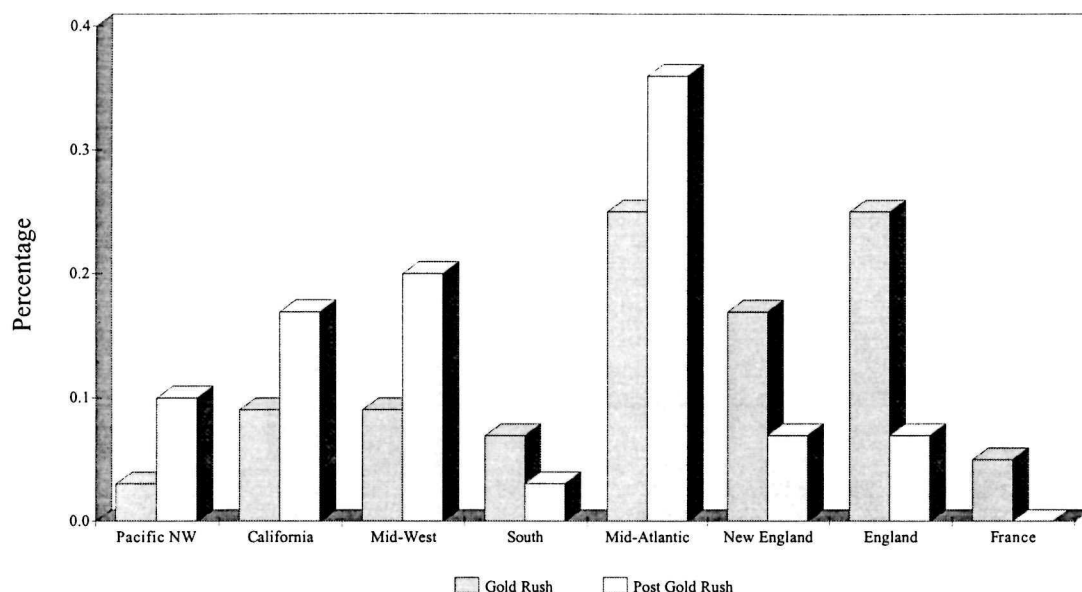


Figure 110: Manufacturer Marks by Percentage

conflicts. In October 1898, Company B established a reservation south of Dyea. Because of the few incidents needing army personnel and the generally poor health conditions that existed in Skagway, it is unknown to what extent the soldiers were allowed to go into town. This would have limited their opportunities for dropping ammunition in a restaurant privy.

In May 1899, Company L of the 24th Infantry relieved Company B. Company L was part of an all Black battalion from the 24th Infantry of the Fifth Corps (Bearss 1970:173). The company was deployed to Alaska from the Presidio in San Francisco. In late July 1899, a large forest fire destroyed the reservation south of Dyea. It was decided to move the troops back to Skagway, since Dyea was in effect a ghost town. The troops were eventually billeted in the Astoria Hotel, which was located on Sixth Avenue between Broadway and Spring Streets. The men of Company L were finally relieved in May 1902 by the 106th

Company of coast artillery (Bearss 1970: 178). The troops from Company L were in Skagway for nearly three years, a lengthy time period when the Feature 14 privy was in use. Were the men from Company L the owners of the outdated practice ammunition? Perhaps the ammunition was a token or keepsake that was accidentally lost by an army veteran.

Theme 4

The fourth theme is to increase our knowledge and understanding of environmental change in Skagway before, during, and after the gold rush by examining floral and faunal remains recovered from general excavations and privy or dump sites. All the samples analyzed for pollen or macrobotanicals were taken from strata laid down during or after the gold rush. The glacial outwash sediments found at the base of all excavation units are not suitable for pollen or macrobotanical analysis. The tree or grass pollen samples did not show any non-

local or non-native species. Some samples from under buildings had low tree pollen counts. It would be inaccurate to assume that lack of pollen from these samples was indicative of a concomitant lack of trees in the valley. Perhaps if securely dated pollen samples could be located, then they could be compared with this data.

Theme 5

The fifth theme concerns increasing our knowledge and understanding of the diet and general health of the people in Skagway during and after the gold rush. Many of the identified pollen samples came from local gardens and disturbed places where weeds like to grow. Once Skagway became a settled town, gardening became a very popular hobby. This would explain the large number of plants that show up in the pollen sample and that are not native to the region. The pollen analysis did show that a large percentage of cereals were consumed, as well as small fruits, such as strawberries and raspberries. The reconstructed diet from the pollen was quite limited in scope. The macrobotanical analysis also shows that a limited number of plants, including raspberries and grapes, were consumed.

Most of the meat consumed was from cattle, with sheep and pigs a distant second and third, respectively. There is also little indication of any reliance on locally available meat. The non-usage of local animals might be explained by the first stampede's decimation of the meager amounts of local animals before the full onset of the gold rush. Fish represented virtually the only source of local meat that was continually harvested throughout the gold rush.

Theme 6

The sixth research theme is to use material remains to aid Klondike Gold Rush National Historical Park interpretive staff in describing to the general public everyday life during and after the gold rush period. The restoration of the Pantheon Saloon Complex to the early 1900s should focus much of the interpretation on the pre-Prohibition Pantheon Saloon and on the Red Front General Merchandise Store. Skagway during that time was a declining boomtown and at the same time a maturing railroad town. The consolidation by the railroad had started by the time of the gold rush and was, for all purposes, complete by the opening of the Pantheon Saloon. The clientele of the saloon would not have consisted of eager and naive cheechakos from the south. Instead, the main clients would have been railroad men, sourdough miners, and locals who stayed after the rush was over.

Conclusions

Because of unavoidable time constraints, the scope of this report is abbreviated. The data collected from this site and others in Skagway demand further research. There are still significant resources in the vacant areas of Block 27, Lots 1 and 2. These resources should be protected, if possible, from further disturbances. One potential area of gold rush era material is under the original Hotel Seattle on Lot 2. Another area is along the south lot line of Lots 1 and 2 in areas not previously excavated and possibly on the west side of Lot 2. The area of Lot 1 facing Broadway is relatively free of intact deposits that would merit recovery. Nevertheless, testing and monitoring is still considered necessary prior to any further construction.

The historical record for the Pantheon Building is relatively more complete when compared to other buildings on Lots 1 and 2. The record concerning the actual people who lived and worked on the site is scarce, except for the Pantheon. Large gaps exist, however, for the Pantheon Building concerning such things as land ownership, business operation, and residential life. There is a lack of material that could be directly related to any of the early business ventures on the northern portion of Lot 1. The only remaining items from the original hotel structure are elements of the roofline. The clothing store seems to be totally absent from the archeological record.

The assemblage from both the pre- and post-Prohibition phases of the Pantheon Saloon differed in some interesting ways. Before Prohibition the saloon appeared to offer a full line of alcohol, including beer and wine, whereas after Prohibition the drink of choice seems to have been beer. The gambling paraphernalia and drug vials are found in the pre-Prohibition deposits of the saloon. In chapter 2 there was speculation based on architectural evidence that prostitution occurred on the second floor of the two-story addition. Catherine Spude conducted a regression analysis on the Pantheon Saloon, using data from comparable sites, and was unable to provide any foundation for the speculation (appendix J).

Structural evidence exists showing that during WW II the Pantheon was used for gambling, as well as dancing and drinking. In the staircase leading to the second floor, window glass was installed in the risers to identify people that presumably were allowed upstairs. Also, a door leading to the space above the Wood Shop was con-

figured much like a bank teller booth. The person behind the door could have facilitated the gambling while sitting in relative security. Interviews with local old-timers have supported the architectural evidence that gambling and drinking did occur perhaps when one or both were illegal (Blee et al. 1984).

The Rainier Hotel and Restaurant is very visible in the archeological record. The restaurant apparently contributed by far the most to the archeological record in the form of food related artifacts. The faunal assemblage from the Rainier is very large. In many ways it resembled the present day fare available in Skagway restaurants, with processed domestic animals and locally harvested fish. The ceramics reflect a mainly utilitarian use.

The businesses on each side of the Rainier were not well represented in the record. The tailor/shoe repair shop was possibly represented with the cut leather scraps and seed beads. Photographic film from the Y.M.C.A. camera club or the Movie Theater was recovered. The Movie Theater could also have contributed the graphite electrodes used in the projectors. No material associated with any steamship business was located or for that matter any business in that building.

It is hoped that this report, though limited in scope, has shed further light on life in Skagway both during and after the gold rush. The archeological record supported the historic documents and in some cases was able to add knowledge where documents were lacking. In the future the Pantheon will continue to serve the visitors and the people of Skagway.

Interpretive Comments

Despite the fact that the park already has a saloon for interpretation, the Pantheon has an equally rich history regarding its development from “flop-house” hotel to saloon, to restaurant/bakery, and finally restored leaseback.

1. The original Hotel Rosalie was one of the first permanent structures built in Skagway and thus started the movement from wild frontier to an established town.
2. Even though the Rainier Hotel and Restaurant no longer exists, it was the first such type of business excavated by the park. The restaurant inside the hotel was well represented in the archeological record.
3. Since the Pantheon was designated as a leaseback building, there will be a need for interpretive signs in order to inform the general public about the archeology and restoration that occurred on the site.

Interpretation Recommendations

1. Conduct a more thorough search for historic documents concerning Lot 2, especially the people identified in the tax and deed records.
2. Develop an online, searchable database of the artifact collection. This would assist anyone interested in research on the gold rush or Skagway.
3. The park will need to maintain the Web page designed for the Pantheon Complex. A park employee should be designated, possibly from the interpretive staff, to maintain and update the site. This would involve checking the links to other sites on the page and changing contact information as necessary.
4. Complete a report, synthesizing the data from all the excavations in Skagway.
5. The park should continue to seek funding for scholars or graduate students to complete research using the park’s databases.

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1901 26 June:4/3
1902 21 June:1/6
1902 23 October:3/1
1903 5 June:1/3
1903 27 June:1/6
1903 3 July:4/1
1904 9 September:1/5
1905 13 June:1/6
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APPENDIX A: DEED HISTORY

Table A-1: Deed History for Block 27, Lots 1 & 2

Year	Lot	Transferred to	Transferred from	Payment	Date Signed	Date Recorded
1897	Lot 1	Dr. Emil Pohl			Aug. 10, 1897	
1897	Lot 2	Lance Burton				
1898	N ½ N ½ lot 1	Ann L. Beveridge	Mrs. Annie Clayson	1500.0	Oct. 19, 1898	Oct. 24, 1898
1898	Lot 2	G. A. Upper	Geo. F. Keinstra	2500.0	Mar. 15, 1898	Mar. 26, 1898
1898	Lot 2, land only	Nina Dupras	Jas. D. Gass	800.0	Mar. 23, 1898	Mar. 26, 1898
1898	Lot 2, hotel	Nina Dupras	Jas. D. Gass	750.0	Mar. 22, 1898	Mar. 26, 1898
1898	Lot 2, hotel	Jas. D. Gass	Nina Dupras	750.0	Mar. 22, 1898	Jun. 24, 1898
1898	Lot 2	Jas. D. Gass	Nina Dupras	800.0	Mar. 22, 1898	Jun. 24, 1898
1898	Lot 2	Jas. D. Gass	Lance Burden	1.0	Jun. 7, 1898	Jun. 24, 1898
1898	Lot 2	Charles Moody	J. D. Gass	1200.0	Jun. 18, 1898	Jun. 24, 1898
1898	S ½ N ½ lot 1	Etta A. Fasel	Mr. & Mrs. Brownell	500.0		Jan. 10, 1898
1899	½ lot 2+4 other lots	J.F. Maloney	Charles Moody	1100.0	May 29, 1899	Jun. 1, 1899
1899	¼ lot 2	Katherine Moyer	J.F. Maloney	1.0	Oct. 30, 1899	Nov. 6, 1899
1899	N ½ lot 2	E. L. Groundahl	Mr. & Mrs. Keinstra	600.0	Dec. 4, 1899	Jan. 4, 1900
1900	½ lot 2	Katherine Moyer	E.L. Groundahl	500.0	Jun. 2, 1902	Jun. 7, 1902
1902	¾ lot 2	Alaska & Northwest Terr. Trading Company	Katherine Moyer	468.45	Aug. 4, 1902	Aug. 5, 1902
1902	¼ lot 2	Alaska & Northwest Terr. Trading Company	Charles Saake	156.25	Aug. 1, 1902	Sept. 30, 1903
1902	¾ lot 2	Katherine Moyer	Alaska & Northwest Territory Trading Company	468.75	Aug. 4, 1902	Apr. 18, 1904
1902	¼ lot 2	Charles Saake	Alaska & Northwest Territory Trading Company	156.25	Aug. 4, 1902	May 31, 1904
1902	S ½ N ½ lot 1	Katherine Moyer	Etta A. Fasel	500.0		Aug. 12, 1902

Table A-1: (continued)

Year	Lot	Transferred to	Transferred from	Payment	Date Signed	Date Recorded
1903	N ½ N ½ lot 1	J.F. Anderson	Alaska & Northwest Terr. Trading Company	440.0		Jul. 14, 1903
1904	¼ lot 2	Katherine Moyer	Charles Saake	200.0	May 17, 1904	May 31, 1904
1911	S ½ N ½ lot 1 & lot 2	J.F. Anderson	Mr. & Mrs. Moyer	1200.0	Mar. 6, 1911	Apr. 12, 1911
1937	S ½ lot 1	J. Wm. Flynn	Sabrina Dortero	5.0	Feb. 16, 1937	Feb. 26, 1937
1937	S ½ lot 1	Alfred L. Powell	J. William Flynn	50.0	Oct. 13, 1937	Feb. 7, 1946
1943	N ½ lot 1 & lot 2	Louis Rapuzzi	Mr. & Mrs. Anderson	10.0	Mar. 15, 1943	May 18, 1943
1948	N ½ lot 1 & lot 2	James Patterson	Mr. & Mrs. Rapuzzi	10.0	Feb. 25, 1948	Feb. 20, 1952
1952	S ½ lot 1	R. J. Behmke	W.G. Powell for A.L. Powell (deceased)		Aug. 12, 1952	Jul. 7, 1953
1956	N ½ lot 1 & lot 2	Mr. & Mrs. Braun	James Patterson	10.0	Sept. 26, 1956	Apr. 25, 1957
1962	S ½ lot 1	Mr. & Mrs. Braun	S&B Joint Venture	10.0		Oct. 26, 1962
1974	Lots 1 & 2	Mr. & Mrs. Brown	Mr. & Mrs. Braun	50,000.0	Aug. 6, 1974	Jul. 19, 1977
1977	Lots 1 & 2	Marie Kallstrom	Mr. & Mrs. Brown	10.0		Jul. 19, 1977
1977	Lots 1 & 2	N.P.S.	Marie Kallstrom	129,000.0		Jul. 25, 1977

APPENDIX A: Deed History

APPENDIX B: TAX HISTORY FOR BLOCK 27, LOTS 1 & 2

APPENDIX B: Tax History

Table B-1: Tax History

	N ½, N ½ Lot 1 (land + improv.)	S ½, N ½ Lot 1 (land + improv.)	S ½ Lot 1 (land + improv.)	Lot 2 (land + improv.)
1900	2500 Beveridge, L.	1750 Fasel, A.C.	3500 Pacific Trad. Co.	2500
1901	1000+500 Beveridge, L.	500+500 Fasel, A.C.	1000+500 Pacific Trad. Co.	1000+500
1902	600+400 Beveridge, L.	400+500 Moyer or Fasel	750+500 Pacific Trad. Co.	1000+500 Moyer, E.W.
1903	500+1000 Anderson, J.F.	500+750 Moyer, E.W.	750+500 Moore's Wharf Townsite	750+500 Moyer, E.W.
1904	600+900 Anderson, J.F.	500+750 Moyer, E.W.	750+500 Wheelwright, E.D.	750+500 Moyer, E.W.
1905	600+750 Anderson, J.F.	500+750 Moyer, E.W.	750+500 Wheelwright, E.D.	750+500 Moyer, E.W.
1906	600+750 Anderson, J.F.	500+750 Moyer, E.W.	750+500 Wheelwright, E.D.	750+500 Moyer, E.W.
1907	600+750 Anderson, J.F.	500+750 Moyer, E.W.	750+500 Wheelwright, E.D.	750+500 Moyer, E.W.
1912	N ½ of Lot 1 1350+1675 Anderson, J.F.	Combined with N ½ N ½ lot 1	900+450 Dortero, A.	450+675 Anderson, J.F.
1913-1919	No change		Dortero, T. is on record in 1918, no change	No change
1920	1350+1700 Anderson, J.F.		900+525 Dortero, Tony estate	800+350 Anderson, J.F.
1921-1935	No change		Mrs. Dortero on record in 1923. No change to tax	No change
1936	1350+1700 Anderson, J.F.		900+525 Dortero or Flynn	800+0 Anderson, J.F.

Table B-1: (continued)

	N ½, N ½ Lot 1 (land + improv.)	S ½, N ½ Lot 1 (land + improv.)	S ½ Lot 1 (land + improv.)	Lot 2 (land + improv.)
1936	1350+1700 Anderson, J.F.		900+525 Dortero or Flynn	800+0 Anderson, J.F.
1937	No change		900+525 Flynn, Wm.	No change
1938	No change		900+525 Powell, A.L.	No change
1939	No change		No change	No change
1940	Oct. 28 city minutes re:tax reduction in 1942		No change	No change
1941	1350+1700 Lee, Archie		No change	800+0 Lee, Archie
1942	1350+1200 Anderson, J.F.			800+0 Anderson, J.F.
1943	1350+2000 Anderson, J.F.			No change
1944	1350+2000 Rapuzzi to Marin		No change	800+0 Rapuzzi to Marin
1945	1350+2000 Marin, J.		No change	800+0 Marin, J.
1946	No records located for year		No records	No records
1947	1500+1000 Rapuzzi		900+2000 Powell, A.L.	Combined with N ½ lot 1
1948-1949	1500+1000 Patterson, J.		No change	Combined with N ½ lot 1
1950	1375+3160 Patterson, J.		1375+5500 Powell, A.L.	2625+0 Patterson, J.
1951	1375+3160 Patterson, J.		1375+5500 Powell, A.L.	2625+0 Patterson, J.
1952	No change		1375+5500 Powell estate	No change
1953-1955	No change		1375+5500 S&B Joint Venture	No change

APPENDIX B: Tax History

Table B-1: (continued)

	N ½, N ½ Lot 1 (land + improv.)	S ½, N ½ Lot 1 (land + improv.)	S ½ Lot 1 (land + improv.)	Lot 2 (land + improv.)
1960-1962	1750+7127 Braun, Mr.&Mrs		No change	1000+0 Braun, Mr.&Mrs.
1963-1964	No change		1750+0 S&B Joint Ven- ture	No change
1965-1966	No change		1750+0 Braun, Mr.&Mrs.	No change
1967-1968	All lot 1 3750+7127 Braun, Mr.&Mrs.			1250+0 Braun, Mr.&Mrs.
1969	3937.5+7127 Braun, Mr.&Mrs.			1312+0 Braun, Mr.&Mrs.
1970-1973	10000+14450 Braun, Mr.&Mrs.			Recorded with Lot 1
1974	17500+17350 Braun, Mr.&Mrs.			
1975	23600+19100 Braun, Mr.&Mrs.			
1976	29550+21950 Brown, Jack			
1977	51000+46830 Kallstrom, Marie			

APPENDIX C: PANTHEON AUGER TEST CHEMICAL CHART

C-2 Table C-1: Auger Test Chemical Chart

Archaeological Investigations in Skagway, Alaska, Vol. 9: Excavations at the Pantheon Saloon Complex

North	West	Depth	pH	Nitrate Nitrogen	Phosp.	Potash	Calcium	Ammonia Nitrogen	Magnesium	Manganese	Aluminum	Nitrite Nitrogen	Ferric Iron	Sulfate	Chloride
5	50	0.8	7	20		80	1400		5	5		1	5		
5	60	1.1	7.4	40	75	90	2800		10	0		1	5		
5	65	0.75	6.8	0			2800		10	0		0	0		
5	75	0.85	6.8	20	200	220	1000		5	0	5				
5	95	1.6	7.8	10	100	200	2800	5	10	10	125	1	5	2000	
10	10	0.9	6.4	10	100	180	1000		10	0	5				
10	20	0.8	7.6	150	75	300	2800	5	25	5	80	1		2000	
10	35	0.9	7	10	50	160	1400		5	0	10				
10	55	0.7	7	20	37	80	700		10	0		1	5		
10	60	0.85	7	5			700		10	0		0			
10	65	0.65	7.2	10		70	1400		10	0		1	5		
10	85	1.1	8.4	0			2800		5	0		0	0		
15	100	0.9	7.6	5			150		5	0		0			
20	50	0.9	6.4	5			150		5	0		0			
20	70	0.8	7	20			2800		10	0		0			
25	10	1	6.6	10	75	180	150		5	0	5				
25	40	1.2	6.8	0			350		10	0		0			
25	60	0.65	7	10			1400		10	0		0	0		
25	85	0.9	6.4	60	75	300	2800		10	0	30				
25	95	1.4	7.2	0			1000		10	0		0	0		
30	35	1.4	6.8	20			1000		10	0		0			
35	20	1	6.8	10			150		10	0		0			
35	30	1.1	7	5			2800		5	0		0			
35	45	1.1	6.8	5			150		10	0		0			
35	100	0.7	6.4	75			1000		5	0		0			

Table C-1: (continued)

North	West	Depth	pH	Nitrate Nitrogen	Phosp.	Potash	Calcium	Ammonia Nitrogen	Magnesium	Manganese	Aluminum	Nitrite Nitrogen	Ferric Iron	Sulfate	Chloride
40	35	1.1	7.6	0			2800		10	0		0			
40	35	0.9	6.2	10	75	220	1400		10	0	30				
40	40	1	5	10	75	300	2800	5	5	5	30	1	5	2000	
40	45	1	7.2	10	75	60	2800	5	25	0	5	0	0	2000	500
40	90	1.2	5.4	10			2800		10	0		0	0		
45	10	1	6.8	10			350		5	0		0	0		
45	95	1.4	7	5			1000		10	0		0			
50	85	1.2	7	10			350		10	0		0	1		
50	95	0.85	7	10			1000		10	0		0			
65	35	1	6.8	150	200	160	1400		15	0	7				
65	75	1.2	7.2	10	25	70	150		10	0		1	5		
65	85	0.85	7.4	0			2800		10	4		0	0		
70	80	0.9	7	5			350		10	0		0			
70	95	0.6	7	5			150		10	0		0			
75	85	1.05	6.8	0			150		10	0		0			
85	80	0.9	6.2	10			150		5	0		0			
85	90	0.7	6.8	5			150		10	0		0			
90	75	1.2	6.8	6.8	10		350		10	0		0			
95	70	1.3	6.8	5			350		25	0		0			
95	85	0.85	8	0			2800		5	7		0	1		
100	75	1	7.4	10	37	110	2800		5	5		1	5		
100	90	1.2	6.8	5			2800		10	0		0			

APPENDIX C: Auger Test Chemical Chart

APPENDIX D: SUMMARY CATALOGS OF NAIL ARTIFACTS

APPENDIX D: SUMMARY CATALOGS OF NAIL ARTIFACTS

Table D-1: Summary of Nails by Pennyweight and Feature

Features	Fragment	2D	3D	4D	5D	6D	7D	8D	9D	10D	12D	16D	20D	30D	40D	50D	60D	Totals
Feat. 01	218	6	11	20	17	37	18	13	12	26	8	1	3	1	.	.	1	392
Feat. 03	.	.	.	.	1	1	.	.	.	.	1	.	.	.	.	.	.	3
Feat. 05	1008	24	146	97	98	172	41	81	37	21	11	1	24	7	.	.	7	1775
Feat. 06	79	6	35	10	4	15	4	9	5	3	3	3	3	2	1	.	.	182
Feat. 07	13	5	5	2	.	5	1	3	1	.	3	1	.	.	1	.	2	42
Feat. 09	12	1	.	1	.	2	1	4	2	.	.	1	.	.	.	.	1	25
Feat. 10	151	5	3	6	3	20	12	18	2	.	2	.	.	1	.	.	.	223
Feat. 12	22	8	8	1	2	2	1	6	1	.	5	.	4	.	.	.	4	64
Feat. 13	4	.	.	.	.	1	3	4	4	1	.	.	2	.	.	.	.	19
Feat. 14	264	14	22	19	21	50	21	56	12	8	9	5	13	2	2	.	3	521
Feat. 16	12	.	.	1	.	1	.	1	.	.	.	.	.	.	.	.	.	15
Feat. 17	5	5	4	1	2	2	5	5	.	2	4	2	18	10	2	1	4	72
Feat. 20	41	8	4	4	9	16	6	11	9	3	2	3	11	5	.	.	.	132
Feat. 21	442	7	11	35	32	20	84	57	28	8	9	4	2	2	3	1	.	745
Feat. 22	22	.	2	2	.	10	1	.	.	1	.	.	.	.	.	.	.	38
Feat. 23	5	.	.	.	.	.	.	.	.	.	.	.	2	1	.	.	.	8
Feat. 24	47	3	6	.	4	31	1	4	8	2	5	1	.	.	.	.	.	112
Feat. 27	89	.	5	1	2	5	32	20	6	.	5	57	.	5	.	.	.	227

Table D-2: Summary Catalog of Straight Nails

	Gold Rush			Post Gold Rush			
Pennyweight	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
2D-5D	25	34	2	4	208	24	297
6D-10D	62	29	21	9	140	50	311
12D-16D	1	1	10	1	6	3	22
20D+	3	2	.	1	22	3	31
Unknown	101	52	24	9	602	82	870
Total	192	118	57	24	978	162	1,531

Table D-3: Summary Catalog of Pulled Nails

	Gold Rush			Post Gold Rush			
Pennyweight	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
2D-5D	61	37	6	9	262	16	391
6D-10D	136	96	38	34	316	54	674
12D-16D	11	9	50	5	27	5	107
20D+	5	12	5	2	50	13	87
Unknown	354	192	64	42	639	113	1,404
Total	567	346	163	92	1,294	201	2,663

Table D-4: Summary Catalog of Clinched Nails

	Gold Rush			Post Gold Rush			
Pennyweight	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
2D-5D	3	5	.	1	48	4	61
6D-10D	11	22	4	4	87	2	130
12D-16D	1	4	2	1	9	.	17
20D+	.	6	.	.	25	2	33
Unknown	9	20	1	1	120	9	160
Total	24	57	7	7	289	17	401

APPENDIX D: Summary Catalogs of Nail Artifacts

Table D-5: Alteration Percentage by Building for Pantheon and Comparative Data

	Building	Straight %	Pulled %	Clinched %
Pantheon Data	Brownell	24.5	72.4	3.1
	Rainier	22.6	66.4	10.9
	Fasel	25.1	71.8	3.1
	Pantheon	19.5	74.8	5.7
	Rainier	38.2	50.5	11.3
	Woodshop	42.6	52.9	4.5
Young Data	Disposal	24.3	37.1	38.6
	Construction	39.7	47.0	13.4

Table D-6: Percent Difference from Construction Model

	Building %	Straight %	Pulled %	Clinched %
Gold Rush	Brownell	15.2	-25.4	10.3
	Rainier	17.1	-19.4	2.5
	Fasel	14.6	-24.8	10.3
Post Gold Rush	Pantheon	20.2	-27.8	7.7
	Rainier	1.5	-3.5	2.1
	Woodshop	-2.9	-5.9	8.9
Young Data	Disposal	15.4	9.9	-25.2

Table D-7: Percent Difference from Disposal Model

	Building	Straight %	Pulled %	Clinched %
Gold Rush	Brownell	-0.2	-35.3	35.5
	Rainier	1.7	-29.3	27.7
	Fasel	-0.8	-34.7	35.5
Post Gold Rush	Pantheon	4.8	-37.7	32.9
	Rainier	-13.9	-13.4	27.3
	Woodshop	-18.3	-15.8	34.1
Young Data	Construction	-15.4	-9.9	25.2

APPENDIX E: Summary Catalogs of Structural Material Artifacts

APPENDIX E: Summary Catalogs of Structural Material Artifacts

Table E-1: Summary Catalog of Structural Hardware Artifacts

Object Name	Gold Rush			Post Gold Rush			Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	
Band	.	.	.	.	1	.	1
Bolt	.	1	1	.	1	.	3
Bolt, Carriage	.	.	.	.	2	.	2
Bracket	.	1	.	.	2	.	3
Clamp	.	.	.	.	1	.	1
Clamp (pipe)	.	.	.	.	1	1	2
Dood knob	.	.	.	.	1	.	1
Hinge	1	1	.	.	2	.	4
Hinge, Door	.	1	.	.	1	.	2
Hook	.	1	.	.	.	.	1
Key	.	.	.	.	1	.	1
Metal	.	1	.	.	.	.	1
Nail, Cap	5	2	1	3	8	.	19
Plate, Jamb	.	.	.	.	1	.	1
Pulley	.	1	.	.	.	.	1
Screw	.	1	.	.	1	1	3
Screw, Eye	.	.	.	.	1	.	1
Screw, Machine	.	1	.	.	2	.	3
Screw, Wood	4	.	.	.	11	1	16
Staple	2	.	.	1	5	1	9
Strap	.	.	.	.	1	.	1
Washer	.	.	1	.	.	.	1
Total	12	11	3	4	43	4	77

APPENDIX E: Summary Catalogs of Structural Material Artifacts

Table E-2: Summary Catalog of Building Material Artifacts

	Gold Rush			Post Gold Rush			
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Asbestos	.	.	.	.	2	.	2
Brick	11	1	.	1	15	8	36
Bucket, Paint	1	.	.	.	.	.	1
Can, Paint	3	1	.	.	2	.	6
Concrete	1	.	.	1	1	.	3
Cylinder	.	.	.	.	1	.	1
Flashing, Roof	.	.	.	.	1	.	1
Linoleum	.	.	.	.	2	.	2
Mortar	2	.	.	1	2	2	7
Paint	2	.	4	1	.	.	7
Paper, Tar	2	.	1	.	2	2	7
Sheet Metal Frag.	.	.	.	.	.	1	1
Shingle	1	.	.	.	.	1	2
Tile	.	.	.	.	1	.	1
Wallpaper	.	.	.	.	1	1	2
Wood, Milled	4	6	1	7	6	11	35
Total	27	8	6	11	36	26	114

APPENDIX E: Summary Catalogs of Structural Material Artifacts

Table E-3: Summary Catalog of Utility Artifacts

Object Name	Gold Rush		Post Gold Rush			Total
	Brownell	Rainier	Pantheon	Rainier	Wood Shop	
Cable	.	.	.	1	.	1
Clamp	.	.	.	2	.	2
Conduit	.	.	.	1	1	2
Faucet	1	1	.	.	.	2
Fiber	.	.	.	1	.	1
Fuse	.	2	.	.	1	3
Insulation, Wire	.	.	1	1	.	2
Insulator	1	2	.	4	2	9
Insulator, Tube	.	.	.	.	1	1
Pipe	.	1	.	.	.	1
Pipe, Sewer	.	2	.	2	2	6
Pipe, Water	.	2	.	1	.	3
Rubber	1	.	.	.	.	1
Wire	2	.	.	1	.	3
Wire, Electrical	.	.	1	.	.	1
Total	5	10	2	14	7	38

APPENDIX F: SUMMARY CATALOGS OF DOMESTIC FOOD AND DRINK ARTIFACTS

APPENDIX F: Summary Catalogs of Domestic Food and Drink Artifacts

Table F-1: Summary Catalog of Food Storage Artifacts

	Gold Rush			Post Gold Rush			
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Bottle, Preserve	.	.	.	1	.	.	1
Can	9	.	9
Container	2	1	3
Crock, Lid	1	.	.	.	.	.	1
Foil	2	.	2
Gasket, Jar	.	1	.	.	.	.	1
Jar	.	2	1	.	6	.	9
Jar, Canning	.	2	.	.	.	.	2
Jar, Preserving	1	.	.	3	4	.	8
Lid, Liner	.	1	.	.	2	.	3
Pitcher	1	.	1
Plastic, Wrapper	1	1
Stopper	1	.	1
Wrapper	1	.	1
Total	2	6	1	4	28	2	43

Table F-2: Summary Catalog of Food Preparation Artifacts

	Gold Rush			Post Gold Rush			
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Bottle	1	1	2
Bottle, Clam Juice	.	.	.	1	.	.	1
Bottle, Condiment	.	5	.	1	8	.	14
Bottle, Olive Oil	1	.	1
Bowl	1	.	1
Coffeepot	.	.	1	.	.	.	1
Jar	2	.	2
Jar, Mustard	.	.	1	.	.	.	1
Lid	1	.	.	.	.	.	1
Opener, Can	.	1	.	.	.	.	1
Pan, Pie	1	.	1
Tool, Food	.	1	.	.	.	.	1
Total	1	7	2	2	14	1	27

APPENDIX F: Summary Catalogs of Domestic Food and Drink Artifacts

Table F-3: Summary Catalog of Serving Artifacts

Object Name	Gold Rush			Post Gold Rush			Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	
Baker	.	.	.	.	1	.	1
Bowl	5	4	.	3	19	.	31
Coffeepot	.	1	.	.	.	.	1
Container	.	.	.	.	2	.	2
Cup	1	6	1	2	4	.	14
Dish	5	16	1	.	33	2	57
Dish, Butter	.	.	.	1	.	.	1
Fork, Dinner	.	1	.	.	.	.	1
Glass, Cordial	.	1	.	.	.	.	1
Glass, Decorative	.	.	.	.	1	.	1
Glass, Drinking	.	1	.	4	.	.	5
Glass, Wine	.	2	.	.	.	.	2
Handle, Utensil	.	.	.	.	1	.	1
Hollowware	.	2	1	.	2	.	5
Knife, Dinner	.	1	.	.	1	.	2
Mug	.	2	.	.	.	.	2
Pitcher	.	1	1	.	.	.	2
Plate	3	7	2	4	38	.	54
Platter	1	1	.	1	.	.	3
Saucer	.	1	1	1	6	.	9
Spoon	1	2	.	.	1	.	4
Stemware	.	.	.	.	1	.	1
Teacup, Handle	.	.	.	.	1	.	1
Tumbler	31	6	1	14	14	.	66
Total	47	57	8	30	123	2	264

APPENDIX F: Summary Catalogs of Domestic Food and Drink Artifacts

Table F-4: Summary Catalog of Beverage Artifacts

	Gold Rush			Post Gold Rush			
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Bottle	8	18	.	6	81	7	120
Bottle, Beer	4	.	.	65	10	.	79
Bottle, Bourbon	.	.	.	.	1	.	1
Bottle, Gin	.	.	.	.	3	.	3
Bottle, Liquor	12	30	.	4	54	1	101
Bottle, Milk	.	1	.	.	.	.	1
Bottle, Soda	2	2	.	.	43	1	48
Bottle, Whiskey	.	.	.	1	2	.	3
Bottle, Wine	.	2	.	.	3	.	5
Can, Milk	.	.	2	.	.	.	2
Cap, Crown Bottle	99	5	1	297	12	8	422
Cap, Wine Bottle	.	.	.	2	.	.	2
Container	2	.	.	.	7	4	13
Cork	.	.	.	.	1	.	1
Flask	12	.	.	1	1	.	14
Flask, Liquor	10	2	.	10	1	.	23
Foil	.	2	.	.	1	.	3
Glass, Shot	.	1	.	.	.	.	1
Glass, Wine	.	1	.	.	.	.	1
Seal, Bottle	2	1	.	.	.	.	3
Stopper, Bottle	2	1	.	1	2	.	6
Wrapper	.	.	.	.	1	.	1
TOTAL	153	66	3	387	224	21	854

APPENDIX F: Summary Catalogs of Domestic Food and Drink Artifacts

Table F-5: Summary Catalog of Non-bone Food Remains (Fragments)

Object Name	Gold Rush			Post Gold Rush		Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	
Can, Sardine	9	2	.	8	1	20
Can, Meat	.	.	.	2	4	6
Can, Liquid	.	.	1	.	5	6
Can, Milk	.	.	.	.	13	13
Can, Food	11	39	33	7	343	433
Can, Unknown	.	.	.	.	18	18
Eggshell	246	178	74	67	377	942
Oyster	8	.	.	.	.	8
Clams	.	106	.	3	234	343
Peach, seed	15	10	.	29	23	77
Apricot, seed	2	.	.	.	.	2
Cherry, seed	6	.	.	.	.	6
Walnut, shell	9	.	.	2	.	11
Filbert, shell	12	.	.	.	.	12
Peanut, shell	1	.	.	1	.	2
Brazil Nut, shell	9	.	.	1	.	10
Pecan, shell	6	.	.	3	.	9
Coconut, husk	.	.	.	.	1	1
Unknown, seed	7	2	.	5	2	16
Wrapper	.	.	.	.	2	2
Foil	.	.	.	.	1	1
Total	341	337	108	128	1,024	1,938

APPENDIX F: Summary Catalogs of Domestic Food and Drink Artifacts

Table F-6: Summary Catalog of Fish Bone

Latin name/common name	Gold Rush			Post Gold Rush		Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	
<i>Clupea pallasii</i> – herring	2	.	.	.	2	4
<i>Clupeidae</i> – herring	1	.	.	1	.	2
<i>Gadidae</i> – cod	.	.	.	.	2	2
<i>Gadus macrocephalus</i> – cod	.	3	.	.	2	5
<i>Hippoglossus stenolepis</i> – halibut	2	4	.	.	8	14
<i>Hexagrammus sp.</i> – greenling	.	.	.	.	1	1
<i>Microgadus proximus</i> – tomcod	.	.	.	.	1	1
<i>Oncorhynchus sp.</i> – salmon	4	.	.	.	1	5
<i>Osteichthyes</i> – fish	.	3	.	.	16	19
<i>Pleuronectidae</i> – sole	10	.	.	1	8	19
<i>Salmonidae</i> – salmon	.	.	.	.	1	1
<i>Scrombridae</i> – mackerel	.	.	1	.	.	1
<i>Theragra chalcogramma</i> – pollock	.	7	.	.	8	15
Total	19	17	1	2	50	89

Table F-7: Summary Catalog of Bird Bone

Latin name/Common name	Gold Rush			Post Gold Rush		Total
	Brownell	Rainier	Fasel	Rainier	Wood Shop	
<i>Anas platyrhynchos</i> – mallard	.	.	.	1	.	1
<i>Anser sp.</i> – goose	.	.	.	.	1	1
<i>Aves</i> – bird	5	4	9	25	.	43
<i>Aves</i> , md – bird	.	.	.	28	.	28
<i>Aves</i> , lg – bird	.	2	1	6	.	9
<i>Branta canadensis</i> – Canada goose	.	.	.	1	.	1
<i>Gallus gallus</i> – chicken	8	31	6	62	.	107
<i>Meleagris gallopavo</i> – turkey	3	.	.	3	.	6
Total	16	37	16	126	1	196

APPENDIX F: Summary Catalogs of Domestic Food and Drink Artifacts

Table F-8: Summary Catalog of Mammal Bone

Latin name/common name	Gold Rush			Post Gold Rush			Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	
<i>Artiodactyla</i> (even-toed ungulate)	6	9	1	3	50	2	71
<i>Bos taurus</i> (cattle)	48	32	8	9	250	3	350
<i>Carnivora</i> (dog, wolf)	.	.	.	.	1	.	1
<i>Capra/Ovis</i> (goat/sheep)	5	11	1	3	260	3	283
<i>Felis domesticus</i> (house cat)	.	.	.	.	1	.	1
<i>Leporidae</i> (rabbit)	.	.	.	.	2	.	2
<i>Lepus americanus</i> (rabbit)	.	.	.	.	4	.	4
Mammal	109	2	38	29	48	.	226
Mammal, sm		.	.	.	3	.	3
Mammal, lg	27	53	8	.	1042	1	1131
Mammal, v lg	8	8	.	2	322	.	340
<i>Marmota caligata</i> (marmot)	.	.	.	.	1	.	1
<i>Odocoileus hemionus</i> (deer)	.	.	.	1	6	.	7
<i>Ovis aries</i> (sheep)	23	.	6	12	38	.	79
<i>Rattus norvegicus</i> – Norway rat	.	1	1	.	8	.	10
<i>Rattus sp.</i>	.	.	.	.	2	.	2
<i>Sus scrofa</i> (pig)	13	3	.	18	33	.	67
<i>Vulpes fulva</i> (fox)	.	.	.	.	1	.	1
Total	239	119	63	77	2072	9	2,579

APPENDIX F: Summary Catalogs of Domestic Food and Drink Artifacts

APPENDIX G: SUMMARY CATALOGS OF HOUSEHOLD ARTIFACTS

APPENDIX G: Summary Catalogs of Household Artifacts

Table G-I: Summary Catalog of Pharmaceutical Artifacts Recovered from Pantheon Site

	Gold Rush			Post Gold Rush			
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Bottle	3	1	.	.	9	2	15
Bottle, Medicine	6	23	.	4	44	.	77
Bottle, Toilet	.	.	.	.	1	.	1
Bottle, Vaseline	.	1	.	.	1	.	2
Container	.	1	.	.	7	.	8
Stopper, Bottle	1	.	.	.	1	.	2
Syringe	.	.	.	.	1	.	1
Tube	.	.	.	.	1	.	1
Vial	15	2	1	18	.	.	36
TOTAL	25	28	1	22	65	2	143

Table G-2: Summary Catalog of Furnishing Artifacts Recovered from Pantheon Site

Object Name	Gold Rush			Post Gold Rush			Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	
Bracket	.	4	.	.	.	.	4
Caster	.	.	.	.	1	.	1
Ceramic	1	.	.	1	.	.	2
Container	.	1	.	.	4	.	5
Fastener	.	.	.	.	1	.	1
Glass, Decorative	2	1	.	5	1	.	9
Glass, Plate	.	1	11	.	2	.	14
Handle	.	.	.	.	2	.	2
Hardware	.	.	.	.	1	.	1
Hinge	1	.	.	.	1	.	2
Holder, Napkin	.	.	.	.	1	.	1
Hook, Coat	.	1	.	.	1	.	2
Key	1	.	.	.	.	.	1
Knob	.	1	.	.	2	.	3
Latch	.	.	.	.	1	.	1
Linoleum	1	.	.	1	.	.	2
Mirror	4	1	.	.	.	.	5
Ornament	.	2	.	.	.	.	2
Padlock	.	.	.	.	1	.	1
Paper	.	1	1	.	.	.	2
Pull, Drawer	.	.	.	.	2	.	2
Spring, Coil	.	.	.	.	1	.	1
Tack	.	.	.	.	5	2	7
Wallpaper	.	.	1	.	1	.	2
Wood, Milled	1	.	.	.	.	.	1
Total	11	13	13	7	28	2	74

APPENDIX G: Summary Catalogs of Household Artifacts

Table G-3: Summary Catalog of Housekeeping Artifacts

	Gold Rush			Post Gold Rush		
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Total
Band	.	.	.	1	.	1
Bottle	.	2	.	.	.	2
Bottle, Bleach	.	5	.	.	1	6
Can	1	.	.	1	1	3
Cap, Bottle	.	.	.	.	1	1
Handle	1	.	1	.	1	3
Handle, Mop	.	.	.	.	1	1
Hook	.	.	.	.	1	1
Jug	.	.	.	.	1	1
Lime	3	.	.	.	.	3
Mineral	6	.	.	.	.	6
Clothespin	.	.	.	.	3	3
Total	11	7	1	2	10	31

Table G-4: Summary Catalog of Personal Artifacts

	Gold Rush	Post Gold Rush		
Object Name	Rainier	Pantheon	Rainier	Total
Seed Bead	.	.	36	36
Bead, ceramic	.	.	1	1
Eyeglasses	.	1	.	1
Jewelry, charm	.	1	1	2
Garment clip	.	.	1	1
Earring	1	.	.	1
Totals	1	2	39	42

APPENDIX G: Summary Catalogs of Household Artifacts

Table G-5: Summary Catalog of Grooming Artifacts

Object Name	Gold Rush		Post Gold Rush			Totals
	Rainier	Fasel	Pantheon	Rainier	Wood Shop	
Bottle	2	1	1	13	.	17
Jar, white	.	.	.	2	.	2
Toothbrush, bone	.	.	.	2	.	2
Can, powder	1	.	.	2	.	3
Comb, plastic	2	1	.	2	1	6
Ceramic, toiletry	.	.	.	1	.	1
Totals	5	2	1	22	1	31

Table G-6: Summary Catalog of Leisure Artifacts

Object Name	Gold Rush		Post Gold Rush			Totals
	Brownell	Fasel	Pantheon	Rainier	Wood Shop	
Film	.	.	.	1	.	1
Film holder	.	.	.	1	1	2
Pipe Stem	3	.	1	3	.	7
Pipe Bowl	1	.	.	.	.	1
Cigar holder	.	.	.	2	.	2
Can, snuff	2	1	.	.	.	3
Totals	6	1	1	7	1	16

Table G-7: Summary Catalog of Interior Lighting Artifacts

Object Name	Gold Rush			Post Gold Rush		Total
	Brownell	Rainier	Fasel	Pantheon	Rainier	
Battery, Dry-Cell	.	.	.	1	.	1
Can (handle)	.	.	.	.	1	1
Can (valve)	.	2	.	.	.	2
Chimney, lamp	2	16	.	.	16	34
Electrode	15	.	.	.	8	23
Finial	.	.	.	.	1	1
Globe	.	.	.	.	5	5
Lamp, Gas (burner)	.	1	1	.	1	3
Lampshade	.	1	4	1	4	10
Lightbulb	.	.	.	2	12	14
Match	.	.	.	6	.	6
Plug, Socket	.	1	.	.	.	1
Total	17	21	5	10	48	101

APPENDIX G: Summary Catalogs of Household Artifacts

Table G-8: Summary Catalog of Heating and Cooking Artifacts

	Gold Rush			Post Gold Rush			
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Oil Can	.	2	.	.	3	.	5
Coal	13	5	4	3	20	3	48
Charcoal	1	.	.	.	2	3	6
Stove Parts	.	1	.	.	.	.	2
Slag	1	.	.	.	.	.	1
Total	15	8	4	3	25	6	61

Table G-9: Summary Catalog of Clothing Artifacts

	Gold Rush			Post Gold Rush			
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Leather, shoes		4	.	2	9	1	16
Shoe, soles	3	2	.	.	4	.	9
Shoe, slipper	.	.	.	.	1	.	1
Cloth, wool	1	5	2	.	3	.	11
Cloth, cotton	.	6	.	.	2	.	8
Button, rubber	.	1	.	.	.	.	1
Holed Button	2	24	1	2	12	1	42
Shank Button	.	5	.	1	7	.	13
Buckle, belt	.	3	.	.	3	.	6
Fastener	.	6	.	.	5	1	12
Eyelet	.	2	.	.	2	.	4
Hook & Eye	.	4	.	.	1	.	5
Felt	.	2	.	.	.	.	2
Shirt Stud	1	2	.	.	1	.	4
Shoehorn	.	.	.	.	1	.	1
Shoe Polish	.	2	.	.	2	.	4
Stocking	.	1	.	.	.	.	1
Total	7	69	3	5	53	3	140

APPENDIX H: SUMMARY CATALOGS OF SPECIALIZED ARTIFACTS

APPENDIX H: Summary Catalogs of Specialized Artifacts

Table H-1: Summary Catalog of Hunting-Military/Fishing Artifacts

Object Name	Gold Rush		Post Gold Rush		Total
	Brownell	Rainier	Pantheon	Rainier	
Button, Military	.	1	.	.	1
Cartridge, Center-fire	4	3	2	12	19
Cartridge, Rim-fire	.	.	.	8	8
Hook, Fish	.	.	.	1	1
Total	4	4	2	21	29

Table H-2: Summary Catalog of Public Services Artifacts Recovered

Object Name	Gold Rush	Post Gold Rush		Total
	Brownell	Pantheon	Rainier	
Insulator	.	.	5	5
Knob	.	.	1	1
Pipe, Sewer	1	1	1	3
Total	1	1	7	9

Table H-3: Summary Catalog of Communication Artifacts

Object Name	Gold Rush			Post Gold Rush	Total
	Brownell	Rainier	Fasel	Rainier	
Pencil	1	1	.	4	6
Paper	2	.	.	.	2
Bottle, Ink	.	1	1	4	6
Newspaper	.	.	.	1	1
Chalk	.	1	.	.	1
Total	3	3	1	9	16

Table H-4: Summary Catalog of Office Supply Artifacts

	Gold Rush	Post Gold Rush		
Object Name	Brownell	Pantheon	Rainier	Total
Band, Rubber	.	1	1	2
Fastner, Paper	1	.	.	1
Pencil	.	.	2	2
Scissors	1	.	.	1
Tack	.	.	1	1
Total	2	1	4	7

Table H-5: Summary Catalog of Transportation Artifacts

	Gold Rush		Post Gold Rush		
Object Name	Brownell	Rainier	Rainier	Wood Shop	Total
Ring	.	.	1	.	1
Spike	.	1	7	.	8
Strap	.	.	1	.	1
Rod	.	.	.	1	1
Valve, Tire	1	.	.	.	1
Total	1	1	9	1	12

Table H-6: Summary Catalog of Bulk Storage Artifacts

	Gold Rush			Post Gold Rush			
Object Name	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop	Total
Barrel, bands	.	.	1	4	5	.	10
Bucket	1	.	2	.	.	.	3
Wood Slats	1	.	.	.	.	.	1
Can, unk.	.	.	.	.	.	1	1
Plastic, bags	.	1	.	.	.	.	1
String	.	.	1	.	.	.	1
Total	2	1	4	4	5	1	17

APPENDIX H: Summary Catalogs of Specialized Artifacts

Table H-7: Summary Catalog of Entertainment Artifacts

Object Name	Gold Rush		Post Gold Rush	Total
	Brownell	Rainier	Pantheon	
Chip, Poker	10	1	3	14
Container	1	.	.	1
Die	1	.	3	4
Glass, Shot	11	.	15	26
Goblet	7	.	4	11
Total	30	1	25	56

Table H-8: Summary Catalog of Economic Exchange Artifacts

Object Name	Gold Rush		Total
	Brownell	Rainier	
Coin, Dime	.	1	1
Coin, Nickel	2	.	2
Coin, Penny	2	.	2
Total	4	1	5

Table H-9: Summary Catalog of Construction Tool Artifacts

Object Name	Gold Rush			Post Gold Rush	Total
	Brownell	Rainier	Fasel	Rainier	
File, flat	1	1			2
Saw, keyhole				1	1
Glass cutter			1		1
Hammer, tack				1	1
Socket, ratchet		1			1
Total	1	2	1	2	6

Table H-10: Summary Catalog of Farming & Ranching Artifacts

	Gold Rush	Post Gold Rush	
Object Name	Rainier	Rainier	Wood Shop
Flowerpot	3	5	1
Total	3	5	1

APPENDIX H: Summary Catalogs of Specialized Artifacts

APPENDIX I: CHAPTER 7 TABLES

Table I-1: Percentages of the Architectural Function Categories

	Gold Rush			Post Gold Rush		
Building	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Nails	69%	79%	23%	37%	65%	66%
Window Glass	26%	15%	74%	57%	28%	3%
Hardware	4%	4%	4%	4%	6%	25%
Utilities	1%	2%	0%	1%	1%	6%
	100%	100%	100%	100%	100%	100%

Table I-2: Percentages Between Nails and Window Glass

	Gold Rush			Post Gold Rush		
Nail/glass	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Nails	73%	84%	24%	39%	70%	96%
Window Glass	27%	16%	76%	61%	30%	4%
	100%	100%	100%	100%	100%	100%

Table I-3: Percentage of Architectural Materials, Excluding Nails

	Gold Rush			Post Gold Rush		
Building 2	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Window Glass	84%	74%	95%	91%	80%	9%
Hardware	15%	18%	5%	7%	18%	73%
Utilities	2%	8%	0%	2%	1%	19%
	100%	100%	100%	100%	100%	100%

Table I-4: Percentage of Domestic Functional Categories

Domestic	Gold Rush			Post Gold Rush		
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Food Storage	2.3%	3.1%	0.5%	0.8%	1.2%	2.8%
Food Prep	0.1%	0.9%	2.6%	0.8%	0.5%	2.8%
Food Serving	18.2%	16.7%	26.7%	8.8%	20.4%	4.2%
Food Remains	49.0%	50.7%	58.6%	24.2%	48.5%	12.7%
Beverage Bottle	27.0%	22.5%	11.0%	62.1%	27.1%	74.6%
Medicinal	3.3%	6.1%	0.5%	3.2%	2.4%	2.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table I-5: Percentage of Domestic Categories, Excluding Food Remains and Medicinal Bottles

	Gold Rush			Post Gold Rush		
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Food 1						
Food Storage	11.1%	14.9%	1.8%	8.0%	5.4%	28.6%
Food Prep	0.6%	4.3%	8.8%	8.0%	2.2%	28.6%
Food Serving	88.3%	80.8%	89.5%	84.0%	92.4%	42.9%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table I-6: Percentages Between Beverage and Medicine Bottles

	Gold Rush			Post Gold Rush		
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Bev/Med						
Beverage	89%	79%	95%	95%	92%	96%
Medicinal	11%	21%	5%	5%	8%	4%
	100%	100%	100%	100%	100%	100%

Table I-7: Percentages of Functional Groups

	Gold Rush			Post Gold Rush		
	Brownell	Rainier	Fasel	Pantheon	Rainier	Wood Shop
Nails	41.0%	24.5%	19.2%	11.7%	25.8%	58.6%
Build 2	18.0%	6.5%	64.6%	20.3%	13.7%	30.4%
Food Remains	20.1%	35.0%	9.5%	16.4%	29.4%	1.4%
Food 1	8.5%	14.3%	4.8%	7.2%	13.4%	1.1%
Bev/Med	12.4%	19.7%	1.9%	44.4%	17.8%	8.5%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table I-8: Percentage Deviation Between Buildings' Eras

	Brown/ Pantheon	Rainier	Fasel/Wood Shop
Nails	29.2%	-1.2%	-39.4%
Build 2	-2.3%	-7.2%	34.2%
Food Remains	3.7%	5.6%	8.1%
Food 1	1.3%	0.9%	3.7%
Bev/Med	-31.9%	1.9%	-6.6%

**APPENDIX J:
MULTILINEAR REGRESSION
ANALYSIS OF THE NON-STRUCTURAL ARTI-
FACTS FROM THE PANTHEON SALOON
(1903-1916)**

By Catherine Holder Spude

Introduction

The appearance of a number of artifacts that could be associated with women (a woman's shoe, an earring, a perfume bottle, and two possible corset stays) in the collection of artifacts associated with the Pantheon Saloon (1903-1916) suggested that perhaps the upper floor of the saloon was used for prostitution at some time during that period. Blee (1991) developed a statistical method for estimating the combination of artifact collections to produce a mixed assemblage. If prostitution was part of the recreation offered to the working class male patrons of the saloon, the collection as a whole should appear as a mixture of saloon and brothel type artifact assemblages.

Sorting Collections with Multilinear Regression

Blee used a least-squares multilinear regression to assess the probability that the Pantheon Saloon collection was a mixture of saloon and brothel collections. This method was developed by Kohler and Blinman (1987) to estimate the relative contributions of differing ceramic assemblages to temporally-mixed Anasazi midden deposits in the American Southwest. Blee developed statistical profiles of six types of historic artifact assemblages (Families, Transient Males, Saloons, Brothels, Hotels and Restaurants, and Military) to estimate the relative contributions of each of these socioeconomic groups to functionally-mixed historic period deposits. The results of her analysis suggest that the method can reliably be used to discern functionally-mixed collections of artifacts.

Subsequent application of the method by Spude et al. (1993: 129-134) suggested that the Family Assemblage should be broken

into two separate assemblages. Spude demonstrated that families that probably consumed alcoholic beverages tended to dispose considerably higher frequencies of both liquor-related artifacts and non-alcoholic beverage containers than families that probably did not consume alcohol (ibid.: 82). Dividing the Drinking Families from the Temperate Families resulted in two comparative artifact assemblages with much stronger internal integrity and closer goodness of fit. While criticizing the method in their study archeological study of the Barnette Street waterfront in Fairbanks, Alaska, Gannon and Bowers (1998: Appendix 10) apparently had not seen the refinements made by Spude et al. (1993:129-134). Their criticism that the collections used to construct the Family Assemblage comparison data set were not drawn from the same population – while a valid criticism – was indeed addressed by Spude et al.'s (1993) division of that set into two separate assemblages.

In the critique of the method, Gannon and Bowers did not consider the extreme robusticity of the multilinear regression. While it is indeed a parametric statistic, it can readily withstand reasonable abuses of its assumptions, one of the characteristics that make the statistic so useful for archeological applications. Unlike the descriptive statistics normally employed by historical archeologists (e.g. South 1977), the linear regression does not measure, calculate or consider standard deviation of each of the variables. It is strictly a measure of central tendency. Whether one collection can be said to lie within the standard deviation of another collection is irrelevant with the linear regression. Therefore, if it is known that a set of saloon collections, for instance, are part of the total universe of saloon collections, it does not matter whether one saloon collection meets a goodness of fit

test with another saloon. What indeed is that fit testing? Is it testing whether a given saloon collection is statistically identical to all other saloon collections? Or is it testing whether all of the customers of one saloon were identical to all of the customers of another saloon?

This is not a facetious question. Indeed, the “likeness” that is being measured is critical to most comparative methods. Gannon and Bowers found the regression method unsuited to their analysis because they were not trying to discover similarities between collections, but rather differences between them. The regression indeed can be used to discover differences, but the comparative data sets were constructed by Blee specifically to maximize differences between assemblages and minimize differences within assemblages. The categorization method developed by Blee was indeed not suitable for answering the questions posed by Gannon and Bowers.

Regardless of the applicability to Gannon and Bowers’ questions, I maintain that historic documentation combined with accurate assessment of the dates of artifacts in a given collection are sufficient to demonstrate whether a given collection is from a saloon. Combined with other similarly documented saloon collections, one can indeed construct a comparative “Saloon Assemblage” that can be instructive in helping assess the degree of mixing of deposits.

However, to reassure those who might still be concerned that one family collection does not seem similar enough to another family collection, or that one saloon is not similar enough to another saloon, I re-examined Blee’s comparative collections. For the purpose of regressing the Pantheon Saloon collection, I used only those collections that accurately predict others in their

same comparative data set. A description of the collections used to construct each comparative assemblage is listed in Figure 1. The numbers used to construct each assemblage appear in Tables 1 through 7. The assemblages consist of averaged frequencies for each collection that comprises the assemblage. The assemblages used as data calibration sets are shown in Figure 8.

The proveniences associated with the Pantheon Saloon (1930-1916) included: N86W36, N82W38, N80, W36, N76W36, N79W37 N79W34, N79W32, and Feature 26. Strata or intrusions containing artifacts later than 1916 were eliminated from the data set.

The Artifact Categories

The artifact categories listed in Tables 2 through 8 are defined in Blee (1991: 83-117). As Blee was attempting to solve slightly different problems with her study, focusing more on differentiating male-only households from households with women in them, the way she categorized her collections are not totally appropriate for the problem of determining whether the Pantheon Saloon’s collection is mixed. Therefore, her categories were modified for the purposes of the Pantheon Saloon study, as outlined below.

Food Serving Items: Use of Blee’s (1991) method since 1991 has suggested that the combination of some of her artifact categories into larger categories, and the break-out of others is more useful in distinguishing the data sets from one another. To control for variability that arises as a function of socioeconomic status (which is not being studied here), I felt it advisable to combine the decorated dishes and undecorated dishes into a single category called Food Serving Items. Detailed examina-

tion of the variability of these two artifact categories in the sample collections suggested that their variability was due to the amount of wealth available to the original owners, and not to whether the original owners disposed of their broken dishes at their home or place of business. In addition to the dishes, I added flatware and utensils that would appear at a table. This category helps the analyst in evaluating the amount of food service that took place in a home or business.

Female-Specific Items: As in Spude et al. (1993), I have chosen to combine the Child-Specific Items with the Female-Specific Items. In a study of the 1900 manuscript census of Skagway, I found that only one household out of 209 households containing children had no adult female present. While women are often present without children, children under 15 years of age at the turn of the century were very rarely living without an adult woman to care for them. A combination of the two categories serves to limit the number of very small frequency categories. Too many small frequency categories can make differing collections seem alike.

Non-Alcoholic Beverage Containers: Another change from Blee's (1991) categories was the splitting of Non-Alcoholic Beverages Containers from the Liquor-Related Items and Food Storage Containers. Spude et al. (1993: 30, 81-82) pulled the non-alcoholic beverage bottles from Blee's (1991) Food Storage Containers in order to better assess the amount of liquor-consumption that occurred in a given context. She observed that non-alcoholic beverages are often mixed with, or used in lieu of alcoholic beverages. Because both saloons and brothels encouraged the use of alcohol, the frequency of non-alcoholic beverages

is of interest to the study of the Pantheon's collection.

Recreation-Related Items: In Blee (1991) the Liquor-Related category contained a number of items more commonly found in saloons than in households and seemingly almost inextricably associated with the consumption of alcohol: poker chips, dice, and other gaming or recreational items. In order to help differentiate the saloon collections from other types of collections, I have chosen to examine the relative frequency of recreation-related items.

Bottle Closures: Finally, the excavators at the Pantheon Saloon, for a number of reasons, chose not to collect crown caps except to sample them. Comparing the relative frequency of the Pantheon Saloon's crown caps to the relative frequencies in other saloon collections where all closures were collected would not yield interpretable results. Therefore, the category of Bottle Closures was eliminated from the data sets.

Calculation and Interpretation of the Multilinear Regressions

The least-squares multilinear regression was run on the statistical software called STATA. In STATA, the regression command is symbolized by "reg." The collection to be sorted is named next (in this case "pantheon"), followed by the data calibration sets (assemblages and/or collections) to which it is being compared. The final command, "noc," instructs the software to use no constant, which would artificially restrict the data to an arbitrary beginning point.

As explained in Blee (1991: 264), it is impossible for an archeological assemblage or

collection to make a hypothetical negative contribution to a test collection. Therefore, collections or assemblages yielding negative slopes (or coefficients) are deleted from the sort and the regression is run again. Deleting all data calibration sets with negative slopes in one fell swoop does not help to solve the problem. The largest negative slope or coefficient must be eliminated and the statistic then calculated again before deleting other data sets with negative coefficients.

The statistics of most use in the following regressions are:

- 1) **The coefficient**, which gives the slope of the data calibration set regressed on the tested collection. The value of this slope can be interpreted as the amount of the test collection that is predicted by that particular collection.
- 2) **The standard error (Std. Err.)** gives the standard deviation of the coefficient.
- 3) **$P > |t|$** gives the probability that this particular coefficient would occur randomly. Most archeologists follow the convention established by physical anthropologists in accepting a 0.05 level of significance. In repeated uses of this regression, I have found that interpretable results can occur with a 0.10 level of significance. This less stringent test is acceptable with archeological data, which is mushy at best, and does not need the rigor used by the harder sciences. Given the overall robusticity of the multilinear regression, this greater tolerance should be acceptable to most archeologists.

To interpret the results of the regression, once all negative coefficients are eliminated, one looks for a $P > |t|$ that is 0.10 or less. The coefficient associated with that $P > |t|$ can be interpreted as the amount of the Pantheon Saloon (or any tested) collection that is predicted by that data set. The standard error gives the standard deviation for that coefficient.

Sorting the Pantheon Saloon Collection

Regression 1: Sort the Pantheon Saloon Collection with the Assemblages

I started with a sort of the Pantheon Saloon using the assemblages listed in Figure 8 as the data calibration sets. Bill Wilson's Store was added as an eighth data calibration set because of its known use as a saloon (although that use was mixed with other functions). The following assemblages yielded negative coefficients, in this order: the Transient Males, the Hotels and Restaurants, the Temperate Families, and the Drinking Families. Those negative slopes indicate that these assemblages were least like the Pantheon Saloon. The sort with the remaining three assemblages and Bill Wilson's Store yielded the following results:

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Source	SS	df	MS	Number of obs = 13
Model	.185875949	4	.046468987	F(4, 9) = 30.95
Residual	.013512503	9	.001501389	Prob > F = 0.0000
Total	.199388451	13	.015337573	R-squared = 0.9322
				Adj R-squared = 0.9021
				Root MSE = .03875

Data set	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
saloon	.5848457	.1477703	3.958	0.003	.2505661	.9191252
brothel	.1097523	.2615465	0.420	0.685	-.4819071	.7014117
military	.0450319	.0968272	0.465	0.653	-.1740065	.2640703
wilson	.2358331	.1535524	1.536	0.159	-.1115265	.5831926

This statistic suggests that 58% \pm 15% of the Pantheon Saloon collection is predicted by the Saloon Assemblage. There is no mixture with the brothels.

Regression 2: Sort the Pantheon Saloon with Six Assemblages and Individual Brothels

As shown elsewhere, however, the three brothel collections used to create the Brothel Assemblage are highly variable (Spude 1998). In particular, the middle-class parlor house on Aliso Street in Los Angeles, California contained substantially more furnishings and decorated ceramics than the other two brothels. The resident prostitutes catered largely to middle class businessmen. Hill 60, in Blairmore, Alberta operated in the first third of the twentieth century, overlapping Canadian prohibition. Its high bottle closure frequency suggests use of contraband beers for alcohol consumption. The resident prostitutes catered to working-class coal miners. The Vanoli Complex, on the other hand, dated to the 1880s and 1890s before widespread use of crown caps for bottle closures. Its transient prostitutes, working a circuit, served working-class miners who came into Ouray from the mines on weekends.

If the proprietors of the Pantheon Saloon had kept prostitutes upstairs sometime during the 1903 to 1916 period, their artifact collection would most closely resemble either Hill 60, which dated to the same time period, or the Vanoli Complex, with its transient, non-resident prostitutes. To see if the Pantheon Saloon collection might be a mixture of the Saloon Assemblage and one or more of these types of brothels, the regression was run again. This time, the Brothel Assemblage was deleted as a data calibration set, and the Vanoli Complex, Hill 60 and Aliso Street brothels were substituted as three different data sets.

When the regression was run, five data sets yielded negative coefficients. They were deleted a step at a time in the following order: Hotels and Restaurants, Transient Males, Dry Families, Drinking Families and the Aliso Street Parlor House. As predicted, any possible prostitution at the Pantheon Saloon would not have been like that on Aliso Street.

The regression yielded the following statistic:

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Source	SS	df	MS	Number of obs = 13
Model	.185935233	5	.037187047	F(5, 8) = 22.11
Residual	.013453219	8	.001681652	Prob > F = 0.0002
Total	.199388451	13	.015337573	R-squared = 0.9325
				Adj R-squared = 0.8904
				Root MSE = .04101

Data set	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]
saloon	.5865616	.1474772	3.977	0.004	.2464787 .9266446
hill60	.0426227	.1094685	0.389	0.707	-.2098122 .2950575
vanoli	.0431284	.1637981	0.263	0.799	-.3345908 .4208476
military	.0565106	.1926159	0.293	0.777	-.3876625 .5006837
wilson	.2458157	.1454324	1.690	0.129	-.0895521 .5811835

As can be seen here, even when the brothels are broken out individually, the saloons predict 59% \pm 15% of the Pantheon Collection. This statistic seems to confirm that the Pantheon did not include a brothel upstairs.

Regression 3: Pantheon Saloon Collection Sorted by Five Assemblages and Individual Saloons and Brothels

A third sort was undertaken to determine whether the Pantheon Saloon might actually resemble one of the other saloons more than any of the others, and, coincidentally, also include a Hill 60 or Vanoli Complex type of brothel. For this sort, data calibration sets consisted of the Drinking Families, Temperate Families, Transient Males, Hotels and Restaurants, and Military assemblages, as well as the individual collections from the Vanoli Complex, Hill 60,

Aliso Street, the Mascot Saloon, the Corner Saloon, the Miner's Home Saloon, the California Saloon, and Bill Wilson's Store.

In the sort, the following data sets yielded negative coefficients, and were dropped one-by-one from the regression in this order: Aliso Street, the Hotels and Restaurants, the Mascot Saloon, the California Saloon, the Drinking Families, the Transient Males, the Temperate Families and Hill 60. The remaining data sets yielded the following statistic:

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Source	SS	df	MS	Number of obs = 13
Model	.188668646	5	.037733729	F(5, 8) = 28.16
Residual	.010719805	8	.001339976	Prob > F = 0.0001
Total	.199388451	13	.015337573	R-squared = 0.9462
				Adj R-squared = 0.9126
				Root MSE = 0.3661

Data set	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]
military	.0512711	.1013082	0.506	0.626	-.182346 .2848883
corner	.1549168	.2521396	0.614	0.556	-.4265183 .7363519
miner	.3635837	.1692166	2.149	0.064	-.0266305 .7537979
vanoli	.0701715	.2162075	0.325	0.754	-.4284039 .5687469
wilson	.3149309	.1275169	2.470	0.039	.0208764 .6089853

This regression shows us that about 36% \pm 17% of the collection was predicted by the Miners' Home Saloon and 31% \pm 13% by Bill Wilson's Store. Again, it is very clear that there is no possible contribution by any of the sample brothels.

Why the resemblance with Bill Wilson's Store? Remember in the second regression above, Bill Wilson's Store collection (here represented by "wilson") did not meet the 0.10 level of significance, but it was awfully close, at 0.129. This store, in Silcott, Washington, served as general store and saloon, as well as housing its proprietor and his family. During prohibition, the saloon was turned into a soda shop.

Blee (1991: 260-261) had established that Bill Wilson's Store was expressed as a 55% \pm 24% Saloon Assemblage and 45% unexplained. She concluded that the unexplained portion represented the general store function, for which there is currently no comparative data.

Using the revised data calibration sets proposed in this study of the Pantheon Saloon, a sort of Bill Wilson's Store yields the following results.

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Source	SS	df	MS	Number of obs = 13	
Model	.114033813	3	.038011271	F(3, 10) =	9.40
Residual	.040418057	10	.004041806	Prob > F =	0.0029
				R-squared =	0.7383
				Adj R-squared =	0.6598
Total	.15445187	13	.011880913	Root MSE =	.06358

<i>Data set</i>	<i>Coef.</i>	<i>Std. Err.</i>	<i>t</i>	<i>P>|t|</i>	<i>[95% Conf. Interval]</i>
Aliso	.2434678	.3641615	0.669	0.519	-5679347 1.05487
Drink	.5335001	.3248609	1.642	0.132	-.1903351 1.257335
Dry	.1533582	.2125268	0.722	0.487	-.320181 .6268974

When Bill Wilson's Store was regressed by the five assemblages and the individual saloons and brothels, it could not be sorted. In other words, no single or combination of data sets could predict it.

I suspect we could not detect the saloon and soda shop functions in part because we have no data set that could represent general stores, and the statistic could not force a combination of the data sets available to us – or at least a combination that was interpretable. A mixture of the store with a Miners' Home Saloon type of collection – as shown in the third regression – is meaningless, until we understand the nature of the Bill Wilson's Store mix. For the purposes of this study of the Pantheon Saloon, it is important only to note that its known partial function as a saloon and soda shop may account for its resemblance to the Pantheon Saloon collection.

Conclusions of the Regression Analysis

The Pantheon Saloon collection (1903-1916) is best predicted by the Saloon Assemblage, which is represented by the averaged frequencies of the Mascot, Corner, California

and Miner's Home saloons. It does not appear to be mixed with a brothel type of collection.

When regressed with individual saloons rather than the Saloon Assemblage, the Pantheon Saloon collection most closely resembles that of the Miner's Home Saloon in Fairbanks, Alaska. From 1907 to 1916, this saloon served the working-class transient miners and people engaged in transportation services at the start of a major thoroughfare into the Fairbanks mining district. This saloon also served meals and was the headquarters of the Miners' Union during the Tanana Valley Miner's Strike of 1907. Non-Americans seemed to prefer this establishment, as suggested by the high frequency of imported brands of liquor. Besides gambling and pool tables, moving pictures were offered as entertainment in the saloon (Gannon and Bowers 1998). The dates of use, the working-class clientele and the presence of food service at the saloon both contribute to the correlation with the Pantheon Saloon.

Kardatzke has mentioned the relatively low frequency of beer bottles in the 1903-1916 Pantheon Saloon collection when compared to the World War II bar that occu-

pied the premises. It is possible that the low frequency of beer bottles in both the Pantheon and Miners' Home saloons are the primary source of similarity. Whether those low frequencies were caused by the same agency (non-Americans preferring wines and spirits to beer) cannot be answered by the regression alone.

Why do the California, Corner and Mascot saloon collections not predict the Pantheon Saloon collection? The California Saloon was known, at least from 1904 to 1908, as a "notorious hell-hole" with lascivious parties at the Tenana Club upstairs. The refusal of the regression analysis to acknowledge any sort of brothel activity at the Pantheon Saloon may also explain its refusal to acknowledge prediction by the California Saloon. The people running the Pantheon Saloon were just and moral in comparison to those at the California Saloon.

Four bachelors occupied lived on the floor above the Mascot Saloon. In fact, a regression analysis of the Mascot yielded a mixture of about 80% Saloons (all Corner, California and Miner's Home averaged) and about 20% Transient Males (Figure 2). The residential nature of the second story was sufficient to cause the Mascot Saloon not to predict the Pantheon Saloon.

The Corner Saloon burned to the ground on December 27, 1912. Its largely intact material culture, instead of the discarded material culture of the Pantheon Saloon may have been sufficient to cause a difference in the two assemblages.

RECOMMENDATION

The differences suggested by this regression analysis can be explored through a careful comparison of each artifact category in each of the saloon collections. It is

recommended that such a comparison be undertaken.

DRINKING FAMILY ASSEMBLAGE

Weiss Ranch Dump, The Alpowa, Washington (1905-1907): John and Caroline Weiss were German immigrants who, in 1884, homesteaded in the Alpowa, a ranching, farming and fruit-growing region of southeastern Washington. The dump was located about 200 meters behind the main house (W. Adams, et. al 1975; Blee 1991: 155-156, 346-351).

Mulliner Dump, Simpson Springs, Utah (ca. 1900): In about 1890, the Mulliner family developed a stage stop on what was once the Pony Express Trail in west central Utah. They were somewhat isolated from other communities. Despite their lack of ready access to the railroad, the collection is fully compatible with the other families in this study (Berge 1980; Blee 1991: 140-142, 330-333).

Rochester Heights, Sites 81-13 and 27, Nevada (1912-1918):

Rochester Heights was a community in the Rochester gold mining district in the Humbolt Range, about 20 miles north-east of Lovelock, Nevada. These two sites consisted of tent platforms and associated artifacts. Site 81-13 may have doubled as an assayer's office, but the assaying artifacts were removed from the collection for these comparisons (Zeier 1986; Blee 1991: 147-151, 339-342).

Father Turnell's Trash Pit, Skagway, Alaska (1914-1918): Philibert Turnell, S.J. occupied a Catholic rectory in Skagway between 1901 and 1918. The trash in his abandoned privy was probably deposited sometime about 1914 and 1918. Turnell was from an aristocratic Italian family and brought his

taste for fine ceramic wares and brandies with him to Skagway. Although his household was definitely a male-only one, his collection was added to that of the families due to the high degree of correlation with their collections (Spude et al. 1993).

TEMPORATE FAMILY ASSEMBLAGE

Bingham's Cookhouse and Dump, Bingham's Logging Camp, Oregon (1890-1900): This camp was the residential base for the Dalles Lumbering Company, which owned a mill on the Columbia River in The Dalles, Oregon, about 20 miles northeast of Mt. Hood. The two proveniences that comprise this comparative collection were the main dump, where the female cook and her daughter deposited their trash, and the cookhouse, where the cook's family worked and lived (Horn 1987; Blee 1991: 151-154, 343-345).

Family Privy Feature 1, Texas City, Washington (1880-1920): Texas City, Washington was located on the Snake River below the Texas Rapids, a barrier to river travel. The community of 80-100 people became a major water and railroad terminus serving a farming hinterland in the 1880's. It was all but abandoned during the Great Depression (Carley and Sappington 1984; Blee 1991:144-147, 36-338).

TRANSIENT MALE ASSEMBLAGE

Sites 81-1, 81-2, 81-5, 81-24 and 81-25, Rochester Heights, Nevada (1912-1918): Rochester Heights was a community in the Rochester gold mining district in the Humboldt Range, about 20 miles northeast of Lovelock, Nevada. These five sites consisted of tent platforms and associated artifacts (Zeier 1986; Blee 1991: 159-164, 352-353).

The Bunkhouse and Boss's Cabin, Bingham's Logging Camp, Oregon (1890-1900): This camp was the residential base for the Dalles Lumbering Company, which owned a mill on the Columbia River in The Dalles, Oregon, about 20 miles northeast of Mt. Hood. The two proveniences that comprise this comparative collection were the boss's cabin and the bunkhouse, where about a dozen male workers lived (Horn 1987; Blee 1991: 164-166, 343-345).

Marion Railroad Camp, Colorado (1889): The Marion railroad worker's camp was located on the Lake City branch line of the Denver and Rio Grande Railroad on the Gunnison River, about 20 miles east-southeast of Gunnison, Colorado. The laborers' collection was taken from 12 tent platforms associated with the railroad workers and the bosses' collection was drawn from four tent platforms used by the crew bosses (Rossillon 1984; Blee 1991: 166-169, 354).

SALOON ASSEMBLAGE

Mascot Saloon, Skagway, Alaska (1897 - 1916): This saloon operated during the gold rush period in Skagway, serving the transients on their way to the Klondike. It continued to be a popular place for relaxation and recreation for railroad laborers and longshoremen after about 1900. Four men - the bartender, the proprietor, a cook and a gambler - lived above the saloon (Gleeson 1990; Blee 1991:182, 358-359).

Corner Saloon, Lake City, Colorado (1912): The Corner Saloon served working class hard rock miners in the same general vicinity of such notorious San Juan mining district communities as Creede, Silverton and Ouray, Colorado. It burned to the ground on December 27, 1912, with its material culture intact (Baker 1990; Blee 1991: 183-184, 360).

The California Saloon, Fairbanks, Alaska (1904-1916): This saloon served the stable population of men working along the Chena River waterfront between about 1904 and 1916, when local prohibition was enacted. A few artifacts appear to have entered the archeological record as late as 1923, but the overwhelming majority came from the saloon. The building had two stories, and until 1908, the second floor was rented to the "Tanana Club." Obviously a men's club, this "notorious hellhole" had a reputation for indulging in orgies and "various acts of immorality," which may explain the limited number of female-specific items found in the deposits relating to this time period. After 1908, the proprietor remodeled the upstairs rooms for use as a pool hall and place where men could go to read the newspapers. Besides pool, the saloon offered bowling as entertainment. At least one Christmas, in 1911, the saloon served dinner. It is not known if the serving of meals was common at other times of the year, or other Christmases (Gannon and Bowers 1998).

The Miners' Home Saloon, Fairbanks, Alaska (1907-1916): This saloon served the working-class transient miners and people engaged in transportation services at the start of a major thoroughfare into the Fairbanks mining district. This saloon also served meals, and was used as the headquarters of the Miners' Union during the Tanana Valley Miner's Strike of 1907. Non-Americans seemed to prefer this establishment, as was suggested by the high frequency of imported brands of liquor. Besides gambling and pool tables, moving pictures were offered as entertainment in the saloon (Gannon and Bowers 1998:4.6-4.13, 5.3.1-5.3.6).

HOTEL AND RESTAURANT ASSEMBLAGE

Gilt Edge Restaurant, Skagway, Alaska (1898-1903): The collection was part of the contents of a single privy pit associated with a restaurant that claimed -- as many others did -- to be "the most popular eating house in Skagway." Very little else is known of the restaurant (Stilson 1986; Blee 1991: 189-191, 361).

Rustic Hotel, Fort Laramie, Wyoming (1890): A stage stop for the Cheyenne and Black Hills Stage Line in 1879 to serve the miners headed to the Black Hills gold rush. It was located close to the military base at Fort Laramie, Wyoming, but was operated by a civilian family and served a civilian clientele. The grounds were ordered cleaned by the post surgeon in 1886, as he had deemed the place to be a health hazard. The four-room structure burned in April, 1890, leaving an intact material culture associated with the residents and guests occupying the hotel at the time of its sudden demise (Ehrenhard 1973; Blee 1991: 193-194, 362-364).

Tremont Hotel, Denver, Colorado (1864-1914): Denver served a mining hinterland in much the same capacity as Skagway: a transportation hub for the shipment of goods to the mining communities. The Denver Pacific Railroad reached Denver from Cheyenne in 1870. The Tremont Hotel figured prominently in the city's early history: from its second-story balcony, territorial governors William Gilpin and John Evans gave their inaugural speeches. By 1887, the hotel contained a parlor, dining room, kitchen, barbershop, billiard rooms, bathrooms, saloon and office (Carrillo 1988; Blee 1991: 194-197, 365-366).

BROTHEL ASSEMBLAGE

Vanoli Sporting Complex, Ouray, Colorado (1881-1915): The complex of buildings owned by John Vanoli covered half a city block with the means of entertaining the hard-rock miners of the mining district surrounding Ouray, Colorado. The complex included two saloons, a combination theater and dance hall, a hotel with another dance hall and rooms upstairs for prostitutes, two bathhouses, a Chinese laundry and a varying number of prostitutes' cribs. This collection was drawn from ten privies, two dumps and a number of surface middens all directly associated with the prostitutes, although the degree of mixing with the other functions is unknown (Baker 1990; Blee 1991: 199-202, 367).

Hill 60, Blairmore, Alberta (1904-1939): This collection was drawn from three dumps associated with Hill 60 – a Canadian military term for red-light districts, so-named by recuperating World War I veterans at a nearby army hospital. Some of the prostitutes were Japanese. This brothel operated during Canadian prohibition from 1917 to 1924, and may well have substituted for the legal saloons during that time period. Blairmore was a coal mining town, and the bulk of the clientele at the brothel were working-class coal miners (Kennedy 1983; Blee 1991: 202-205, 368).

Aliso Street Parlor House, Los Angeles, California (1888-1901): Three privy vaults (the Privy 426 Complex) filled with domestic refuse formed the basis of this comparative collection. The parlor house served a somewhat higher class than clientele than the miners who patronized the Vanoli Sporting Complex and Hill 60 (Costello 1998).

MILITARY ASSEMBLAGE

The 9th Cavalry, Ft. Walla Walla, Washington (1902-1904): This army unit was one of only four African-American Army units to serve overseas before 1900. Upon returning from the Philippines in 1902, the 2nd Squadron was stationed at Fort Walla Walla, with approximately 377 enlisted men and 13 officers. The material culture used in this comparative collection was taken from two test trenches through a trash dump (Riordan 1985; Blee 1991: 209-211, 369).

The 1st Cavalry, Ft. Walla Walla, Washington (1909-1910): The 2nd Squadron of the 1st Cavalry averaged 340 Euroamerican enlisted men and 15 officers. The collection was taken from a trash dump associated with this Army unit (Riordan 1985; Blee 1991: 211-213, 369).

Fort Bowie, Arizona (ca. 1885-1894): Fort Bowie was founded in 1862 in order to conduct a military campaign against Cochise, Geranimo and the Chiricahua Apache. Geranimo surrendered to the Army in 1886; as the Apache Wars subsided, the fort became unnecessary. It closed in 1894. Most of the collection comes from test trenches at the fort dump. All proveniences were lumped, including some surface scatters from the Sutler's Store, blacksmith, Butterfield stage station, armory, hospital, officers' quarters and barracks. Most of the artifacts date from the time of the fort's abandonment (Herskovitz 1978; Blee 1991: 213-215, 370-373).

Writing-on-Stone Northwest Mounted Police Outpost, Alberta (1888-1894): This outpost was established as the result of a minor gold rush to the Sweetgrass Hills in southern Alberta. It served as a center for

the distribution of supplies to other, lesser outposts and as a headquarters for a special horse-mounted patrol group. The troops functioned primarily to police the illicit whiskey trade over the American-Canadian border and to curb the activities of Indian raiding parties operating in the area. The excavations included the NCO's quarters, barracks, barn, blacksmith shops and a portion of the camp dump. Most artifacts came from the latter provenience. What few liquor-related items that were in the collection were found in the vicinity of a shooting range. They may have represented confiscated goods rather than consumption by the troops (G. Adams, et. al 1977; Blee 1991: 216-218, 374-375).

MIXED STORE AND SALOON COLLECTION

Bill Wilson's Store, Silcott, Washington (1909-1928): Silcott, Washington was a small agricultural community that served a wheat, fruit orchard and cattle ranching community in southeastern Washington. It was located on a bend of the Snake River, about five miles due west of Clarkeston,

Washington. Bill Wilson owned a combination general store, saloon and dance hall on the main road of the town. He and his family lived on the second floor of the main store. The saloon became a soda shop after prohibition began in 1919 (W. Adams et al. 1975; Blee 1991:185-186, 346-351).

To sort the possible type of contributors to the Mascot Saloon collection, I used 13 artifact categories. As the Pantheon Saloon collection was not used in this sort, I was able to add back the bottle closures that were deleted from the sorts of the Pantheon Saloon.

The data calibration sets consisted of the assemblages formed of the same collections as the regressions on the Pantheon Saloon: Drinking Family, Temperate Family, Transient Male, Hotel and Restaurant, and Military. The Saloon Assemblage consisted of the averaged Corner, California and Miners' Home saloons. Bill Wilson's Store was added as a separate combined Store and Saloon collection.

The data sets were as follows:

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Figure 1: Descriptions of the Artifact Collections Used to Construct the Data Calibration Sets.

<i>Artifact type</i>	<i>Mascot Saloon (mas-cot)</i>	<i>Saloons (sal3)</i>	<i>Brothels (brothel)</i>	<i>Drinking Families (drink)</i>	<i>Temperate Families (dry)</i>	<i>Transient Males (male)</i>	<i>Hotels and Restaurants (hotel)</i>	<i>Military (military)</i>	<i>Bill Wilson's Store (wilson)</i>
Liquor-Related	0.3361	0.3751	0.2214	0.3527	0.0664	0.0472	0.0946	0.1472	0.0468
Bottle Closures	0.2484	0.3080	0.1879	0.0511	0.0068	0.0065	0.0234	0.0123	0.3609
Recreation-Related	0.0209	0.0198	0.0062	0.0000	0.0000	0.0000	0.0029	0.0017	0.0004
Food Serving	0.0251	0.0730	0.1212	0.1050	0.1995	0.0326	0.2147	0.0665	0.0504
Food Storage	0.0292	0.0643	0.0808	0.1747	0.1732	0.0384	0.0339	0.0270	0.2068
Other Household	0.0689	0.0447	0.0734	0.0516	0.2872	0.0556	0.1827	0.0477	0.0532
Pharmaceuticals	0.0146	0.0139	0.0849	0.0711	0.0326	0.0207	0.0191	0.0252	0.1461
Generic Personal	0.1315	0.0418	0.0997	0.0804	0.0684	0.4629	0.2842	0.1624	0.0413
Female-Specific	0.0084	0.0090	0.0774	0.0168	0.0418	0.0000	0.0491	0.0144	0.0187
Male-Specific	0.0042	0.0015	0.0010	0.0141	0.0118	0.0602	0.0207	0.0032	0.0183
Tobacco-Related	0.0605	0.0138	0.0135	0.0084	0.0048	0.1151	0.0114	0.0081	0.0214
Armaments	0.0104	0.0060	0.0153	0.0233	0.0300	0.0534	0.0203	0.3749	0.0075
Other Artifacts	0.0418	0.0290	0.0173	0.0507	0.0776	0.1072	0.0431	0.1094	0.0282
Total	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

The following data calibration sets yielded negative coefficients. They were dropped one-by-one from the regression in the following order: Hotel and Restaurant, Brothel, Dry Family, Drinking Family, and Military.

A regression of the Mascot Saloon by the two remaining data sets (the Transient Males and the Saloons) yielded the following statistic:

Figure 2: The Regression of the Mascot Saloon Collection.

Source	SS	df	MS
Model	.200125738	2	.100062869
Residual	.004315973	11	.000392361
Total	.20444171	13	.015726285

Number of obs = 13
F(2, 11) = 255.03
Prob > F = 0.0000
R-squared = 0.9789
Adj R-squared = 0.9751
Root MSE = .01981

Data set	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
saloon	.8249813	.0404379	20.401	0.000	.7359781	.9139846
male	.2125643	.0401734	5.291	0.000	.1241433	.3009852

According to this statistic, the Saloon Assemblage predicts 82% \pm 4% of the Mascot Saloon collection, and the Transient Male Assemblage predicts 21% \pm 4%. The correlation is very high (0.951 out of a possible 1.000, which would be a perfect correlation). The probability of these predictions

occurring randomly is less than 0.0005, a very low probability.

Four bachelor men were known to live above the Mascot Saloon in 1900. The regression accurately predicts the known mix of functions at the saloon.

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Table 1: Frequencies of Each Artifact Category in the Drinking Family Data Calibration Set.

<i>Artifact type</i>	<i>Weiss Dump</i>	<i>Mulliner</i>	<i>Rochester Heights 81-13</i>	<i>Rochester Heights 27</i>	<i>Father Turnell</i>	<i>Averaged Frequency</i>
Liquor-Related	0.3980	0.3194	0.1608	0.2612	0.3025	0.2884
Non-Alcoholic Beverages	0.0034	0.0083	0.3427	0.0597	0.1891	0.1206
Recreation-Related	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Food Serving	0.1020	0.1056	0.0559	0.1716	0.1176	0.1106
Food Storage	0.1701	0.2639	0.0210	0.1716	0.1050	0.1463
Other Household	0.0442	0.0111	0.0979	0.0448	0.0714	0.0539
Pharmaceuticals	0.1429	0.1083	0.0979	0.0000	0.0378	0.0774
Generic Personal	0.0238	0.0611	0.0979	0.1716	0.0630	0.0835
Female-Specific	0.0306	0.0167	0.0350	0.0075	0.0000	0.0179
Male-Specific	0.0000	0.0083	0.0070	0.0448	0.0126	0.0145
Tobacco-Related	0.0034	0.0000	0.0000	0.0149	0.0252	0.0087
Armaments	0.0340	0.0611	0.0000	0.0299	0.0000	0.0250
Other Artifacts	0.0476	0.0361	0.0839	0.0224	0.0756	0.0531
Total	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table 2: Frequencies of Each Artifact Category in the Temperate Family Data Calibration Set.

<i>Artifact type</i>	<i>Bingham's Cookhouse and Dump</i>	<i>Texas City Feature 1</i>	<i>Averaged Frequency</i>
Liquor-Related	0.0095	0.1250	0.0673
Non-Alcoholic Beverages	0.0000	0.0000	0.0000
Recreation-Related	0.0000	0.0000	0.0000
Food Serving	0.1524	0.2500	0.2012
Food Storage	0.0952	0.2546	0.1749
Other Household	0.4238	0.1528	0.2883
Pharmaceuticals	0.0286	0.0370	0.0328
Generic Personal	0.1048	0.0324	0.0686
Female-Specific	0.0333	0.0509	0.0421
Male-Specific	0.0190	0.0046	0.0118
Tobacco-Related	0.0095	0.0000	0.0048
Armaments	0.0143	0.0463	0.0303
Other Artifacts	0.1095	0.0463	0.0779
Total	1.0000	1.0000	1.0000

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Table 3: Frequencies of Each Artifact Category in the Transient Male Data Calibration Set.

<i>Artifact type</i>	<i>Bingham's Bachelors</i>	<i>Rochester Heights Bachelors</i>	<i>Marion Laborers</i>	<i>Marion Bosses</i>	<i>Averaged Frequency</i>
Liquor-Related	0.0140	0.1094	0.0349	0.0284	0.0467
Non-Alcoholic Beverages	0.0047	0.0000	0.0000	0.0000	0.0012
Recreation-Related	0.0000	0.0000	0.0000	0.0000	0.0000
Food Serving	0.0280	0.0938	0.0058	0.0047	0.0331
Food Storage	0.0000	0.1198	0.0174	0.0190	0.0390
Other Household	0.1308	0.0625	0.0116	0.0190	0.0560
Pharmaceuticals	0.0467	0.0104	0.0116	0.0142	0.0207
Generic Personal	0.2944	0.4063	0.5988	0.5640	0.4659
Female-Specific	0.0000	0.0000	0.0000	0.0000	0.0000
Male-Specific	0.0981	0.0365	0.0407	0.0664	0.0604
Tobacco-Related	0.1215	0.0052	0.1977	0.1374	0.1155
Armaments	0.0748	0.0990	0.0233	0.0190	0.0540
Other Artifacts	0.1869	0.0573	0.0581	0.1280	0.1076
Total	1.0000	1.0000	1.0000	1.0000	1.0000

Table 4: Frequencies of Each Artifact Category in the Saloon Data Calibration Set.

<i>Artifact type</i>	<i>Mascot Saloon</i>	<i>Corner Saloon</i>	<i>California Saloon</i>	<i>Miners' Home Saloon</i>	<i>Averaged Frequency</i>	<i>Bill Wilson's Store</i>	<i>Pantheon Saloon</i>
Liquor-Related	0.4472	0.4970	0.4848	0.6457	0.5187	0.1598	0.3823
Non-Alcoholic Beverages	0.0000	0.0000	0.0222	0.0157	0.0095	0.0688	0.0101
Recreation-Related	0.0278	0.0527	0.0101	0.0197	0.0276	0.0005	0.0430
Food Serving	0.0333	0.2150	0.0434	0.0433	0.0838	0.0657	0.0987
Food Storage	0.0389	0.0408	0.1758	0.0354	0.0727	0.2694	0.0785
Other Household	0.0917	0.0935	0.0576	0.0394	0.0705	0.0693	0.0456
Pharmaceuticals	0.0194	0.0246	0.0152	0.0197	0.0197	0.1903	0.1291
Generic Personal	0.1750	0.0365	0.0606	0.0866	0.0897	0.0538	0.0557
Female-Specific	0.0111	0.0000	0.0212	0.0197	0.0130	0.0243	0.0127
Male-Specific	0.0056	0.0000	0.0030	0.0039	0.0031	0.0238	0.0076
Tobacco-Related	0.0806	0.0153	0.0384	0.0079	0.0355	0.0279	0.0051
Armaments	0.0139	0.0153	0.0061	0.0039	0.0098	0.0098	0.0177
Other Artifacts	0.0556	0.0093	0.0616	0.0591	0.0464	0.0367	0.1139
Total	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Table 5: Frequencies of Each Artifact Category in the Brothel Data Calibration Set.

<i>Artifact type</i>	<i>Vanoli Complex</i>	<i>Hill 60</i>	<i>Aliso Street</i>	<i>Averaged Frequency</i>
Liquor-Related	0.2312	0.3588	0.2535	0.2812
Non-Alcoholic Beverages	0.0000	0.0000	0.0130	0.0043
Recreation-Related	0.0151	0.0000	0.0057	0.0069
Food Serving	0.2310	0.1620	0.0634	0.1521
Food Storage	0.0743	0.1111	0.1024	0.0959
Other Household	0.0664	0.0208	0.1600	0.0824
Pharmaceuticals	0.0889	0.0579	0.1511	0.0993
Generic Personal	0.1957	0.0162	0.1259	0.1126
Female-Specific	0.0154	0.2384	0.0739	0.1092
Male-Specific	0.0001	0.0000	0.0032	0.0011
Tobacco-Related	0.0153	0.0023	0.0276	0.0151
Armaments	0.0431	0.0069	0.0041	0.0180
Other Artifacts	0.0236	0.0255	0.0162	0.0218
Total	1.0000	1.0000	1.0000	1.0000

Table 6: Frequencies of Each Artifact Category in the Hotel and Restaurant Data Calibration Set.

<i>Artifact type</i>	<i>Gilt Edge Restaurant</i>	<i>Tremont Hotel</i>	<i>Rustic Hotel</i>	<i>Averaged Frequency</i>
Liquor-Related	0.1111	0.1152	0.0642	0.0968
Non-Alcoholic Beverages	0.0000	0.0000	0.0000	0.0000
Recreation-Related	0.0000	0.0045	0.0043	0.0029
Food Serving	0.2626	0.2304	0.1669	0.2200
Food Storage	0.0404	0.0268	0.0371	0.0348
Other Household	0.2828	0.0537	0.2282	0.1883
Pharmaceuticals	0.0101	0.0157	0.0328	0.0195
Generic Personal	0.1616	0.3926	0.3153	0.2898
Female-Specific	0.0505	0.0671	0.0328	0.0501
Male-Specific	0.0505	0.0011	0.0128	0.0215
Tobacco-Related	0.0000	0.0302	0.0043	0.0115
Armaments	0.0000	0.0347	0.0271	0.0206
Other Artifacts	0.0303	0.0280	0.0742	0.0441
Total	1.0000	1.0000	1.0000	1.0000

APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

Table 7: Frequencies of Each Artifact Category in the Military Data Calibration Set.

<i>Artifact type</i>	<i>Fort Walla Walla 1st</i>	<i>Fort Walla Walla 9th</i>	<i>Fort Bowie</i>	<i>Writing-on-Stone</i>	<i>Averaged Frequency</i>
Liquor-Related	0.1091	0.1568	0.2366	0.0872	0.1474
Non-Alcoholic Beverages	0.0007	0.0029	0.0044	0.0000	0.0020
Recreation-Related	0.0000	0.0000	0.0057	0.0013	0.0017
Food Serving	0.0899	0.1201	0.0296	0.0277	0.0668
Food Storage	0.0217	0.0331	0.0107	0.0436	0.0273
Other Household	0.0000	0.0000	0.0339	0.1612	0.0488
Pharmaceuticals	0.0283	0.0431	0.0274	0.0026	0.0254
Generic Personal	0.1983	0.3307	0.0524	0.0713	0.1632
Female-Specific	0.0196	0.0175	0.0106	0.0106	0.0145
Male-Specific	0.0010	0.0004	0.0063	0.0053	0.0032
Tobacco-Related	0.0000	0.0000	0.0241	0.0092	0.0083
Armaments	0.4360	0.2523	0.4491	0.3831	0.3801
Other Artifacts	0.0955	0.0431	0.1092	0.1968	0.1112
Total	1.0000	1.0000	1.0000	1.0000	1.0000

Table 8: Frequencies of Each Artifact Category in the Assemblages Used as Data Calibration Sets.

<i>Artifact type</i>	<i>Saloons</i>	<i>Brothels</i>	<i>Drinking Families</i>	<i>Dry Families</i>	<i>Transient Males</i>	<i>Hotels and Restaurants</i>	<i>Military</i>
Liquor-Related	0.5187	0.2812	0.2884	0.0673	0.0467	0.0968	0.1474
Non-Alcoholic Beverages	0.0095	0.0043	0.1206	0.0000	0.0012	0.0000	0.0020
Recreation-Related	0.0276	0.0069	0.0000	0.0000	0.0000	0.0029	0.0017
Food Serving	0.0838	0.1521	0.1106	0.2012	0.0331	0.2200	0.0668
Food Storage	0.0727	0.0959	0.1463	0.1749	0.0390	0.0348	0.0273
Other Household	0.0705	0.0824	0.0539	0.2883	0.0560	0.1883	0.0488
Pharmaceuticals	0.0197	0.0993	0.0774	0.0328	0.0207	0.0195	0.0254
Generic Personal	0.0897	0.1126	0.0835	0.0686	0.4659	0.2898	0.1632
Female-Specific	0.0130	0.1092	0.0179	0.0421	0.0000	0.0501	0.0145
Male-Specific	0.0031	0.0011	0.0145	0.0118	0.0604	0.0215	0.0032
Tobacco-Related	0.0355	0.0151	0.0087	0.0048	0.1155	0.0115	0.0083
Armaments	0.0098	0.0180	0.0250	0.0303	0.0540	0.0206	0.3801
Other Artifacts	0.0464	0.0218	0.0531	0.0779	0.1076	0.0441	0.1112
Total	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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APPENDIX J: Multilinear Regression Analysis of Non-Structural Artifacts

APPENDIX K: FAUNAL REPORT

**ZOOARCHAEOLOGY OF THE PANTHEON SALOON
AND ITS LOCAL AREA
SKAGWAY, ALASKA**

By
Thomas A. Wake, Ph.D.
Zooarchaeology Laboratory
Institute of Archaeology, UCLA

INTRODUCTION

The National Park Service (NPS) has undertaken a series of archaeological investigations in Klondike Gold Rush National Historical Park (KLGO) over the last two decades. Many of these studies have been before or concurrent with various construction and maintenance projects necessary to the continued viability of the resource. This report focuses on the identification and analysis of vertebrate faunal remains recovered from the 1995, 1996, and 1997 excavations conducted in and around the Pantheon Saloon on Lot 1.

The information gained from the analysis of archaeological faunal remains provides a more complete understanding of past lifeways and is becoming an ever more important part of research projects as investigators realize its potential (Brewer 1992; Crabtree 1990; Davis 1987; Lyman 1982). The impact of zooarchaeological analysis on North American archaeology has been particularly far reaching (Jolley 1983; Landon 1996; Lyman 1977). Various investigators have used the analysis of animal remains to answer questions regarding ethnicity (Ijzereef 1989; Langenwaller 1980; Mckee 1987; Wake 1995, 1997), socio-economic status (Huelsenbeck 1989, 1991; Lyman 1987; Salls 1989; Schulz and Gust 1983), or both (Crader 1984, 1990; Jackson and Scott 1995; Zeder 1991). The analysis of archaeofaunas is especially powerful when integrated with studies of other classes of material culture, serving as data from yet another class of artifacts to be included in a more complete, multiple-lines-of-evidence approach to understanding the past (Crabtree 1990).

Various authors mentioned above support specific methodological and theoretical approaches to the analysis of archaeofaunas. Since no single model is applicable to every

archaeological faunal assemblage, flexibility in approach is important. Certain methodological and theoretical approaches are better suited to specific problems than are others. In order to support comparison and integration of this report to much of the prior zooarchaeological study undertaken at Klondike Gold Rush National Historical Park (Huelsenbeck 1987, 1988, 1994, 1996a, 1996b) the approach used in this report follows Huelsenbeck's (1991) consumer behavior research framework. To paraphrase (Huelsenbeck 1991, 1996:1), this approach focuses on: 1) factors affecting food availability, 2) factors affecting consumer choice, 3) classification of the faunal assemblage into categories that duly reflect the conditions of availability and choice, and 4) considering the effects of taphonomic forces and recovery techniques on the overall bone collection.

Geography

Local. The local and regional geography of a specific area typically defines the resources that would have been available to the past inhabitants of an archaeological site. Huelsenbeck (1996a:2), summarizing Adams and Brauner (1991), states that Skagway is located on Lynn Canal near the head of Taiya Fjord. The town is close to the northern edge of the Moist Maritime climatic zone, yet averages only 28 inches of precipitation per year. The local climate is conducive to gardening, but available space is limited. Local wild animal populations were rapidly decimated, virtually extirpated, during the gold rush. Before the gold rush, a few animals were raised in town (Rhodes 1988:284). Some animals continued to be raised in town after the gold rush, and Huelsenbeck (1988) states that it is possible to detect the difference between home butchered and commercially processed bones in a faunal assemblage.

Regional. Availability of meat in Skagway was directly related to conditions in the greater northwest, where the bulk of the meat supply came from. Huelsbeck (1996a) provides an excellent overview of regional geography and meat importation into Alaska. To paraphrase him, most of the meat imported to Skagway came from the Pacific Northwest and was subject to varying supply and demand pressures. Sometimes weather caused trouble with meat distribution. If suppliers couldn't get their meat over the passes due to inclement weather, the supply went up in Skagway and prices would drop. With low prices, even the most expensive cuts of meat could become available to less well-off people. Conversely, if weather kept deliveries away from Skagway entirely, then overall prices would rise.

One trend pertinent to the availability of meat in Skagway concerns the consumption of beef in the West. While pork was an important meat source in the East and South, it was apparently much less so in the west. The dominant meat source west of the Mississippi was beef. Beef was king, and it stayed so into the twentieth century. Beginning in the late nineteenth century, sheep-raising became more important in the Northwest and by the early twentieth century (at least by 1920) sheep outnumbered cattle in the region.

Price is another factor affecting availability and appearance of meat in historic assemblages. While the best data to study price is derived from local or regional meat market listings, such information is difficult to obtain, and most researchers rely on Schulz and Gust (1983). They show that while beef prices fluctuated in the nineteenth century, the rank order prices of common wholesale cuts of beef remained virtually unchanged. Comparatively little work has been done

concerning the prices of mutton and pork, but their costs did fluctuate during the nineteenth century as well. Huelsbeck (1996a) judiciously warns that the boom and bust cycle in Skagway could skew both price and availability, and that analysts should be very careful in their use of price-based interpretations. He adds that mutton was probably less costly in comparison to pork than it was in Chicago (Huelsbeck 1996a:Table 2) and that the cut rankings in Schulz and Gust (1983) can be used for post-boom contexts.

Methods

This report focuses on the vertebrate skeletal remains recovered from various Pantheon project excavation areas. The vertebrate faunal remains from each area are first described in general as the overall Pantheon assemblage, then independently interpreted in comparison with the results of previous analyses of KLGO localities. In so doing, this new data can be described and interpreted as independent manifestations and then placed into a broader regional perspective.

All of the sediment excavated from these units was dry screened through 3-mm (1/8 in.) mesh. The screened material was then sorted in the KLGO laboratory. Upon arrival at the UCLA Institute of Archaeology Zooarchaeology laboratory, the bone specimens were identified and analyzed, with the resulting information entered into a Paradox 4.5 database. Both the report tables and the appended catalogs were produced from the computer database.

Identifications

The staff of the UCLA Zooarchaeology laboratory, including Mercedes Duque, Lady Harrington, Judy Porcasi, and Thom-

as Wake, identified the Pantheon vertebrate remains. Thomas Wake identified all of the fish remains. Wendy Teeter prepared the tables and catalog based on information provided by Doreen Cooper. All identifications were confirmed using the comparative osteological collection housed in the UCLA Institute of Archaeology Zooarchaeology Laboratory, the UCLA Department of Biology Ichthyology, and Dickey Natural History collections. Use of the Los Angeles County Museum of Natural History and the U.C. Berkeley Museum of Vertebrate Zoology osteological collections also facilitated the identification of a number of species. Manville and Young (1965) and MacDonald and Cook (1996) proved to be valuable resources as well.

Each bone specimen was identified to the most discrete taxonomic level possible. More detailed taxonomic assignment is limited to elements with sufficient distinguishing features, allowing rapid identification to the given level. Bones lacking discrete identifiable features were sorted into broad size categories by class, or simply as representative of the sub-phylum Vertebrata. Size categories are defined as follows: for mammals, large represents deer size or greater; medium, smaller than deer but larger than jackrabbit; and small, jackrabbit or smaller. For birds, large represents goose size or greater; medium, ducks to jays; and small, robin or smaller.

For each discretely identifiable bone specimen a series of data were recorded including catalog number, complete provenience information, skeletal element, part of element, side, age, and modification (Grayson 1984; Klein and Cruz-Urbe 1984). Data recorded regarding modification of bone specimens includes evidence of burning, saw marks, cut marks, gnaw marks, and indications of tool or other artifact manufac-

ture. The bone was counted and weighed to the nearest 0.01 g, using Ohaus electronic scales. Complete detailed information is provided in the accompanying catalog.

Results

The Pantheon Saloon archaeofauna consists of a total of 4,423 bone specimens weighing 59,260.88 g. The vertebrate taxa represented in the Pantheon and associated excavation areas include fish, birds, and mammals. No amphibian or reptile bone was identified. Counts and weights for all identified taxa are presented in tables 1 through 8. Sixteen crab (*Cancer* sp.) Specimens are identified; but they constitute only a small fraction of the overall assemblage and do not factor into the analysis. The vertebrate faunal remains recovered from the Pantheon and surrounding areas suggest the exploitation of a limited variety of habitats and resources, including predominantly available domesticated species (cattle, sheep, pigs, chickens, and turkeys), fish from coastal waters (herring, salmon, cod, and flatfish), a few native birds (geese, ducks, and one bald eagle specimen) from coastal waters, and rarely local native mammals. The results of the analysis of these faunal remains suggest a strong focus on processed domesticated species, predominantly mammals, with dietary variety provided by birds and fish, but to a much lesser extent. The mammals are dominated by cattle, followed by sheep, with pigs a distant third. Large wild game (deer) and small game (rabbits and squirrels) are present, but rare.

Largely the Pantheon bone collection is in good condition. Few of the individual bones have been affected adversely by soil moisture or compaction. Some are more weathered or softer than others and are somewhat friable, but the majority of

the specimens are solid and durable. It is unlikely that any appreciable number of animal bones have disappeared after they were in the ground.

Based on information provided by Doreen Cooper (pers. comm. 1997) the overall assemblage can be broken into a number of subassemblages, including possible generalized dump contexts (Units 3N50W, 4N59W (excluding feature 5), and 13N92W), gold rush period mixed privy/dump contexts (Features 4 and 5, including the bulk of 4N59W), gold rush era privy contexts (Features 14, 15, and 16), later privy deposits (10N35W, 6N35W, and Feature 18), woodshop contexts (Units between 50N and 79N), generalized Rosalie/Brownell/Pantheon contexts (Units north of 79N, excluding 93N57W), and poorly understood or disturbed areas (6N39W, 10N39W, 14N39W, 22N35W, 34N35W, 46N31W, 47N34W, 68N55W, and 93N57W). Table 1 lists the cumulative counts and weights of all identified bones from the Pantheon Saloon and neighboring areas. Lists of identified species from these contexts are presented in tables 2 through 8.

Fish

Six species and eight genera of fish representing six different families are identified. The identified fish include herring (*Clupea pallasii*), salmon (*Oncorhynchus* sp.), members of the cod family (Pacific cod - *Gadus macrocephalus*, Pacific tomcod - *Microgadus proximus*, and walleye pollock - *Theragra chalcogramma*), greenling (*Hexagrammos* sp.), flatfish (Pacific halibut - *Hippoglossus stenolepis*, and sand sole - *Psettichthys melanostictus*), and a scombrid (probably mackerel, Scombridae). The flatfish dominate numerically, followed by cod, and herring. The vertical and horizontal distribution of fish remains in this assemblage is presented in table 9.

Fish are most common in Features 5, 14, and 21, and Unit 79N37W. Flatfish (*Pleuronectidae*) are by far the best represented fish Family. A number of identified pacific halibut vertebrae have been cut in two along their circumference, suggesting they may have been prepared as steaks (table 10). Cod and herring appear also to have been popular. Salmon are poorly represented in the overall collection and are not concentrated in any particular context. Salmon representation may be affected by their relatively porous, spongy bone, that typically does not preserve well. Some of the salmon vertebrae appear to have been from steaks as well.

Birds

Six species and six genera of birds representing three families are identified. They include ducks and geese (Canada goose - *Branta canadensis*, white-fronted goose - *Anser albifrons*, and mallard - *Anas platyrhynchos*), a bald eagle (*Haliaeetus leucocephalus*), and chickens (*Gallus gallus*) and turkeys (*Meleagris gallopavo*). The vertical and horizontal distribution of bird remains in this assemblage is presented in table 11.

The domesticated chickens and turkeys dominate strongly, constituting 59% (N=176) of the entire bird bone assemblage, including bone identified only to size class. Chickens are the most common bird species (N=161), with only turkey (N=15) represented by more than 10 specimens. The presence of a number of head bones suggests that the chicken remains may represent either backyard chickens or whole birds brought from a market and butchered at home. All other identified species are represented by less than 5 specimens each. Bird remains, particularly chickens, are most common in Features 5, 14, 1, 21,

and Units 6N35W, and 13N92W. Feature 5 (N=103) has by far the best representation of bird remains. Four chicken bones are sawed (table 12), and 13 bird bones (9 chicken) exhibit cut marks (table 13). Twenty-five bird bones have carnivore-gnawing marks (table 14).

Mammals

Mammals are the most taxonomically diverse group in this overall assemblage. Ten species and 11 genera are represented. The identified taxa include snowshoe rabbits (*Lepus americanus*), hoary marmot (*Marmota caligata*), chickaree (*Tamiasciurus hudsonicus*), rats (*Rattus norvegicus*), cats (*Felis domesticus*), red fox (*Vulpes fulva*), and dogs (*Canis* sp.). Artiodactyls, including cattle (*Bos taurus*), sheep (*Ovis aries*), sheep/goat (*Ovis/Capra* - which are almost certainly all sheep), pigs (*Sus scrofa*), and deer (*Odocoileus hemionus*), dominate the entire assemblage numerically and by weight. The presence of a few wild taxa indicates that they were taken and consumed, but were probably not readily available. The vertical and horizontal distribution of mammal remains in this assemblage is presented in table 15.

Butchery Patterns

The great majority of bone in this collection probably represents meat purchased from a market. Most of the butchery marks are saw cuts, and these cuts are placed in general accordance with contemporary butchering patterns and practices (Levie 1970; Lyman 1977). Mammal carcasses were typically split lengthwise into right and left halves and then cut into market portions such as steaks, roasts, chops, and so on. (Rombauer and Rombauer-Becker 1975: 450-452).

Two differences visible in the Skagway

butchery pattern that Huelsbeck (1996a) points out are evident in the Pantheon remains as well. First, the butchers who provided the Pantheon bone (probably the same butchers who provided some of the bone Huelsbeck has analyzed) continue to miss the center of vertebrae when splitting carcasses, leaving lopsided chop and loin cuts. Second, the Pantheon remains provide further support for Huelsbeck's contention that Skagway's butchers defined the shank differently than it is today. Modern butchers do not include the distal metapodial with a shank, considering it butcher's waste. The evidence from the Pantheon remains shows that Skagway's did include the distal metapodial. Very few artiodactyl phalanges were identified, and none appeared butchered. The absence of phalanges and the presence of distal metapodials suggest that the Pantheon distal metapodials, like those from the Moore House, should not be considered butcher waste.

The sawed bone from the Pantheon collection is presented in table 16, and by unit in table 17. Cattle are the most heavily represented (N=305), with sheep/goats (almost certainly all sheep), coming in second most common with 127 specimens. Pigs are represented by 16 sawed bones. In comparing the data in tables 16 and 17 a number of observations can be made. Firstly, cattle have the widest representation of body parts and by far the greatest number of rib cuts. A greater number of cattle hindquarter elements are represented, although forequarters are present in good numbers as well.

By far the greatest number of butchered cattle bones is represented in Unit 4N59W (N=106). The emphasis is clearly on hindquarter elements, particularly pelvic bones and lumbar vertebrae, in this specific sub-

assemblage. Ribs are also well represented. While lower-ranking elements from the lower limbs are present, this subassemblage is dominated by higher-ranking cuts one might expect from a restaurant. The general trend of higher frequencies of higher-ranking cuts continues in many of the other subassemblages. However, feature 1 and Unit 13N92W stand out as different since they are dominated by relatively lower utility elements (tables 16 and 17). Units 6N35W and 10N35W are interesting since these represent privy contexts and are the only units where the cattle and sheep specimen numbers are nearly equivalent (cow, N=32, sheep, N=21).

The greatest concentration of sheep bone is found also in Unit 4N59W (N=49). The sheep and sheep/goat bones in general are dominated by upper forequarter and hind-quarter elements. Few ribs are present. Shoulder and arm cuts are present, but the emphasis is clearly on shanks, hocks, and legs in the sheep assemblage.

Bones that could provide information about thickness of cuts were measured in inches or fractions thereof to provide information on a number of cuts. Steak-cut meats, in thickness, are presented in tables 18, 19, 20, 21, and 22. The most common cuts are half-inch round steaks and chops for the cattle and half-inch shoulder and round steaks for the sheep. Few quarter-inch steaks are identified, and most of them are beef round and chops, suitable for frying. Most of the round cuts are between a half and one inch thick as are the loin cuts. Thick cut beef loin or sirloin steaks dominate bones greater than an inch in thickness. These could have been roasted, but this is not likely.

Bones bearing knife cut marks are presented for the entire Pantheon assemblage in

tables 23 and by context in table 24. Vertebrae and ribs exhibit the most cut marks. While the knife cuts seen on these bones could be due to final preparation of meat by butchers, such as trimming, the placement of many of the marks indicates otherwise. It is likely that the majority of the knife-cut marks found on these remains are more closely related to consumption rather than butchery per se. The knife marks are most likely the result of persons cutting steaks and meats at the table before actually consuming it, or chefs' treatment before or after cooking. The majority of the knife-cut bone is found in 4N59W-dump area, but Unit 13N92W and the 6N35W privy have considerable amounts, as well.

The bones of wild taxa tend to have proportionately more cut marks than the domestic taxa (table 23), and none is sawed (table 16). This may be a result of their noncommercial derivation and home butchering without the use of saws. The single marmot bone bears an unmistakable cut mark, strongly suggesting that it should be included in the overall dietary profile of the context it was recovered from (Feature 5).

Consumption

In general the gold rush era deposits, especially Feature 5, are richer and more diverse than the later period contexts. Fish and fowl are better represented in the Pantheon area collections than most of the other reported Skagway archaeofaunas. This may have to do with better preservation, but in light of the degree of burning and potentially considerable effects dogs may have had on these assemblages, that is unlikely. While large mammals, especially beef, dominates the diet, the Pantheon area residents appear to have had more

diverse fare, in terms of fish and fowl representation than the other known localities. Feature 5 is notable for its inclusion of a variety of wild mammal taxa, especially deer, rabbit, and marmot.

In all of the contexts examined, beef is more common than lamb or mutton, but sheep are well represented. Sheep tend to be the second most common domesticated mammal. Pork is consistently far behind either beef or mutton in popularity. This fits the pattern seen in most other Skagway archaeofaunas, with the exception of the Moore House (Huelsbeck 1996b), where sheep meat was better represented than beef. Throughout Skagway's history, pork was present, but relatively unpopular. This trend is continued in the Pantheon remains.

Gnawing

Hardly any of the bones are complete. Most of the specimens are broken, or sawed, or both. Some specimens have cut marks from metal tools, knives most likely, that could represent butchery, but more likely are due to actual consumption of prepared food by inhabitants or saloon patrons. Some of the bone has been burned, and there is ample evidence that dogs gnawed on many of the bones. Dogs clearly had an impact on the overall assemblage characteristics, and especially in certain areas. Disposal practices are discussed here and butchery and consumption patterns are discussed subsequently

Some 399 (slightly over 9%) of the Pantheon area bone assemblage specimens bear tooth marks, percussion pits, hollowing (by licking), edge crumbling, or other evidence of carnivore gnawing. Remarkably few exhibited any sign of rodent gnawing. It is possible that many of the

broken long bone shaft elements identified only as large mammal are the result of dogs cracking bones to get at the marrow. The greatest concentration of gnawed bone (almost 46% of the gnawed bone, N=183) is seen in Feature 5 (4N59W). Gnawed bone is also well represented in Feature 1 (3N50W, N=20), Unit 6N35W (N=47), and Unit 13N92W (31). A few gnawed pieces are found in virtually every other unit and context (table 25).

Burning

Almost 18% (17.97%) of the total collection shows clear evidence of burning (table 26). Most of these fragments are calcined (turned white), but many are charred (black). Most of the subassemblages with good-sized bone collections have burning frequencies roughly equivalent to the entire collection. The highest frequencies of burning are seen in Units 4N59W (Feature 5, N=417) and Unit 13N92W (N=188). The burning evidenced in these two units must have been quite intense since temperatures in excess of 600° C are required to turn bone white (Lyman 1994). Such fires would not be suitable for cooking, unless it was on a grand scale, and most likely represent disposal areas. The privy contexts also tend to have fair amounts of burned bone.

Disposal

Feature 5 (4N59W) has the highest frequencies of both gnawed and burned bone, and Unit 13N92W is a close second. It is likely that these areas represent locations where bone (and probably other trash) was gathered together in the open. It is possible that these trash piles lay exposed to scavenging dogs for multiple periods of time long enough to generate the numbers of gnawed bones evident, and were burned periodically, either when the dogs became

too much of a nuisance or the smell became too strong. Burning of such accumulations does not always affect more deeply buried bone in the same way as it does the surface material; and repeated disposal events would likely cause a great deal of mixing. In other areas with relatively high gnawing frequencies but low burning frequencies, it is likely that bones were simply thrown outside and subsequently scavenged by dogs.

Such disposal practices certainly had an impact on the surviving bone collection. Both burning and gnawing are density dependent taphonomic processes (Huelsenbeck 1996a; Lyman 1994). Dense bones typically survive better than less dense bones. Like many of the Skagway collections, dense bone fragments from medium and particularly large mammals are more common than the less dense bones of fish, birds, and small mammals (Huelsenbeck 1996a, 1996b). The relatively smaller numbers of fish and bird remains could be the result of consumption patterns, disposal patterns, or a combination of the two. The presence of a small number of eggshells suggests that birds (chickens) may have been raised for egg laying, and as layers, may not have been consumed. This analysis, like others from Skagway (Huelsenbeck 1996a, 1996b), works under the assumption that the relative frequencies of large mammal (cattle, sheep, pig, and the occasional deer) bones have not been appreciably affected, but that bird and fish bone, being more fragile, is probably under represented overall.

Availability

Similar to Huelsenbeck's (1996a, 1996b) findings, little evidence of local animal husbandry is evident in the Pantheon faunal assemblage. The overall assemblage contains bones that would likely be discarded

today as butcher waste - distal metapodials and tarsals. There is also a noteworthy absence of beef or sheep phalanges. Like Huelsenbeck (1996a) I would expect phalanges to be present if animals were raised and butchered at home. Their absence points strongly to commercial supplies of meat.

The presence of chicken head and foot bones (tables 12, 13, and 14) and some eggshell that is probably from chickens, suggests that they were actively being raised. These specific elements are found in other Skagway contexts, but not all (Huelsenbeck 1996a); and the possibility that markets may have sold whole chickens should not be discounted. The presence of turkey remains indicates their availability; but raising is not indicated, and they may have been purchased directly from markets.

The variety of fish remains suggests that fishing played a noteworthy role in the diet in these Pantheon contexts. Most of the fish species are found in local waters, and salmonids could certainly be easily captured during their spawning runs. Herring fishing usually requires large nets and boats with the gear to run them. Cod and flatfish are usually captured with multiple baited hook lines (long lines) set in relatively deep water, at least far enough off shore that casual land bound fishermen don't often capture them. It is likely that a few fishing boats, or perhaps fishmongers, were supplying markets that sold butchered meat.

The presence of small numbers of wild taxa, more common in earlier contexts, raises interesting questions. While clearly dominated by domestic taxa, in terms of species diversity, the gold rush era diet breadth appears wider than those of later contexts do. The primary concern involves determining the significance of the pattern. Three alternatives can explain this pat-

tern: 1) dietary stress forced a widening of diet breadth, 2) a decadent desire for more exotic foods forced the inclusion of deer, rabbits, marmots, ducks, geese, and local fish in the diet, and 3) the subsample size from Feature 5, Unit 4N59W is so much larger than the others that the appearance of these few wild taxa can be credited to sample size effects - where larger samples typically and statistically include more uncommon species. Alternative 3 is the simplest explanation and perhaps the most likely. Alternative 1 is unlikely, and alternative 2 has some merit. A combination of alternative 2 and 3 is possible. Also, all of the wild taxa identified taste good, so if the opportunity arose, they would probably be hunted and consumed.

Choice

Personal tastes in foods can be greatly affected by religious affiliation, ethnicity, or other specific belief systems. Little evidence supporting the notion that these factors were operating is seen in the Pantheon faunal remains, or in any other local assemblage for that matter. Huelsbeck (1996a, 1996b) has identified purchasing power and foodways as operant factors at other localities in Skagway, and the Pantheon remains seem no different. The main issue concerning choice is somewhat muddled, since the most numerous Pantheon subassemblages contain mixtures of species (cattle and sheep primarily) and relatively high-ranked and lower-ranked cuts of meat.

The earlier deposits tend to be more diverse and have higher frequencies of high-ranking cuts of meat than the later ones, possibly to supply the demands of relatively wealthier people frequenting the food serving establishments in this area during the gold rush period. Of particular

note is the amount of young sheep legs represented in Feature 5. According to Huelsbeck (1996a) lamb was more expensive in Chicago, so these cuts could represent a wealthier clientele, if this feature is actually an earlier assemblage. However, sudden price drops due to meat gluts cannot be ruled out and may affect the identified element distributions.

Summary

A total of 4,423 bone fragments, including 16 crab elements, were identified in the faunal collection from the Pantheon Project. More than half (N=2414, 54.6%) of these bones could only be identified to a relative mammal size class. Many of the remains are associated with gold rush era contexts. Some date to later periods, and some are from disturbed contexts.

Recovery

Various recovery techniques were used to recover an overall large sample of faunal remains, including sampling that would detect small or fragile bones. It is unlikely that small fragile remains were missed during excavation and recovery. In fact the presence of small herring bones, eggshell, and rat bones testifies to the careful nature of the recovery techniques.

Disposal

Disposal practices certainly had an impact on the surviving bone collection. Burning and carnivore-gnawing both fragment bone, and dogs are well known to move bone from its original place of deposition while consuming them (Hudson 1992). Small fragile bones could have been severely affected by these processes, but larger and denser cattle and sheep bones were less so. It is possible that smaller taxa,

especially fish, could be underrepresented in the overall assemblage due to post depositional taphonomic factors.

Identification

Mammal remains clearly dominate the Pantheon assemblage. Most of the individual bones could not be identified to any more specific level than size class (more than 50%). Based on the identified taxa reported here and elsewhere in Skagway, it is likely that the bones from very large mammals represent cattle, and the large mammals represent a mix of sheep and cattle. As with the other reported collections, it is apparent that the butchery practices in Skagway differed little from modern patterns. The dimensions and thicknesses of cuts are similar to today's. The only noteworthy difference concerns the presence of distal metapodials, which are considered waste by modern butchers, in the Pantheon and other Skagway assemblages.

Using the numbers of identified bones as a measure shows that cattle are much more common than sheep, pigs, or other taxa in virtually every context. When the meat on the bones is considered, cattle still dominate. The only instance where sheep contribute equally, or almost so, is in the 6N and 10N53W privy subassemblage. Hogs are present but relatively rare. Wild mammal taxa are also present, but in very small numbers.

Availability

Chickens and turkeys are present, and certainly contributed to the diet, as did a few wild bird species. It is possible that chickens were raised locally. Birds could be underrepresented, since dogs could destroy bird waste easily. Fish are present, as well, and all the species represented could be taken with boats in the local Skagway area.

In the late nineteenth century the northwest livestock industry produced more cattle than sheep and relatively few lambs and pigs. By the 1920s the industry was producing greater numbers of younger cattle and sheep and a few more pigs. While this trend may be evident in the Pantheon remains, complications arise when factors affecting choice are considered.

Choice

None of the previous studies of Skagway archaeofaunas indicates that religion or ethnicity affected the structuring of available bone collections, and by proxy, consumption patterns. Preferences for certain food preparation techniques have been observed in other Skagway assemblages, but the pattern appears somewhat muddled in the Pantheon remains. The largest subassemblages in the Pantheon collection include mixtures of species and large and small and costly and less expensive cuts that require various cooking techniques.

Table 1: Identified Vertebrate Species from the Pantheon Project

Taxon	Common Name	Count	Weight
Decapoda			
Decapoda	Crab	16	18.04
Total Decapoda		16	18.04
Clueiformes			
Clupeidae	Herring Family	14	.29
<i>Clupea pallasii</i>	Herring - Pacific	9	.34
<i>Total Clupeiformes</i>		<i>23</i>	<i>.63</i>
Salmoniformes			
Salmonidae	Trout and Salmon Family	1	.02
<i>Oncorhynchus</i> sp	Salmon - Unid	6	.98
<i>Total Salmoniformes</i>		<i>7</i>	<i>1.00</i>
Gadiformes			
Gadidae	Cod Family	3	.51
<i>Gadus macrocephalus</i>	Cod - Pacific	6	2.73
<i>Microgadus proximus</i>	Tomcod - Pacific	1	.07
<i>Theragra chalcogramma</i>	Pollock - Walleye	19	4.35
<i>Total Gadiformes</i>		<i>29</i>	<i>7.66</i>
Scorpaeniformes			
Hexagrammidae			
<i>Hexagrammos</i> sp	Greenling - Unid	1	.09
<i>Total Scorpaeniformes</i>		<i>1</i>	<i>.09</i>
Pleuronectiformes			
Pleuronectidae	Flounder Halibut Sole Family	36	4.54
<i>Hippoglossus stenolepis</i>	Halibut - Pacific	21	14.16
<i>Psettichthys melanostictus</i>	Sole - Sand	1	.15
<i>Total Pleuronectiformes</i>		<i>58</i>	<i>18.85</i>
Peciformes			
Scombridae	Mackerel, Tuna Family	1	.06
<i>Total Peciformes</i>		<i>1</i>	<i>.06</i>
Osteichthyes	Fish - Bony	27	2.38
Total Fish		146	30.67

(Table I cont.)			
Taxon	Common Name	Count	Weight
Anseriformes			
Anatidae - Anserinae			
<i>Branta canadensis</i>	Goose - Canada	2	4.85
<i>Anser albifrons</i>	Goose - White-fronted	1	1.98
<i>Anser sp</i>	Goose - Unid	1	2.16
<i>Anas platyrhynchos</i>	Mallard	1	1.17
<i>Anas sp</i>	Duck - Unidentified	1	.67
<i>Total Anseriformes</i>		6	10.83
Falconiformes			
Accipitridae			
<i>Haliaeetus leucocephalus</i>	Eagle - Bald	1	3.12
<i>Total Falconiformes</i>		1	3.12
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken - Domestic	161	157.96
<i>Meleagris gallopavo</i>	Turkey - Wild	15	51.26
<i>Total Galliformes</i>		176	209.22
Aves	Bird - Unid	54	24.45
Aves, lg	Bird - Large	23	6.82
Aves, md	Bird - Medium	38	13.00
<i>Total Aves – Unid.</i>		115	44.27
Total Aves		298	267.44
Lagomorpha			
Leporidae			
<i>Lepus americanus</i>	Rabbit - Snowshoe	9	4.07
Leporidae	Rabbit Family	2	.18
<i>Total Lagomorpha</i>		11	4.25
Rodentia			
Sciuridae			
<i>Marmota caligata</i>	Marmot - Hoary	1	3.42
<i>Tamiasciurus hudsonicus</i>	Chickaree	1	.28
Muridae			
<i>Rattus norvegicus</i>	Rat - Brown or Norway	12	2.42
<i>Rattus sp</i>	Rat - Old World species	2	.45
<i>Total Rodentia</i>		16	6.57

(Table I cont.)

Taxon	Common Name	Count	Weight
Carnivora			
Canidae			
<i>Vulpes fulva</i>	Fox - Red	1	1.44
<i>Canis</i> sp	Dog, Wolf, Coyote - Unid	2	7.86
Felidae			
<i>Felis catus</i>	Cat - Domestic	1	1.53
Carnivora	Carnivore Order	1	.29
<i>Total Carnivora</i>		5	11.12
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig - Domestic	98	829.22
Cervidae			
<i>Odocoileus hemionus</i>	Deer - Mule	10	183.14
Bovidae			
<i>Bos taurus</i>	Cattle - Domestic	653	48368.86
<i>Capra/Ovis</i> sp	Goat or Sheep	538	4428.07
<i>Ovis aries</i>	Sheep - Domestic	111	1599.13
<i>Ovis</i> sp	Sheep - Unid	5	20.03
Artiodactyla	Even-toed Ungulates - Unid	100	352.86
Artiodactyla, lg	Even-toed Ungulates - Large	2	23.79
<i>Total Artiodactyla</i>		1517	55805.10
Mammalia		254	55.94
Mammalia, v lg		393	1159.11
Mammalia, lg		1754	1893.83
Mammalia, md		10	8.49
Mammalia, sm		3	.32
<i>Total Mammalia – Unid</i>		2414	3117.69
Total Mammalia		3963	58,944.73
Total Taxa		4423	59,260.88

Table 2: Identified Vertebrate Species from Pantheon Dump Contexts

Taxon	Common name	Count	Weight
Unit 03N-50W			
Gadiformes			
Gadidae	Cod Family	1	.08
<i>Theragra chalcogramma</i>	Pollock – Walleye	1	.22
<i>Total Gadiformes</i>		2	.30
Pleuronectiformes			
Pleuronectidae	Flounder Halibut Sole Family	1	.06
<i>Hippoglossus stenolepis</i>	Halibut – Pacific	1	.35
<i>Total Pleuronectiformes</i>		2	.41
Total Fish		4	.71
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken – Domestic	5	2.28
<i>Meleagris gallopavo</i>	Turkey – Wild	1	1.04
<i>Total Galliformes</i>		6	3.32
Aves lg	Bird – Large	2	.87
Aves md	Bird – Medium	13	4.77
<i>Total Aves Unid.</i>		15	5.64
Total Bird		21	8.96
Rodentia			
Muridae			
<i>Rattus norvegicus</i>	Rat - Brown or Norway	3	.36
<i>Total Rodentia</i>		3	.36
Artiodactyla			
Bovidae			
<i>Bos Taurus</i>	Cattle - Domestic	36	1,226.92
<i>Ovis/Capra</i> sp	Sheep or Goat	20	140.25
Artiodactyla	Even-toed Ungulates – Unid	1	.62
<i>Total Artiodactyla</i>		57	1,367.79
Mammalia	Mammal – Unid	1	.13
Mammalia, v lg	Mammal - Very large	58	91.16
Mammalia, lg	Mammal – Large	63	64.01
Mammalia, md	Mammal – Medium	2	1.79
<i>Total Mammalia Unid.</i>		124	157.09
Total Mammalia		184	1,525.24
Unit Total		209	1,534.91

Table 2: (cont.)

Taxon	Common Name	Count	Weight
Unit 04N-59W (Excluding Feature 5)			
Clupeiformes			
Clupeidae			
<i>Clupea pallasii</i>	Herring - Pacific	1	.04
Total Fish		1	.04
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken - Domestic	1	.77
Total Bird		1	.77
Artiodactyla			
Bovidae			
<i>Bos Taurus</i>	Cattle - Domestic	1	8.07
<i>Ovis/Capra</i> sp	Sheep or Goat	1	13.98
<i>Ovis aries</i>	Sheep - Domestic	1	4.10
Artiodactyla	Even-toed Ungulates - Unid	1	2.86
<i>Total Artiodactyla</i>		4	29.01
Mammalia lg	Mammal - Large	5	4.72
Total Mammalia		9	33.73
Unit Total		11	34.54
Unit 13N-92W			
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken - Domestic	8	3.82
<i>Total Galliformes</i>		8	3.82
Aves	Bird - Unid	7	1.21
Aves, lg	Bird - Large	3	2.15
Aves, md	Bird - Medium	1	.23
<i>Total Aves - Unid.</i>		11	3.59
Total Bird		19	7.41
Carnivora			
Canidae			
<i>Canis</i> sp	Dog, Wolf, Coyote - Unid	1	7.51
<i>Total Carnivora</i>		1	7.51

Table 2: (cont.)

Taxon	Common Name	Count	Weight
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig - Domestic	5	8.04
Cervidae			
<i>Odocoileus hemionus</i>	Deer - Mule	1	62.82
Bovidae			
<i>Bos Taurus</i>	Cattle - Domestic	99	3,242.60
<i>Ovis/Capra</i> sp	Sheep or Goat	83	476.92
<i>Ovis aries</i>	Sheep - Domestic	4	63.09
<i>Ovis</i> sp	Sheep - Unid	3	15.47
Artiodactyla	Even-toed Ungulates - Unid	19	39.03
Artiodactyla, lg	Even-toed Ungulates - Large	2	23.79
<i>Total Artiodactyla</i>		216	3,931.76
Mammalia, v lg	Mammal - Very large	19	126.95
Mammalia, lg	Mammal - Large	390	363.40
Mammalia, md	Mammal - Medium	4	4.94
<i>Total Mammal - Unid.</i>		413	495.29
Total Mammalia		630	4,434.56
Unit Total		649	4,441.97
Total Taxa		869	6,011.42

Table 3: Identified Vertebrate Species from Gold Rush Privy/Dump Contexts (Features 4 and 5, Unit 4N59W)

Taxon	Common Name	Count	Weight
Clupeiformes			
Clupeidae			
<i>Clupea pallasii</i>	Herring – Pacific	2	.13
<i>Total Clupeiformes</i>		2	.13
Salmoniformes			
Salmonidae	Trout and Salmon Family	1	.02
<i>Oncorhynchus</i> sp	Salmon – Unid	1	.09
<i>Total Salmoniformes</i>		2	.11
Gadiformes			
Gadidae	Cod Family	1	.38
<i>Gadus macrocephalus</i>	Cod – Pacific	2	1.06
<i>Microgadus proximus</i>	Tomcod – Pacific	1	.07
<i>Theragra chalcogramma</i>	Pollock – Walleye	8	1.51
<i>Total Gadiformes</i>		12	3.02
Scorpaeniformes			
Hexagrammidae			
<i>Hexagrammos</i> sp	Greenling – Unid	1	.09
<i>Total Scorpaeniformes</i>		1	.09
Pleuronectiformes			
Pleuronectidae	Flounder Halibut Sole Family	7	.80
<i>Hippoglossus stenolepis</i>	Halibut – Pacific	7	7.23
<i>Total Pleuronectiformes</i>		14	8.03
Osteichthyes	Fish – Bony	16	.73
Total Fish		47	12.11
Anseriformes			
Anatidae			
<i>Branta Canadensis</i>	Goose – Canada	1	3.84
<i>Anas platyrhynchos</i>	Mallard	1	1.17
<i>Total Anseriformes</i>		2	5.01
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken – Domestic	56	43.28
<i>Meleagris gallopavo</i>	Turkey – Wild	1	1.08
<i>Total Galliformes</i>		57	44.36
Aves	Bird – Unid	25	15.04
Aves, lg	Bird – Large	4	.84
Aves, md	Bird – Medium	15	4.32
<i>Total Aves – Unid.</i>		44	20.20
Total Bird		103	69.57

Table 3: (cont.)

Taxon	Common Name	Count	Weight
Lagomorpha			
Leporidae	Rabbit Family	2	.18
<i>Lepus americanus</i>	Rabbit – Snowshoe	4	1.00
<i>Total Lagomorpha</i>		6	1.18
Rodentia			
Sciuridae			
<i>Marmota caligata</i>	Marmot - Hoary	1	3.42
Muridae			
<i>Rattus norvegicus</i>	Rat - Brown or Norway	5	.62
<i>Rattus</i> sp	Rat – Old World species	1	.30
<i>Total Rodentia</i>		7	4.34
Carnivora			
Canidae			
<i>Vulpes fulva</i>	Fox – Red	1	1.44
Carnivora	Carnivore Order	1	.29
<i>Total Carnivora</i>		2	1.73
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig – Domestic	32	331.06
Cervidae			
<i>Odocoileus hemionus</i>	Deer – Mule	6	84.80
Bovidae			
<i>Bos Taurus</i>	Cattle – Domestic	199	4,847.95
<i>Ovis/Capra</i> sp	Sheep or Goat	224	2,035.38
<i>Ovis aries</i>	Sheep - Domestic	37	616.40
<i>Ovis</i> sp	Sheep – Unid	1	.71
Artiodactyla	Even-toed Ungulates – Unid	49	184.36
<i>Total Artiodactyla</i>		548	8,100.66
Mammalia	Mammal – Unid	42	19.20
Mammalia, v lg	Mammal - Very large	246	497.61
Mammalia, lg	Mammal - Large	953	990.12
Mammalia, md	Mammal - Medium	1	.63
Mammalia, sm	Mammal – Small	3	.32
<i>Total Mammal – Unid.</i>		1245	1,507.88
Total Mammalia		1808	9,615.79
Total Taxa		1958	9,697.47

Table 4: Identified Vertebrate Species from Gold Rush Privy Contexts (features 14, 15, 16)

Taxon	Common Name	Count	Weight
Gadiformes			
Gadidae			
<i>Gadus macrocephalus</i>	Cod – Pacific	3	1.47
<i>Theragra chalcogramma</i>	Pollock – Walleye	7	1.97
<i>Total Gadiformes</i>		10	3.44
Pleuronectiformes			
Pleuronectidae			
<i>Hippoglossus stenolepis</i>	Halibut – Pacific	4	3.31
<i>Total Pleuronectiformes</i>		4	3.31
Osteichthyes	Fish-Bony	3	.41
Total Fish		17	7.16
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken - Domestic	31	39.41
<i>Total Galliformes</i>		31	39.41
Aves	Bird – Unid	4	3.42
Aves, lg	Bird - Large	2	.70
<i>Total Aves – Unid.</i>		6	4.12
Total Bird		37	43.53
Rodentia			
Muridae			
<i>Rattus norvegicus</i>	Rat - Brown or Norway	1	.17
<i>Total Rodentia</i>		1	.17
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig – Domestic	3	12.31
Bovidae			
<i>Bos Taurus</i>	Cattle - Domestic	34	630.35
<i>Ovis/Capra</i> sp	Sheep or Goat	10	73.42
Artiodactyla	Even-toed Ungulates – Unid	9	45.04
<i>Total Artiodactyla</i>		56	761.12
Mammalia	Mammal – Unid	2	1.60
Mammalia, v lg	Mammal - Very large	2	15.16
Mammalia, lg	Mammal - Large	56	96.12
<i>Total Mammal – Unid.</i>		60	112.88
Total Mammalia		117	874.17

Table 5: Identified Vertebrate Species from post Gold Rush Privy Contexts

Taxon	Common Name	Count	Weight
Unit 06N-35W			
Clupeiformes			
Clupeidae			
<i>Clupea pallasii</i>	Herring – Pacific	4	.15
<i>Total Clupeiformes</i>		4	.15
Salmoniformes			
Salmonidae			
<i>Oncorhynchus</i> sp	Salmon – Unid	1	.23
<i>Total Salmoniformes</i>		1	.23
Gadiformes			
Gadidae	Cod Family	1	.05
<i>Theragra chalcogramma</i>	Pollock - Walleye	2	.57
<i>Total Gadiformes</i>		3	.62
Pleuronectiformes			
Pleuronectidae			
<i>Hippoglossus stenolepis</i>	Halibut – Pacific	1	.27
<i>Psettichthys melanostictus</i>	Sole – Sand	1	.15
<i>Total Pleuronectiformes</i>		2	.42
Osteichthyes	Fish - Bony	8	1.24
Total Fish		18	2.66
Anseriformes			
Anatidae			
<i>Branta Canadensis</i>	Goose - Canada	1	1.01
<i>Anas</i> sp	Duck – Unidentified	1	.67
<i>Total Anseriformes</i>		2	1.68
Falconiformes			
Accipitridae			
<i>Haliaeetus leucocephalus</i>	Eagle - Bald	1	3.12
<i>Total Falconiformes</i>		1	3.12
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken – Domestic	34	36.77
<i>Meleagris gallopavo</i>	Turkey – Wild	6	36.67
<i>Total Galliformes</i>		40	73.44
Aves	Bird - Unid	1	.31
Aves, lg	Bird – Large	11	1.79
Aves, md	Bird – Medium	4	1.08
<i>Total Aves – Unid.</i>		16	3.18
Total Bird		59	81.42

Table 5: (cont.)

Taxon	Common Name	Count	Weight
Lagomorpha			
Leporidae			
<i>Lepus americanus</i>	Rabbit - Snowshoe	4	2.20
<i>Total Lagomorpha</i>		4	2.20
Rodentia			
Sciuridae			
<i>Tamiasciurus hudsonicus</i>	Chickaree	1	.28
<i>Total Rodentia</i>		1	.28
Carnivora			
Canidae			
<i>Canis</i> sp	Dog, Wolf, Coyote - Unid	1	.35
<i>Total Carnivora</i>		1	.35
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig – Domestic	8	58.12
Bovidae			
<i>Bos Taurus</i>	Cattle – Domestic	62	1,177.43
<i>Ovis/Capra</i> sp	Sheep or Goat	65	349.56
<i>Total Artiodactyla</i>		135	1,585.11
Mammalia, v lg	Mammal - Very large	18	100.20
Mammalia, lg	Mammal – Large	88	70.44
<i>Total Mammal – Unid.</i>		106	170.64
Total Mammalia		247	1,758.58
Unit Total		340	1,860.70
Unit 10N-35W			
Gadiformes			
Gadidae			
<i>Gadus macrocephalus</i>	Cod - Pacific	1	.20
<i>Theragra chalcogramma</i>	Pollock – Walleye	1	.08
<i>Total Gadiformes</i>		2	.28
Total Fish		2	.28
Anseriformes			
Anatidae – Anserinae			
<i>Anser albifrons</i>	Goose - White-fronted	1	1.98
<i>Total Anseriformes</i>		1	1.98

Table 5: (cont.)

Taxon	Common Name	Count	Weight
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken - Domestic	3	3.44
<i>Meleagris gallopavo</i>	Turkey – Wild	1	1.31
<i>Total Galliformes</i>		4	4.75
Aves, md	Bird - Medium	1	.09
Total Bird		6	6.82
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig - Domestic	7	33.50
Bovidae			
<i>Bos taurus</i>	Cattle – Domestic	5	80.32
<i>Ovis/Capra</i> sp	Sheep or Goat	8	169.42
Artiodactyla	Even-toed Ungulates - Unid	1	12.85
<i>Total Artiodactyla</i>		21	296.09
Mammalia, v lg	Mammal - Very large	1	30.08
Mammalia, lg	Mammal – Large	3	4.11
<i>Total Mammal – Unid.</i>		4	34.19
Total Mammalia		25	330.28
Unit Total		33	337.38
Total Taxa		373	2,198.08

Table 6: Identified Vertebrate Species from Woodshop Contexts (Units 50N to 79N)

Taxon	Common Name	Count	Weight
Anseriformes			
Anatidae			
<i>Anser</i> sp	Goose – Unid	1	2.16
<i>Total Anseriformes</i>		1	2.16
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken - Domestic	1	.73
<i>Meleagris gallopavo</i>	Turkey – Wild	2	3.66
<i>Total Galliformes</i>		3	4.39
Aves	Bird – Unid	2	.28
Aves, md	Bird – Medium	2	1.93
<i>Total Aves – Unid.</i>		4	2.21
Total Bird		8	8.76
Lagomorpha			
Leporidae			
<i>Lepus americanus</i>	Rabbit - Snowshoe	1	.87
<i>Total Lagomorpha</i>		1	.87
Rodentia			
Muridae			
<i>Rattus norvegicus</i>	Rat - Brown or Norway	3	1.27
<i>Total Rodentia</i>		3	1.27
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig - Domestic	7	132.77
Bovidae			
<i>Bos Taurus</i>	Cattle – Domestic	73	32,968.77
<i>Ovis/Capra</i> sp	Sheep or Goat	54	645.29
<i>Ovis aries</i>	Sheep – Domestic	14	230.33
<i>Ovis</i> sp	Sheep – Unid	1	3.85
Artiodactyla	Even-toed Ungulates – Unid	6	16.33
<i>Total Artiodactyla</i>		155	33,997.34
Mammalia	Mammal - Unid	13	3.11
Mammalia, v lg	Mammal - Very large	9	78.67
Mammalia, lg	Mammal - Large	50	71.58
<i>Total Mammal – Unid.</i>		72	153.36
Total Mammalia		231	34,152.84
Total Taxa		239	34,161.60

Table 7: Identified Vertebrate Species from Rosalie/Brownell/Pantheon Contexts

Taxon	Common Name	Count	Weight
Clupeiformes			
Clupeidae	Herring Family	10	.21
<i>Total Clupeiformes</i>		10	.21
Pleuronectiformes			
Pleuronectidae	Flounder Halibut Sole Family	5	.65
<i>Total Pleuronectiformes</i>		5	.65
Total Fish		15	.86
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken – Domestic	2	2.08
<i>Total Galliformes</i>		2	2.08
Aves	Bird – Unid	1	.07
Aves, lg	Bird - Large	1	.47
<i>Total Aves – Unid.</i>		2	.54
Total Bird		4	2.62
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig - Domestic	2	2.00
Cervidae			
<i>Odocoileus hemionus</i>	Deer – Mule	2	25.95
Bovidae			
<i>Bos Taurus</i>	Cattle - Domestic	27	880.88
<i>Ovis/Capra</i> sp	Sheep or Goat	12	97.62
<i>Ovis aries</i>	Sheep – Domestic	7	69.39
Artiodactyla	Even-toed Ungulates – Unid	5	10.27
<i>Total Artiodactyla</i>		55	1,086.11
Mammalia	Mammal – Unid	13	2.92
Mammalia, v lg	Mammal - Very large	3	14.61
Mammalia, lg	Mammal - Large	31	20.00
<i>Total Mammal – Unid.</i>		47	37.53
Total Mammalia		102	1,123.64
Total Taxa		121	1,127.12

Table 8: Identified Vertebrate Species from other Pantheon Dump Contexts
Units include 76N36W, 79N32W, 79N34W, 79N37W.

Taxon	Common Name	Count	Weight
Clupeiformes			
Clupeidae	Herring Family	3	.06
<i>Clupea pallasii</i>	Herring – Pacific	2	.02
Total Clupeiformes		5	.08
Salmoniformes			
Salmonidae			
<i>Oncorhynchus</i> sp	Salmon - Unid	4	.66
Total Salmoniformes		4	.66
Pleuronectiformes			
Pleuronectidae	Flounder, Halibut, Sole Family	23	3.03
<i>Hippoglossus stenolepis</i>	Halibut – Pacific	8	3.00
Total Pleuronectiformes		31	6.03
Total Fish		40	6.77
Galliformes			
Phasianidae			
<i>Gallus gallus</i>	Chicken – Domestic	11	12.59
<i>Meleagris gallopavo</i>	Turkey – Wild	3	5.82
Total Galliformes		14	18.41
Aves	Bird – Unid	5	2.05
Total Bird		19	20.46
Artiodactyla			
Suidae			
<i>Sus scrofa</i>	Pig – Domestic	12	176.50
Bovidae			
<i>Bos Taurus</i>	Cattle - Domestic	59	1,802.10
<i>Ovis/Capra</i> sp	Sheep or Goat	8	55.89
<i>Ovis aries</i>	Sheep - Domestic	32	300.24
Artiodactyla	Even-toed Ungulates – Unid	6	18.56
Total Artiodactyla		117	2,353.29
Mammalia	Mammal – Unid	114	19.83
Mammalia, v lg	Mammal - Very large	15	47.45
Mammalia, lg	Mammal - Large	27	54.89
Total Mammal – Unid.		156	122.17
Total Mammalia		273	2,475.46
Unit Total		332	2,502.69
Total Taxa		705	4,700.77

Table 9: Distribution of Fish Bone

Feature	Unit	Level	Taxon	Common Name	Count	Wgt(g)
1	03N-50W	2	Gadidae	Cod Family	1	.08
1	03N-50W	3	Hippoglossus stenolepis	Halibut – Pacific	1	.35
1	03N-50W	3	Pleuronectidae	Flounder Halibut Sole Family	1	.06
Feature Total					3	.49
5	04N-59W	4	Clupea pallasii	Herring – Pacific	1	.10
5	04N-59W	4	Oncorhynchus sp	Salmon – Unid	1	.09
5	04N-59W	4	Salmonidae	Trout and Salmon Family	1	.02
5	04N-59W	4	Gadus macrocephalus	Cod – Pacific	2	1.06
5	04N-59W	4	Hexagrammos sp	Greenling – Unid	1	.09
5	04N-59W	4	Hippoglossus stenolepis	Halibut – Pacific	4	.92
5	04N-59W	4	Pleuronectidae	Flounder Halibut Sole Family	5	.66
5	04N-59W	4	Osteichthyes	Fish – Bony	4	.17
5	04N-59W	5	Microgadus proximus	Tomcod – Pacific	1	.07
5	04N-59W	6	Theragra chalcogramma	Pollock – Walleye	4	.42
5	04N-59W	6	Osteichthyes	Fish – Bony	1	.05
5	04N-59W	7	Clupea pallasii	Herring – Pacific	1	.03
5	04N-59W	7	Theragra chalcogramma	Pollock – Walleye	1	.25
5	04N-59W	7	Gadidae	Cod Family	1	.38
5	04N-59W	7	Hippoglossus stenolepis	Halibut – Pacific	3	6.31
5	04N-59W	7	Pleuronectidae	Flounder Halibut Sole Family	2	.14
5	04N-59W	7	Osteichthyes	Fish - Bony	11	.51
5	10N-35W	3	Theragra chalcogramma	Pollock – Walleye	3	.84
Feature Total					47	12.11
14	10N-35W	1	Gadus macrocephalus	Cod - Pacific	3	1.47
14	10N-35W	1	Theragra chalcogramma	Pollock – Walleye	2	.56
14	10N-35W	1	Hippoglossus stenolepis	Halibut - Pacific	1	.39
14	10N-35W	1	Osteichthyes	Fish – Bony	2	.17

Table 9: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Wgt(g)
14	10N-35W	3	Theragra chalcogramma	Pollock - Walleye	3	1.08
14	16N-35W	2	Theragra chalcogramma	Pollock - Walleye	2	.33
14	16N-35W	2	Osteichthyes	Fish - Bony	1	.24
Feature Total					14	4.24
15	06N-35W	2	Hippoglossus stenolepis	Halibut - Pacific	3	2.92
Feature Total					3	2.92
21	76N-36W	1	Oncorhynchus sp	Salmon - Unid	2	.11
21	76N-36W	1	Pleuronectidae	Flounder Halibut Sole Family	3	.29
21	79N-32W	2	Pleuronectidae	Flounder Halibut Sole Family	2	.54
21	79N-32W	4	Clupeidae	Herring Family	1	.01
21	79N-32W	4	Oncorhynchus sp	Salmon - Unid	2	.55
21	79N-32W	4	Pleuronectidae	Flounder Halibut Sole Family	3	.38
21	79N-32W	7	Clupea pallasii	Herring - Pacific	2	.02
21	79N-32W	7	Hippoglossus stenolepis	Halibut - Pacific	1	.80
21	79N-34W	3	Hippoglossus stenolepis	Halibut - Pacific	1	.20
21	79N-34W	3	Pleuronectidae	Flounder Halibut Sole Family	2	.29
Feature Total					19	3.19
24		2	Clupeidae	Herring Family	1	.02
24	80N-36W	1	Pleuronectidae	Flounder Halibut Sole Family	1	.14
Feature Total					2	.16
27			Scombridae	Mackerel Tuna Family	1	.06
Feature Total					1	.06

Table 9: (cont.)

Unit	Level	Taxon	Common Name	Count	Wgt(g)
03N-50W	2	Theragra chalcogramma	Pollock - Walleye	1	.22
Unit Total				1	.22
04N-59W	7	Clupea pallasii	Herring - Pacific	1	.04
Unit Total				1	.04
06N-35W	2	Psettichthys melanostictus	Sole - Sand	1	.15
06N-35W	3	Decapoda	Crab	16	18.04
06N-35W	3	Clupea pallasii	Herring – Pacific	4	.15
06N-35W	3	Oncorhynchus sp	Salmon - Unid	1	.23
06N-35W	3	Gadidae	Cod Family	1	.05
06N-35W	3	Hippoglossus stenolepis	Halibut – Pacific	1	.27
06N-35W	3	Osteichthyes	Fish – Bony	1	.14
06N-35W	4	Theragra chalcogramma	Pollock – Walleye	2	.57
06N-35W	4	Osteichthyes	Fish - Bony	7	1.10
Unit Total				34	20.70
10N-35W	3	Gadus macrocephalus	Cod - Pacific	1	.20
10N-35W	3	Theragra chalcogramma	Pollock – Walleye	1	.08
Unit Total				2	.28
79N-32W	7	Pleuronectidae	Flounder Halibut Sole Family	1	.11
Unit Total				1	.11
79N-37W	2	Hippoglossus stenolepis	Halibut - Pacific	1	1.28
79N-37W	2	Pleuronectidae	Flounder Halibut Sole Family	5	.85
79N-37W	3	Pleuronectidae	Flounder Halibut Sole Family	1	.01
79N-37W	4	Hippoglossus stenolepis	Halibut – Pacific	5	.72
79N-37W	4	Pleuronectidae	Flounder Halibut Sole Family	6	.56
79N-37W	8	Clupeidae	Herring Family	2	.05
Unit Total				20	3.47
80N-36W	3	Clupeidae	Herring Family	10	.21
80N-36W	3	Pleuronectidae	Flounder Halibut Sole Family	3	.36
Unit Total				13	.57
86N-38W	1	Pleuronectidae	Flounder Halibut Sole Family	1	.15
Unit Total				1	.15
SITE TOTAL				162	48.71

Table 10: Distribution of Modified Fish Bone

Element	Part	Halibut		Flounder Family		Cod		Cod Family		Bony Fish		Total	
		Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight	Count	Weight
Feature 1	3N-50W (burned)												
Vertebrae	fragment			1	.05							1	.05
Feature 1	3N-50W (cut)												
Vert, Precaudal	Centrum	1	.35									1	.35
Feature 5	4N-59W (cut)												
Postcleithrum	Fragment							1	.38			1	.38
Vert, Precaudal	Fragment	1	.95									1	.95
Vert, Precaudal	Posterior	1	5.15									1	5.15
Vertebrae	Spine									2	.18	2	.18
Feature 14	10N-35W (cut)												
Vert, Cervical	Spine					1	.37					1	.37
Feature 21	79N-32W (cut)												
Vert, Caudal	Anterior	1	.80									1	.80
Total		4	7.25	1	.05	1	.37	1	.38	2	.18	9	8.24

*element also sawed to 1" steak cut

Table 11: Distribution of Bird Bone

Feat	Unit	Level	Taxon	Common Name	Ct	Weight(g)
1	03N-50W	1	Aves, md	Bird - Medium	3	.41
1	03N-50W	2	Gallus gallus	Chicken - Domestic	2	.80
1	03N-50W	2	Aves, md	Bird - Medium	5	1.93
1	03N-50W	3	Aves, md	Bird - Medium	3	.58
1	03N-50W	4	Meleagris gallopavo	Turkey - Wild	1	1.04
1	03N-50W	4	Aves, lg	Bird - Large	2	.87
1	03N-50W	4	Aves, md	Bird - Medium	2	1.85
1	03N-50W	5	Gallus gallus	Chicken - Domestic	2	.72
1	03N-50W	6	Gallus gallus	Chicken - Domestic	1	.76
Feature Total					21	8.96
5	04N-59W	2	Anas platyrhynchos	Mallard	1	1.17
5	04N-59W	2	Gallus gallus	Chicken - Domestic	5	2.73
5	04N-59W	2	Aves	Bird - Unid	9	3.55
5	04N-59W	2	Aves, lg	Bird - Large	3	.60
5	04N-59W	2	Aves, md	Bird - Medium	1	.07
5	04N-59W	3	Aves, md	Bird - Medium	1	.23
5	04N-59W	4	Branta canadensis	Goose - Canada	1	3.84
5	04N-59W	4	Gallus gallus	Chicken - Domestic	13	14.80
5	04N-59W	4	Meleagris gallopavo	Turkey - Wild	1	1.08
5	04N-59W	4	Aves	Bird - Unid	4	.52
5	04N-59W	4	Aves, md	Bird - Medium	12	3.83
5	04N-59W	5	Gallus gallus	Chicken - Domestic	9	5.43
5	04N-59W	5	Aves	Bird - Unid	2	.27
5	04N-59W	6	Gallus gallus	Chicken - Domestic	10	4.75
5	04N-59W	6	Aves	Bird - Unid	7	3.23
5	04N-59W	6	Aves, lg	Bird - Large	1	.24
5	04N-59W	6	Aves, md	Bird - Medium	1	.19
5	04N-59W	7	Gallus gallus	Chicken - Domestic	12	10.19
5	04N-59W	7	Aves	Bird - Unid	2	3.84
5	04N-59W	8	Gallus gallus	Chicken - Domestic	7	5.38
5	04N-59W	8	Aves	Bird - Unid	1	3.63
Feature Total					103	69.57
13	34N-39W	2	Meleagris gallopavo	Turkey - Wild	1	1.68
Feature Total					1	1.68
14	10N-35W	1	Gallus gallus	Chicken - Domestic	7	4.47
14	10N-35W	1	Aves	Bird - Unid	1	.14
14	10N-35W	1	Aves, lg	Bird - Large	1	.45
14	10N-35W	2	Gallus gallus	Chicken - Domestic	3	1.77

Table II: (cont.)

Feat	Unit	Level	Taxon	Common Name	Ct	Weight(g)
14	10N-35W	3	Gallus gallus	Chicken – Domestic	11	15.98
14	10N-35W	3	Aves	Bird - Unid	1	.30
14	10N-35W	4	Gallus gallus	Chicken – Domestic	5	6.33
14	10N-35W	4	Aves	Bird – Unid	2	2.98
14	10N-35W	5	Gallus gallus	Chicken - Domestic	3	9.34
Feature Total					34	41.76
15	06N-35W	2	Gallus gallus	Chicken - Domestic	2	1.52
15	06N-35W	2	Aves, lg	Bird - Large	1	.25
Feature Total					3	1.77
17	06N-39W	3	Gallus gallus	Chicken – Domestic	1	2.67
Feature Total					1	2.57
20	56N-29W	1	Anser sp	Goose – Unid	1	2.16
Feature Total					1	2.15
21	76N-36W	3	Gallus gallus	Chicken - Domestic	1	1.61
21	79N-32W	3	Gallus gallus	Chicken – Domestic	1	.24
21	79N-32W	8	Gallus gallus	Chicken - Domestic	1	.77
21	79N-32W	8	Meleagris gallopavo	Turkey - Wild	3	5.82
21	79N-32W	8	Aves	Bird - Unid	3	.51
21	79N-32W	9	Gallus gallus	Chicken - Domestic	3	2.21
21	79N-34W	1	Gallus gallus	Chicken - Domestic	1	.84
21	79N-34W	6	Aves	Bird - Unid	1	.45
21	79N-34W	9	Aves	Bird – Unid	1	1.09
21	79N-34W	10	Gallus gallus	Chicken - Domestic	1	.69
Feature Total					16	14.23
27			Gallus gallus	Chicken – Domestic	6	9.34
27			Aves	Bird - Unid	9	2.07
27	80N-27W	0	Aves, lg	Bird – Large	1	.47
Feature Total					16	11.88
	04N-59W	2	Gallus gallus	Chicken - Domestic	1	.77
Unit Total					1	.77
	06N-35W		Aves, md	Bird - Medium	1	.35
	06N-35W	2	Anas sp	Duck - Unidentified	1	.67
	06N-35W	2	Haliaeetus leucocephalus	Eagle – Bald	1	3.12
	06N-35W	2	Gallus gallus	Chicken - Domestic	8	10.95
	06N-35W	2	Meleagris gallopavo	Turkey - Wild	1	12.67
	06N-35W	2	Aves	Bird – Unid	1	.31
	06N-35W	2	Aves, lg	Bird - Large	6	1.02

Table II: (cont.)

Feat	Unit	Level	Taxon	Common Name	Ct	Weight(g)
	06N-35W	3	Branta Canadensis	Goose - Canada	1	1.01
	06N-35W	3	Gallus gallus	Chicken – Domestic	9	10.54
	06N-35W	3	Aves, lg	Bird - Large	5	.77
	06N-35W	4	Gallus gallus	Chicken – Domestic	12	8.94
	06N-35W	4	Meleagris gallopavo	Turkey - Wild	4	10.90
	06N-35W	4	Aves, md	Bird - Medium	1	.26
	06N-35W	5	Gallus gallus	Chicken - Domestic	5	6.34
	06N-35W	5	Meleagris gallopavo	Turkey - Wild	1	13.10
	06N-35W	5	Aves, md	Bird – Medium	2	.46
Unit Total					59	81.42
	10N-35W	5	Anser albifrons	Goose - White-fronted	1	1.98
	10N-35W	5	Gallus gallus	Chicken - Domestic	3	3.44
	10N-35W	5	Meleagris gallopavo	Turkey - Wild	1	1.31
	10N-35W	5	Aves, md	Bird - Medium	1	.09
Unit Total					6	6.82
	13N-92W	5	Gallus gallus	Chicken – Domestic	2	.54
	13N-92W	6	Gallus gallus	Chicken - Domestic	3	1.76
	13N-92W	6	Aves	Bird - Unid	1	.07
	13N-92W	7	Gallus gallus	Chicken - Domestic	1	.53
	13N-92W	7	Aves, lg	Bird - Large	2	1.40
	13N-92W	7	Aves, md	Bird - Medium	1	.23
	13N-92W	8	Gallus gallus	Chicken - Domestic	1	.70
	13N-92W	11	Gallus gallus	Chicken - Domestic	1	.29
	13N-92W	11	Aves	Bird - Unid	6	1.14
	13N-92W	11	Aves, lg	Bird - Large	1	.75
Unit Total					19	7.41
	14N-39W	3	Gallus gallus	Chicken – Domestic	1	.61
	14N-39W	3	Aves, md	Bird – Medium	1	.30
Unit Total					2	.91
	47N-31W	6	Aves, md	Bird - Medium	1	.28
	47N-31W	7	Gallus gallus	Chicken - Domestic	1	.17
Unit Total					2	.45
	57N-06W		Aves, md	Bird - Medium	1	1.46
Unit Total					1	1.45
	58N-37W	1	Meleagris gallopavo	Turkey - Wild	1	1.45
Unit Total					1	1.45

Table II: (cont.)

Feat	Unit	Level	Taxon	Common Name	Ct	Weight(g)
	59N-21W	1	Aves, md	Bird - Medium	1	.47
	59N-21W	3	Gallus gallus	Chicken - Domestic	1	.73
Unit Total					2	1.20
	66N-18W	2	Aves	Bird – Unid	1	.08
Unit Total					1	.08
	66N-21W	0	Meleagris gallopavo	Turkey - Wild	1	2.21
Unit Total					1	2.21
	72N-09W	0	Aves	Bird – Unid	1	.20
Unit Total					1	.20
	79N-34W	0	Gallus gallus	Chicken – Domestic	1	4.94
Unit Total					1	4.94
	79N-37W	2	Gallus gallus	Chicken – Domestic	1	.22
	79N-37W	3	Gallus gallus	Chicken – Domestic	1	1.07
Unit Total					2	1.29
	80N-27W	0	Gallus gallus	Chicken - Domestic	1	1.52
Unit Total					1	1.52
	86N-38W	1	Gallus gallus	Chicken – Domestic	1	.56
	86N-38W	1	Aves	Bird - Unid	1	.07
Unit Total					2	.63
SITE TOTAL					298	267.44

Table 12: Distribution of Sawed/Burned Bird Bone

Element	Part	Chicken		Aves		Total	
		Count	Weight	Count	Weight	Count	Weight
FEATURE 5	04N-59W (Burned)						
Phalanx	shaft			1	.03	1	.03
Tarsometatarsus	proximal			1	.19	1	.19
FEATURE 21	79N-34W (Burned)						
Tibiotarsus	shaft			1	1.09	1	1.09
Femur	proximal+shaft	1	.69			1	.69
FEATURE 14	10N-35W (Sawed)						
Tibiotarsus	proximal+shaft	2	3.05			2	3.05
UNIT 13N-92W (Sawed)							
Tibiotarsus	distal	1	.70			1	.70
SITE TOTAL		4	4.44	3	1.31	7	5.75

Table 13: Distribution of Cut Bird Bone

		Chicken		Turkey		Canada Goose		Aves		Total	
Element	Part	Count	Wt(g)	Count	Wt(g)	Count	Wt(g)	Count	Wt(g)	Count	Wt(g)
FEATURE 1	03N-50W										
Coracoid	distal+shaft	2	.72							2	.72
FEATURE 5	04N-59W										
Carpometacarpus	most	1	.62							1	.62
Sternum	proximal	1	.33							1	.33
FEATURE 14	10N-35W										
Coracoid	articlr surface	1	.51							1	.51
Tibiotarsus	distal shaft	1	4.54							1	4.54
FEATURE 21	79N-32W										
Coracoid	most	1	.77							1	.77
Femur	Distal			1	.96					1	.96
Tibia	Proximal			1	2.17					1	2.17
FEATURE 21	79N-34W										
Synsacrum	Fragment							1	.45	1	.45
FEATURE 27											
Scapula	articlr surface	1	.66							1	.66
UNIT 6N-35W											
Coracoid	Proximal					1	1.01			1	1.01
Scapula	Shaft	1	.78							1	.78
SITE TOTAL											
		9	8.93	2	3.13	1	1.01	1	.45	13	13.52

Table 14: Distribution of Gnawed Bird Bone

Feature #	Unit	Chicken		Turkey		Bald Eagle		Goose		Canada Goose		Aves, lg		Aves, md		Aves		Total	
Element	Part	Cnt	Weight	Cnt	Weight	Cnt	Weight	Cnt	Weight	Cnt	Weight	Cnt	Weight	Cnt	Weight	Cnt	Weight	Count	Weight
Feature 1	3N-50W																		
Limb	Shaft													1	.68			1	.68
Feature 5	4N-59W																		
Femur	Shaft													1	.97			1	.97
Tarsometatarsus	Shaft	1	1.07																
Tibiotarsus	Distal shaft									1	3.84							1	3.84
Feature 14	10N-35W																		
Humerus	Shaft	1	1.26															1	1.26
Tarsometatarsus	Distal											1	.45					1	.45
Tarsometatarsus	Shaft	1	.96															1	.96
Tibiotarsus	Shaft															1	2.82	1	2.82
Feature 20	56N-29W																		
Carpometacarpus	Proximal shaft							1	1.26									1	1.26
Feature 21	79N-32W																		
Ulna	Proximal shaft	2	.77															2	.77
Tibia	Proximal shaft			1	2.69													1	2.69
Feature 21	79N-34W																		
Femur	Proximal shaft	1	.69															1	.69
	6N-35W																		
Coracoid	Mostly complete	1	1.26															1	1.26
Femur	Shaft	1	1.00															1	1.00
Humerus	Mostly complete			1	12.67													1	12.67
Humerus	Proximal					1	3.12											1	3.12
Humerus	Proximal shaft	1	1.77															1	1.77
Humerus	Shaft			1	13.10													1	13.10
Limb	Shaft											3	.61					3	.61
Tibia	Shaft	1	1.28															1	1.28
Ulna	Distal shaft	1	.79															1	.79
	57N-6W																		
Tibia	Shaft													1	1.46			1	1.46
Site Total		11	10.85	3	28.46	1	3.12	1	1.26	1	3.84	4	1.06	3	3.11	1	2.82	25	55.42

Table 15: Distribution of Mammal Bone

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
1	03N-30W	4	Bos taurus	Cattle – Domestic	4	2.81
1	03N-30W	4	Capra/Ovis sp	Goat or Sheep	2	8.18
1	03N-30W	4	Mammalia, lg	Mammal – Large	1	4.39
1	03N-50W	1	Rattus norvegicus	Rat - Brown or Norway	3	.36
1	03N-50W	1	Bos Taurus	Cattle – Domestic	3	333.29
1	03N-50W	1	Capra/Ovis sp	Goat or Sheep	3	20.57
1	03N-50W	1	Mammalia, lg	Mammal – Large	11	6.70
1	03N-50W	2	Bos Taurus	Cattle – Domestic	3	39.83
1	03N-50W	2	Capra/Ovis sp	Goat or Sheep	2	5.36
1	03N-50W	2	Mammalia, v lg	Mammal - Very large	39	6.09
1	03N-50W	2	Mammalia, lg	Mammal – Large	19	23.97
1	03N-50W	3	Capra/Ovis sp	Goat or Sheep	1	23.95
1	03N-50W	3	Artiodactyla	Even-toed Ungulates – Unid	1	.62
1	03N-50W	3	Mammalia, v lg	Mammal - Very large	4	2.74
1	03N-50W	3	Mammalia, lg	Mammal – Large	11	10.65
1	03N-50W	4	Bos Taurus	Cattle – Domestic	5	128.24
1	03N-50W	4	Capra/Ovis sp	Goat or Sheep	1	10.50
1	03N-50W	4	Mammalia, v lg	Mammal - Very large	11	15.91
1	03N-50W	4	Mammalia, lg	Mammal – Large	3	2.22
1	03N-50W	5	Bos Taurus	Cattle – Domestic	5	42.23
1	03N-50W	5	Capra/Ovis sp	Goat or Sheep	3	14.29
1	03N-50W	5	Mammalia	Mammal - Unid	1	.13
1	03N-50W	5	Mammalia, v lg	Mammal - Very large	2	10.22
1	03N-50W	5	Mammalia, lg	Mammal - Large	8	10.07
1	03N-50W	6	Bos taurus	Cattle - Domestic	7	212.02
1	03N-50W	6	Mammalia, v lg	Mammal - Very large	1	1.08
1	03N-50W	6	Mammalia, lg	Mammal - Large	5	4.87
1	03N-50W	7	Bos taurus	Cattle - Domestic	8	299.97
1	03N-50W	7	Mammalia, v lg	Mammal - Very large	1	5.12
1	03N-50W	7	Mammalia, lg	Mammal - Large	3	2.03
1	03N-50W	4	Mammalia, lg	Mammal - Large	4	2.37
1	03N-50W	2	Bos taurus	Cattle - Domestic	1	12.50
Feature Total					176	1,343.28
2	03N-50W	1	Bos taurus	Cattle - Domestic	1	16.36
2	03N-50W	1	Capra/Ovis sp	Goat or Sheep	2	18.68
Feature Total					3	35.04
5	04N-59W	1	Bos taurus	Cattle - Domestic	2	177.78
5	04N-59W	1	Capra/Ovis sp	Goat or Sheep	1	3.91
5	04N-59W	1	Ovis aries	Sheep - Domestic	1	6.28
5	04N-59W	1	Artiodactyla	Even-toed Ungulates - Unid	2	4.53
5	04N-59W	1	Mammalia, v lg	Mammal - Very large	6	30.80
5	04N-59W	1	Mammalia, lg	Mammal - Large	1	1.51
5	04N-59W	2	Lepus americanus	Rabbit - Snowshoe	4	1.00

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
5	04N-59W	2	Leporidae	Rabbit Family	2	.18
5	04N-59W	2	Marmota caligata	Marmot - Hoary	1	3.42
5	04N-59W	2	Sus scrofa	Pig - Domestic	4	32.11
5	04N-59W	2	Bos taurus	Cattle - Domestic	43	1,029.66
5	04N-59W	2	Capra/Ovis sp	Goat or Sheep	30	259.67
5	04N-59W	2	Ovis aries	Sheep - Domestic	14	204.15
5	04N-59W	2	Artiodactyla	Even-toed Ungulates - Unid	20	123.83
5	04N-59W	2	Mammalia	Mammal - Unid	4	4.05
5	04N-59W	2	Mammalia v lg	Mammal - Very large	28	97.38
5	04N-59W	2	Mammalia lg	Mammal - Large	224	326.14
5	04N-59W	2	Mammalia sm	Mammal - Small	1	.18
5	04N-59W	3	Rattus sp	Rat - Old World species	1	.30
5	04N-59W	3	Carnivora	Carnivore Order	1	.29
5	04N-59W	3	Sus scrofa	Pig - Domestic	3	80.31
5	04N-59W	3	Bos taurus	Cattle - Domestic	11	255.90
5	04N-59W	3	Capra/Ovis sp	Goat or Sheep	8	81.18
5	04N-59W	3	Ovis aries	Sheep - Domestic	12	238.54
5	04N-59W	3	Artiodactyla	Even-toed Ungulates - Unid	7	16.53
5	04N-59W	3	Mammalia	Mammal - Unid	14	9.39
5	04N-59W	3	Mammalia v lg	Mammal - Very large	5	23.00
5	04N-59W	3	Mammalia lg	Mammal - Large	65	27.28
5	04N-59W	4	Rattus norvegicus	Rat - Brown or Norway	2	.24
5	04N-59W	4	Sus scrofa	Pig - Domestic	12	169.99
5	04N-59W	4	Odocoileus hemionus	Deer - Mule	6	84.80
5	04N-59W	4	Bos taurus	Cattle - Domestic	96	1,638.15
5	04N-59W	4	Capra/Ovis sp	Goat or Sheep	149	1,475.19
5	04N-59W	4	Ovis aries	Sheep - Domestic	2	27.80
5	04N-59W	4	Artiodactyla	Even-toed Ungulates - Unid	2	2.34
5	04N-59W	4	Mammalia v lg	Mammal - Very large	200	275.98
5	04N-59W	4	Mammalia lg	Mammal - Large	332	387.16
5	04N-59W	5	Sus scrofa	Pig - Domestic	4	20.92
5	04N-59W	5	Bos taurus	Cattle - Domestic	16	236.69
5	04N-59W	5	Capra/Ovis sp	Goat or Sheep	19	97.26
5	04N-59W	5	Ovis aries	Sheep - Domestic	4	73.88
5	04N-59W	5	Artiodactyla	Even-toed Ungulates - Unid	4	13.98
5	04N-59W	5	Mammalia, lg	Mammal - Large	58	54.08
5	04N-59W	6	Rattus norvegicus	Rat - Brown or Norway	1	.12
5	04N-59W	6	Sus scrofa	Pig - Domestic	2	4.05
5	04N-59W	6	Bos taurus	Cattle - Domestic	12	692.47
5	04N-59W	6	Capra/Ovis sp	Goat or Sheep	6	21.84
5	04N-59W	6	Ovis aries	Sheep - Domestic	3	57.94
5	04N-59W	6	Artiodactyla	Even-toed Ungulates - Unid	5	4.56
5	04N-59W	6	Mammalia	Mammal - Unid	19	3.76

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
5	04N-59W	6	Mammalia, v lg	Mammal - Very large	2	41.20
5	04N-59W	6	Mammalia, lg	Mammal - Large	155	109.32
5	04N-59W	6	Mammalia, sm	Mammal - Small	1	.09
5	04N-59W	7	Rattus norvegicus	Rat - Brown or Norway	2	.26
5	04N-59W	7	Sus scrofa	Pig - Domestic	5	19.18
5	04N-59W	7	Bos taurus	Cattle - Domestic	13	505.09
5	04N-59W	7	Capra/Ovis sp	Goat or Sheep	10	32.40
5	04N-59W	7	Ovis sp	Sheep - Unid	1	.71
5	04N-59W	7	Artiodactyla	Even-toed Ungulates - Unid	9	18.59
5	04N-59W	7	Mammalia	Mammal - Unid	4	1.80
5	04N-59W	7	Mammalia, v lg	Mammal - Very large	5	29.25
5	04N-59W	7	Mammalia, lg	Mammal - Large	116	78.44
5	04N-59W	7	Mammalia, md	Mammal - Medium	1	.63
5	04N-59W	8	Bos taurus	Cattle - Domestic	4	271.67
5	04N-59W	8	Capra/Ovis sp	Goat or Sheep	1	63.93
5	04N-59W	8	Ovis aries	Sheep - Domestic	1	7.81
5	04N-59W	8	Mammalia	Mammal - Unid	1	.20
5	04N-59W	8	Mammalia, lg	Mammal - Large	2	6.19
5	47N-59W	2	Vulpes fulva	Fox - Red	1	1.44
5	47N-59W	2	Sus scrofa	Pig - Domestic	2	4.50
5	47N-59W	2	Bos taurus	Cattle - Domestic	2	40.54
5	47N-59W	2	Mammalia, sm	Mammal - Small	1	.05
Feature Total					1,808	9,615.79
6	46N-33W	1	Capra/Ovis sp	Goat or Sheep	1	.24
6	46N-33W	1	Mammalia, v lg	Mammal - Very large	1	11.02
6	46N-33W	1	Mammalia, lg	Mammal - Large	7	4.52
6	46N-33W	1	Mammalia, md	Mammal - Medium	2	.68
6	46N-33W	2	Bos taurus	Cattle - Domestic	6	348.35
6	46N-33W	2	Capra/Ovis sp	Goat or Sheep	3	45.41
6	46N-33W	2	Ovis aries	Sheep - Domestic	1	37.54
6	46N-33W	3	Capra/Ovis sp	Goat or Sheep	2	8.74
6	46N-33W	3	Mammalia, v lg	Mammal - Very large	4	28.81
6	46N-33W	3	Mammalia, lg	Mammal - Large	5	5.50
6	46N-33W	4	Capra/Ovis sp	Goat or Sheep	6	39.20
6	46N-33W	4	Mammalia, lg	Mammal - Large	1	1.02
6	46N-33W	5	Sus scrofa	Pig - Domestic	1	15.02
6	46N-33W	5	Capra/Ovis sp	Goat or Sheep	2	75.28
6	46N-33W	5	Mammalia, lg	Mammal - Large	1	1.35
Feature Total					43	622.68
7	46N-33W	2	Bos taurus	Cattle - Domestic	1	20.30
7	46N-33W	2	Capra/Ovis sp	Goat or Sheep	2	13.38
7	46N-33W	2	Mammalia, v lg	Mammal - Very large	6	13.00

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
7	46N-33W	2	Mammalia, lg	Mammal - Large	1	1.03
Feature Total					10	47.71
8	67N-27W	1	Rattus norvegicus	Rat - Brown or Norway	1	.79
8	67N-27W	1	Bos taurus	Cattle - Domestic	2	30.39
8	67N-27W	1	Capra/Ovis sp	Goat or Sheep	1	13.33
8	67N-27W	1	Mammalia, lg	Mammal - Large	8	1.49
Feature Total					12	46.00
9	63N-27W	1	Mammalia, lg	Mammal - Large	1	1.42
Feature Total					1	1.42
10	68N-55W	1	Capra/Ovis sp	Goat or Sheep	1	5.26
10	68N-55W	1	Artiodactyla	Even-toed Ungulates - Unid	1	2.13
10	68N-55W	2	Bos taurus	Cattle - Domestic	1	4.75
10	68N-55W	3	Artiodactyla	Even-toed Ungulates - Unid	1	1.52
10	68N-55W	3	Mammalia	Mammal - Unid	1	.44
Feature Total					5	14.10
12	14N-39W	1	Bos taurus	Cattle - Domestic	3	23.99
12	14N-39W	1	Capra/Ovis sp	Goat or Sheep	1	4.02
12	14N-39W	1	Mammalia, lg	Mammal - Large	2	1.37
12	14N-39W	2	Capra/Ovis sp	Goat or Sheep	1	1.31
12	14N-39W	2	Mammalia, lg	Mammal - Large	1	.43
12	14N-39W	3	Bos taurus	Cattle - Domestic	1	13.92
12	14N-39W	3	Mammalia	Mammal - Unid	5	1.25
Feature Total					14	46.29
13	34N-35W	3	Capra/Ovis sp	Goat or Sheep	1	3.48
13	34N-39W	1	Bos taurus	Cattle - Domestic	1	66.96
13	34N-39W	1	Capra/Ovis sp	Goat or Sheep	1	9.88
13	34N-39W	1	Mammalia, v lg	Mammal - Very large	1	3.45
13	34N-39W	1	Mammalia, lg	Mammal - Large	1	1.79
13	34N-39W	2	Felis catus	Cat - Domestic	1	1.53
13	34N-39W	2	Bos taurus	Cattle - Domestic	2	42.06
13	34N-39W	2	Mammalia, v lg	Mammal - Very large	1	23.02
13	34N-39W	2	Mammalia, lg	Mammal - Large	1	.71
Feature Total					10	152.88
14	10N-35W	1	Sus scrofa	Pig - Domestic	1	.29
14	10N-35W	1	Bos taurus	Cattle - Domestic	7	146.48
14	10N-35W	1	Capra/Ovis sp	Goat or Sheep	2	6.85
14	10N-35W	1	Artiodactyla	Even-toed Ungulates - Unid	2	2.95
14	10N-35W	1	Mammalia, lg	Mammal - Large	16	36.24
14	10N-35W	3	Bos taurus	Cattle - Domestic	8	110.83
14	10N-35W	3	Capra/Ovis sp	Goat or Sheep	2	15.96
14	10N-35W	3	Artiodactyla	Even-toed Ungulates - Unid	1	11.65
14	10N-35W	3	Mammalia	Mammal - Unid	2	1.60
14	10N-35W	3	Mammalia, lg	Mammal - Large	5	16.25

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
14	10N-35W	4	Sus scrofa	Pig - Domestic	1	4.04
14	10N-35W	4	Bos taurus	Cattle - Domestic	4	36.59
14	10N-35W	4	Capra/Ovis sp	Goat or Sheep	1	2.01
14	10N-35W	4	Artiodactyla	Even-toed Ungulates - Unid	4	23.75
14	10N-35W	4	Mammalia, v lg	Mammal - Very large	1	3.81
14	10N-35W	4	Mammalia, lg	Mammal - Large	22	25.18
14	10N-35W	5	Bos taurus	Cattle - Domestic	5	78.44
14	10N-35W	5	Capra/Ovis sp	Goat or Sheep	2	17.14
14	16N-35W	2	Rattus norvegicus	Rat - Brown or Norway	1	.17
14	16N-35W	2	Sus scrofa	Pig - Domestic	1	7.98
14	16N-35W	2	Bos taurus	Cattle - Domestic	2	14.95
14	16N-35W	2	Capra/Ovis sp	Goat or Sheep	1	1.44
14	16N-35W	2	Artiodactyla	Even-toed Ungulates - Unid	2	6.69
14	16N-35W	2	Mammalia, lg	Mammal - Large	5	9.68
Feature Total					98	580.97
15	06N-35W	2	Bos taurus	Cattle - Domestic	7	169.93
15	06N-35W	2	Capra/Ovis sp	Goat or Sheep	1	2.59
15	06N-35W	2	Mammalia, v lg	Mammal - Very large	1	11.35
15	06N-35W	2	Mammalia, lg	Mammal - Large	5	7.47
Feature Total					14	191.34
16	06N-35W	4	Mammalia, lg	Mammal - Large	3	1.30
16	06N-39W	1	Capra/Ovis sp	Goat or Sheep	1	27.43
16	06N-39W	2	Bos taurus	Cattle - Domestic	1	73.13
Feature Total					5	101.86
17	10N-39W	1	Rattus sp	Rat - Old World species	1	.15
17	10N-39W	1	Capra/Ovis sp	Goat or Sheep	2	18.78
17	10N-39W	1	Mammalia, v lg	Mammal - Very large	5	36.66
17	10N-39W	1	Mammalia, lg	Mammal - Large	1	.91
Feature Total					9	56.50
20	56N-29W	1	Bos taurus	Cattle - Domestic	1	15.36
20	56N-29W	1	Ovis aries	Sheep - Domestic	1	12.02
20	56N-29W	3	Ovis aries	Sheep - Domestic	1	3.80
20	56N-29W	4	Bos taurus	Cattle - Domestic	1	10.15
Feature Total					4	41.33
21		4	Artiodactyla	Even-toed Ungulates - Unid	1	1.54
21		9	Sus scrofa	Pig - Domestic	2	2.61
21	19N-34W	6	Mammalia, v lg	Mammal - Very large	1	1.85
21	76N-36W	1	Bos taurus	Cattle - Domestic	2	16.46
21	76N-36W	1	Ovis aries	Sheep - Domestic	5	9.61
21	76N-36W	1	Mammalia, lg	Mammal - Large	1	.61
21	76N-36W	2	Bos taurus	Cattle - Domestic	3	15.83
21	76N-36W	2	Mammalia, v lg	Mammal - Very large	4	5.43

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
21	76N-36W	3	Bos taurus	Cattle - Domestic	8	55.40
21	76N-36W	3	Ovis aries	Sheep - Domestic	2	29.36
21	76N-36W	3	Mammalia	Mammal - Unid	1	.63
21	76N-36W	3	Mammalia, lg	Mammal - Large	1	2.59
21	76N-36W	4	Bos taurus	Cattle - Domestic	2	12.81
21	76N-36W	5	Bos taurus	Cattle - Domestic	1	8.29
21	79N-32W	1	Bos taurus	Cattle - Domestic	1	12.38
21	79N-32W	1	Artiodactyla	Even-toed Ungulates - Unid	3	12.52
21	79N-32W	2	Bos taurus	Cattle - Domestic	1	8.80
21	79N-32W	2	Ovis aries	Sheep - Domestic	1	2.14
21	79N-32W	3	Bos taurus	Cattle - Domestic	1	12.70
21	79N-32W	3	Ovis aries	Sheep - Domestic	2	56.06
21	79N-32W	3	Mammalia, lg	Mammal - Large	1	2.71
21	79N-32W	4	Sus scrofa	Pig - Domestic	1	4.84
21	79N-32W	4	Bos taurus	Cattle - Domestic	1	11.61
21	79N-32W	8	Bos taurus	Cattle - Domestic	3	80.83
21	79N-32W	8	Ovis aries	Sheep - Domestic	2	26.05
21	79N-32W	8	Mammalia, lg	Mammal - Large	2	1.55
21	79N-32W	9	Sus scrofa	Pig - Domestic	4	16.45
21	79N-32W	9	Mammalia, lg	Mammal - Large	2	11.41
21	79N-34W	2	Sus scrofa	Pig - Domestic	2	51.45
21	79N-34W	2	Ovis aries	Sheep - Domestic	3	24.23
21	79N-34W	2	Mammalia, lg	Mammal - Large	3	6.77
21	79N-34W	3	Artiodactyla	Even-toed Ungulates - Unid	1	.99
21	79N-34W	3	Mammalia, v lg	Mammal - Very large	2	8.48
21	79N-34W	4	Bos taurus	Cattle - Domestic	1	11.88
21	79N-34W	5	Bos taurus	Cattle - Domestic	3	55.86
21	79N-34W	5	Ovis/Capra sp	Sheep or Goat	2	7.38
21	79N-34W	6	Sus scrofa	Pig - Domestic	1	3.72
21	79N-34W	6	Bos taurus	Cattle - Domestic	3	40.89
21	79N-34W	6	Ovis/Capra sp	Sheep or Goat	2	11.19
21	79N-34W	6	Mammalia, v lg	Mammal - Very large	1	3.05
21	79N-34W	7	Mammalia, lg	Mammal - Large	1	.99
21	79N-34W	8	Mammalia, v lg	Mammal - Very large	2	7.24
21	79N-34W	8	Mammalia, lg	Mammal - Large	1	.64
21	79N-34W	9	Ovis aries	Sheep - Domestic	1	11.88
21	79N-34W	10	Mammalia, v lg	Mammal - Very large	1	4.95
21	79N-39W	3	Mammalia, lg	Mammal - Large	3	.30
Feature Total					92	674.96
22	79N-37W	1	Bos taurus	Cattle - Domestic	3	62.14
22	79N-37W	1	Artiodactyla	Even-toed Ungulates - Unid	1	2.40
22	79N-37W	1	Mammalia, lg	Mammal - Large	9	12.71

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
22	79N-37W	2	Sus scrofa	Pig - Domestic	3	66.46
22	79N-37W	2	Bos taurus	Cattle - Domestic	15	1,011.99
22	79N-37W	2	Ovis/Capra sp	Sheep or Goat	1	4.36
22	79N-37W	2	Ovis aries	Sheep - Domestic	7	70.98
22	79N-37W	2	Mammalia	Mammal - Unid	108	17.96
22	79N-37W	2	Mammalia, v lg	Mammal - Very large	3	12.45
22	79N-37W	2	Mammalia, lg	Mammal - Large	3	11.68
Feature Total					153	1,273.13
23			Bos taurus	Cattle - Domestic	5	133.82
23			Ovis aries	Sheep - Domestic	9	186.47
23	82N-38W	1	Bos taurus	Cattle - Domestic	1	9.56
23	82N-38W	2	Ovis/Capra sp	Sheep or Goat	3	35.59
Feature Total					18	365.44
24		2	Odocoileus hemionus	Deer - Mule	1	9.57
24		2	Mammalia, v lg	Mammal - Very large	1	11.29
24	80N-36W	1	Mammalia, v lg	Mammal - Very large	1	5.62
24	80N-36W	3	Bos taurus	Cattle - Domestic	3	52.80
24	80N-36W	3	Ovis aries	Sheep - Domestic	3	36.79
24	80N-36W	3	Artiodactyla	Even-toed Ungulates - Unid	3	4.33
24	80N-36W	3	Mammalia	Mammal - Unid	8	2.29
Feature Total					20	122.69
26			Sus scrofa	Pig - Domestic	18	50.06
26			Mammalia	Mammal - Unid	21	3.03
Feature Total					39	53.09
27			Bos taurus	Cattle - Domestic	6	80.33
27			Ovis aries	Sheep - Domestic	6	91.57
27			Artiodactyla	Even-toed Ungulates - Unid	1	18.35
27			Mammalia	Mammal - Unid	38	2.77
27			Mammalia, lg	Mammal - Large	8	29.22
Feature Total					59	222.24
	03N-50W	2	Bos Taurus	Cattle - Domestic	2	24.75
	03N-50W	2	Capra/Ovis sp	Goat or Sheep	4	25.79
	03N-50W	2	Mammalia, lg	Mammal - Large	3	3.50
	03N-50W	3	Bos taurus	Cattle - Domestic	2	130.23
	03N-50W	3	Capra/Ovis sp	Goat or Sheep	4	21.11
	03N-50W	3	Mammalia, md	Mammal - Medium	2	1.79
Unit Total					17	207.17
	04N-59W	2	Bos taurus	Cattle - Domestic	1	8.07

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	04N-59W	2	Capra/Ovis sp	Goat or Sheep	1	13.98
	04N-59W	2	Ovis aries	Sheep - Domestic	1	4.10
	04N-59W	2	Artiodactyla	Even-toed Ungulates - Unid	1	2.86
	04N-59W	2	Mammalia, lg	Mammal - Large	4	2.08
	04N-59W	4	Mammalia, lg	Mammal - Large	1	2.64
Unit Total					9	33.73
	06N-35W	1	Bos taurus	Cattle - Domestic	14	74.03
	06N-35W	1	Capra/Ovis sp	Goat or Sheep	1	1.75
	06N-35W	1	Mammalia, v lg	Mammal - Very large	6	26.19
	06N-35W	2	Lepus americanus	Rabbit - Snowshoe	1	.60
	06N-35W	2	Sus scrofa	Pig - Domestic	1	15.26
	06N-35W	2	Bos taurus	Cattle - Domestic	13	287.10
	06N-35W	2	Capra/Ovis sp	Goat or Sheep	19	84.28
	06N-35W	2	Mammalia, lg	Mammal - Large	22	18.44
	06N-35W	3	Lepus americanus	Rabbit - Snowshoe	2	.34
	06N-35W	3	Tamiasciurus hudson.	Chickaree	1	.28
	06N-35W	3	Canis sp	Dog, Wolf, Coyote - Unid	1	.35
	06N-35W	3	Sus scrofa	Pig - Domestic	4	25.11
	06N-35W	3	Bos taurus	Cattle - Domestic	17	441.28
	06N-35W	3	Capra/Ovis sp	Goat or Sheep	9	48.97
	06N-35W	3	Mammalia, lg	Mammal - Large	13	14.75
	06N-35W	4	Lepus americanus	Rabbit - Snowshoe	1	1.26
	06N-35W	4	Sus scrofa	Pig - Domestic	3	17.75
	06N-35W	4	Bos taurus	Cattle - Domestic	12	265.12
	06N-35W	4	Capra/Ovis sp	Goat or Sheep	27	159.26
	06N-35W	4	Mammalia, v lg	Mammal - Very large	11	57.34
	06N-35W	4	Mammalia, lg	Mammal - Large	18	11.69
	06N-35W	5	Bos taurus	Cattle - Domestic	6	109.90
	06N-35W	5	Capra/Ovis sp	Goat or Sheep	9	55.30
	06N-35W	5	Mammalia, v lg	Mammal - Very large	1	16.67
	06N-35W	5	Mammalia, lg	Mammal - Large	35	25.56
Unit Total					247	1,758.58
	10N-35W	1	Artiodactyla	Even-toed Ungulates - Unid	1	12.85
	10N-35W	2	Bos Taurus	Cattle – Domestic	1	21.87
	10N-35W	3	Sus scrofa	Pig - Domestic	3	20.09

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	10N-35W	3	Bos taurus	Cattle - Domestic	1	8.92
	10N-35W	3	Capra/Ovis sp	Goat or Sheep	1	26.73
	10N-35W	3	Mammalia, lg	Mammal - Large	1	.86
	10N-35W	4	Capra/Ovis sp	Goat or Sheep	2	98.20
	10N-35W	4	Mammalia, v lg	Mammal - Very large	1	30.08
	10N-35W	5	Sus scrofa	Pig - Domestic	4	13.41
	10N-35W	5	Bos taurus	Cattle - Domestic	3	49.53
	10N-35W	5	Capra/Ovis sp	Goat or Sheep	5	44.49
	10N-35W	5	Mammalia, lg	Mammal - Large	2	3.25
Unit Total					25	330.28
	13N-92W	2	Bos taurus	Cattle - Domestic	1	13.92
	13N-92W	2	Capra/Ovis sp	Goat or Sheep	1	2.59
	13N-92W	2	Artiodactyla	Even-toed Ungulates - Unid	1	3.57
	13N-92W	2	Mammalia, lg	Mammal - Large	1	.30
	13N-92W	3	Bos taurus	Cattle - Domestic	1	9.91
	13N-92W	3	Capra/Ovis sp	Goat or Sheep	1	3.46
	13N-92W	3	Mammalia, lg	Mammal - Large	6	4.67
	13N-92W	4	Bos taurus	Cattle - Domestic	2	16.35
	13N-92W	4	Artiodactyla	Even-toed Ungulates - Unid	5	12.89
	13N-92W	4	Mammalia, lg	Mammal - Large	15	11.59
	13N-92W	5	Sus scrofa	Pig - Domestic	4	7.32
	13N-92W	5	Bos taurus	Cattle - Domestic	11	253.04
	13N-92W	5	Capra/Ovis sp	Goat or Sheep	8	46.91
	13N-92W	5	Artiodactyla	Even-toed Ungulates - Unid	5	8.28
	13N-92W	5	Mammalia, lg	Mammal - Large	56	41.32
	13N-92W	6	Sus scrofa	Pig - Domestic	1	.72
	13N-92W	6	Bos taurus	Cattle - Domestic	13	93.24
	13N-92W	6	Capra/Ovis sp	Goat or Sheep	33	170.41
	13N-92W	6	Artiodactyla	Even-toed Ungulates - Unid	1	.46
	13N-92W	6	Mammalia, lg	Mammal - Large	42	37.71
	13N-92W	7	Canis sp	Dog, Wolf, Coyote - Unid	1	7.51
	13N-92W	7	Odocoileus hemionus	Deer - Mule	1	62.82
	13N-92W	7	Bos taurus	Cattle - Domestic	7	274.97
	13N-92W	7	Capra/Ovis sp	Goat or Sheep	17	51.38
	13N-92W	7	Ovis sp	Sheep - Unid	2	6.88

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	13N-92W	7	Artiodactyla	Even-toed Ungulates - Unid	5	7.46
	13N-92W	7	Mammalia, lg	Mammal - Large	106	89.46
	13N-92W	8	Bos taurus	Cattle - Domestic	3	60.99
	13N-92W	8	Ovis aries	Sheep - Domestic	3	17.67
	13N-92W	8	Ovis sp	Sheep - Unid	1	8.59
	13N-92W	8	Mammalia, lg	Mammal - Large	45	35.99
	13N-92W	8	Mammalia, md	Mammal - Medium	3	3.72
	13N-92W	9	Capra/Ovis sp	Goat or Sheep	3	7.37
	13N-92W	9	Mammalia, lg	Mammal - Large	14	18.20
	13N-92W	9	Mammalia, md	Mammal - Medium	1	1.22
	13N-92W	10	Bos taurus	Cattle - Domestic	1	12.89
	13N-92W	10	Artiodactyla	Even-toed Ungulates - Unid	2	6.37
	13N-92W	10	Mammalia, lg	Mammal - Large	26	42.77
	13N-92W	11	Bos taurus	Cattle - Domestic	17	716.54
	13N-92W	11	Capra/Ovis sp	Goat or Sheep	2	11.74
	13N-92W	11	Ovis aries	Sheep - Domestic	1	45.42
	13N-92W	11	Mammalia, lg	Mammal - Large	42	50.38
	13N-92W	12	Bos taurus	Cattle - Domestic	43	1,790.75
	13N-92W	12	Capra/Ovis sp	Goat or Sheep	18	183.06
	13N-92W	12	Artiodactyla, lg	Even-toed Ungulates - Large	2	23.79
	13N-92W	12	Mammalia, v lg	Mammal - Very large	19	126.95
	13N-92W	12	Mammalia, lg	Mammal - Large	37	31.01
Unit Total					630	4,434.56
	14N-39W	1	Mammalia	Mammal - Unid	1	.17
	14N-39W	3	Bos taurus	Cattle - Domestic	1	50.40
	14N-39W	3	Capra/Ovis sp	Goat or Sheep	3	2.53
Unit Total					5	53.10
	22N-35W	2	Bos taurus	Cattle - Domestic	1	8.63
	22N-35W	4	Bos taurus	Cattle - Domestic	1	24.85
Unit Total					2	33.48
	30N-39W	2	Bos taurus	Cattle - Domestic	1	30.46
	30N-39W	2	Mammalia	Mammal - Unid	1	.71
	30N-39W	2	Mammalia, lg	Mammal - Large	3	17.03
	30N-39W	3	Bos taurus	Cattle - Domestic	2	88.68
	30N-39W	3	Capra/Ovis sp	Goat or Sheep	1	1.15

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	30N-39W	3	Mammalia, lg	Mammal - Large	10	23.50
	30N-39W	4	Bos taurus	Cattle - Domestic	6	82.90
	30N-39W	4	Capra/Ovis sp	Goat or Sheep	7	33.68
	30N-39W	4	Mammalia	Mammal - Unid	2	.60
	30N-39W	4	Mammalia, lg	Mammal - Large	3	5.69
Unit Total					36	284.40
	34N-35W	1	Bos taurus	Cattle - Domestic	1	25.85
	34N-35W	2	Capra/Ovis sp	Goat or Sheep	1	26.29
	34N-35W	3	Capra/Ovis sp	Goat or Sheep	3	19.73
	34N-35W	3	Mammalia, lg	Mammal - Large	1	4.35
	34N-35W	4	Bos taurus	Cattle - Domestic	1	13.13
	34N-35W	4	Capra/Ovis sp	Goat or Sheep	1	8.75
	34N-35W	4	Mammalia, lg	Mammal - Large	1	1.55
Unit Total					9	99.65
	34N-39W	1	Sus scrofa	Pig - Domestic	1	7.23
	34N-39W	1	Bos taurus	Cattle - Domestic	3	63.75
	34N-39W	1	Capra/Ovis sp	Goat or Sheep	7	19.45
	34N-39W	1	Mammalia, v lg	Mammal - Very large	1	4.10
	34N-39W	1	Mammalia, lg	Mammal - Large	11	17.91
Unit Total					23	112.44
	46N-33W	3	Mammalia	Mammal - Unid	1	.62
Unit Total					1	.52
	47N-31W	4	Capra/Ovis sp	Goat or Sheep	2	18.62
	47N-31W	4	Mammalia, v lg	Mammal - Very large	1	24.02
	47N-31W	4	Mammalia, lg	Mammal - Large	1	11.55
	47N-31W	5	Capra/Ovis sp	Goat or Sheep	1	3.12
	47N-31W	5	Mammalia, lg	Mammal - Large	1	.98
	47N-31W	6	Bos taurus	Cattle - Domestic	7	105.45
	47N-31W	6	Capra/Ovis sp	Goat or Sheep	2	6.09
	47N-31W	6	Mammalia, lg	Mammal - Large	7	8.75
	47N-31W	7	Bos taurus	Cattle - Domestic	3	215.27
	47N-31W	7	Artiodactyla	Even-toed Ungulates - Unid	1	3.05
	47N-31W	7	Mammalia, lg	Mammal - Large	10	5.07
	47N-31W	7	Mammalia, md	Mammal - Medium	1	.45
Unit Total					37	402.42

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	52N-28W		Capra/Ovis sp	Goat or Sheep	3	10.47
Unit Total					3	10.47
	54N-27W	0	Capra/Ovis sp	Goat or Sheep	1	2.92
Unit Total					1	2.92
	56N-29W	2	Ovis sp	Sheep - Unid	1	3.85
	56N-29W	3	Ovis/Capra sp	Sheep or Goat	3	4.71
	56N-29W	5	Mammalia, lg	Mammal - Large	1	1.42
	56N-29W	6	Ovis/Capra sp	Sheep or Goat	1	52.52
	56N-29W	6	Mammalia	Mammal - Unid	5	.10
	56N-29W	6	Mammalia, lg	Mammal - Large	2	6.90
	56N-29W	7	Bos taurus	Cattle - Domestic	1	8.38
	56N-29W	7	Ovis aries	Sheep - Domestic	1	13.86
	56N-29W	7	Mammalia, v lg	Mammal - Very large	1	4.85
	56N-29W	7	Mammalia, lg	Mammal - Large	2	1.94
Unit Total					18	98.53
	57N-06W		Bos taurus	Cattle - Domestic	1	48.83
Unit Total					1	48.83
	58N-37W	1	Sus scrofa	Pig - Domestic	1	16.12
	58N-37W	1	Bos taurus	Cattle - Domestic	2	138.96
	58N-37W	1	Capra/Ovis sp	Goat or Sheep	5	35.59
	58N-37W	1	Mammalia	Mammal - Unid	3	.78
	58N-37W	1	Mammalia, lg	Mammal - Large	1	2.26
	58N-37W	2	Bos taurus	Cattle - Domestic	1	53.51
	58N-37W	2	Capra/Ovis sp	Goat or Sheep	2	3.76
	58N-37W	2	Mammalia, lg	Mammal - Large	2	1.19
Unit Total					17	252.17
	59N-21W	1	Capra/Ovis sp	Goat or Sheep	1	6.00
	59N-21W	1	Mammalia, v lg	Mammal - Very large	3	13.83
	59N-21W	2	Capra/Ovis sp	Goat or Sheep	1	5.84
	59N-21W	2	Mammalia, lg	Mammal - Large	2	.97
	59N-21W	3	Bos taurus	Cattle - Domestic	9	29,275.81
	59N-21W	3	Capra/Ovis sp	Goat or Sheep	5	26.58
	59N-21W	3	Mammalia, lg	Mammal - Large	5	2.08
Unit Total					26	29,331.11
	60N-12W	0	Bos taurus	Cattle - Domestic	1	14.45
Unit Total					1	14.45

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	60N-15W	0	Capra/Ovis sp	Goat or Sheep	1	7.22
Unit Total					1	7.22
	60N-27W	1	Bos taurus	Cattle - Domestic	1	8.40
	60N-27W	1	Capra/Ovis sp	Goat or Sheep	1	28.57
	60N-27W	1	Mammalia, lg	Mammal - Large	2	.92
	60N-27W	2	Bos taurus	Cattle - Domestic	6	217.18
	60N-27W	2	Capra/Ovis sp	Goat or Sheep	6	147.53
	60N-27W	2	Mammalia, lg	Mammal - Large	3	3.44
Unit Total					19	406.04
	62N-07W	0	Bos taurus	Cattle - Domestic	1	12.91
	62N-07W	0	Capra/Ovis sp	Goat or Sheep	2	61.87
	62N-07W	0	Mammalia, v lg	Mammal - Very large	1	20.35
Unit Total					4	95.13
	63N-03W	0	Capra/Ovis sp	Goat or Sheep	2	12.22
Unit Total					2	12.22
	63N-06W	0	Capra/Ovis sp	Goat or Sheep	3	1.66
Unit Total					3	1.66
	63N-12W	0	Bos taurus	Cattle - Domestic	1	42.34
Unit Total					1	42.34
	63N-15W	0	Capra/Ovis sp	Goat or Sheep	1	8.22
Unit Total					1	8.22
	63N-18W	0	Mammalia, lg	Mammal - Large	1	8.12
Unit Total					1	8.12
	63N-21W	0	Capra/Ovis sp	Goat or Sheep	2	77.06
Unit Total					2	77.05
	63N-24W	0	Capra/Ovis sp	Goat or Sheep	1	57.84
Unit Total					1	57.84
	65N-15W		Sus scrofa	Pig - Domestic	2	65.78
	65N-15W		Bos taurus	Cattle - Domestic	3	302.22
	65N-15W		Ovis aries	Sheep - Domestic	4	54.56
	65N-15W		Mammalia, v lg	Mammal - Very large	1	14.46
Unit Total					10	437.02
	66N-06W	0	Mammalia, v lg	Mammal - Very large	1	5.42
Unit Total					1	5.42
	66N-12W	0	Bos taurus	Cattle - Domestic	1	150.04
Unit Total					1	150.04
	66N-15W	0	Sus scrofa	Pig - Domestic	1	20.02

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	66N-15W	0	Bos taurus	Cattle - Domestic	2	231.08
	66N-15W	0	Capra/Ovis sp	Goat or Sheep	1	20.79
Unit Total					4	271.89
	66N-18W	0	Bos taurus	Cattle - Domestic	1	127.12
	66N-18W	0	Ovis aries	Sheep - Domestic	1	37.78
	66N-18W	0	Mammalia, lg	Mammal - Large	1	1.62
	66N-18W	1	Rattus norvegicus	Rat - Brown or Norway	1	.38
	66N-18W	1	Bos taurus	Cattle - Domestic	1	99.97
	66N-18W	1	Ovis aries	Sheep - Domestic	1	8.55
	66N-18W	1	Artiodactyla	Even-toed Ungulates - Unid	2	4.73
	66N-18W	1	Mammalia, lg	Mammal - Large	4	5.43
	66N-18W	2	Lepus americanus	Rabbit - Snowshoe	1	.87
	66N-18W	2	Sus scrofa	Pig - Domestic	2	25.16
	66N-18W	2	Bos taurus	Cattle - Domestic	11	374.73
	66N-18W	2	Capra/Ovis sp	Goat or Sheep	8	45.05
	66N-18W	2	Ovis aries	Sheep - Domestic	2	29.63
	66N-18W	2	Mammalia, lg	Mammal - Large	8	16.38
Unit Total					44	777.40
	66N-21W	0	Bos taurus	Cattle - Domestic	2	199.27
	66N-21W	0	Artiodactyla	Even-toed Ungulates - Unid	1	3.75
	66N-21W	0	Mammalia, v lg	Mammal - Very large	1	13.71
Unit Total					4	216.73
	67N-24W	1	Bos taurus	Cattle - Domestic	3	205.19
	67N-24W	1	Artiodactyla	Even-toed Ungulates - Unid	1	4.20
Unit Total					4	209.39
	67N-27W	2	Bos taurus	Cattle - Domestic	1	253.44
	67N-27W	2	Ovis aries	Sheep - Domestic	1	43.23
	67N-27W	2	Mammalia, v lg	Mammal - Very large	1	6.05
	67N-27W	2	Mammalia, lg	Mammal - Large	1	2.77
	67N-27W	3	Rattus norvegicus	Rat - Brown or Norway	1	.10
	67N-27W	3	Capra/Ovis sp	Goat or Sheep	1	5.71
	67N-27W	3	Mammalia	Mammal - Unid	2	.11
Unit Total					8	311.41
	68N-55W	1	Bos taurus	Cattle - Domestic	2	72.78
	68N-55W	1	Mammalia	Mammal - Unid	2	1.68

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	68N-55W	2	Sus scrofa	Pig - Domestic	1	5.69
	68N-55W	2	Mammalia, lg	Mammal - Large	1	2.32
	68N-55W	3	Capra/Ovis sp	Goat or Sheep	1	4.57
	68N-55W	4	Bos taurus	Cattle - Domestic	1	10.37
Unit Total					8	97.41
	69N-12W	0	Bos taurus	Cattle - Domestic	1	38.70
Unit Total					1	38.70
	69N-15W	0	Bos taurus	Cattle - Domestic	4	41.70
Unit Total					4	41.70
	69N-18W	0	Bos taurus	Cattle - Domestic	1	32.13
	69N-18W	0	Ovis aries	Sheep - Domestic	1	19.65
Unit Total					2	51.78
	69N-27W	1	Bos taurus	Cattle - Domestic	3	73.31
	69N-27W	1	Ovis aries	Sheep - Domestic	1	7.25
	69N-27W	1	Mammalia, lg	Mammal - Large	1	1.26
Unit Total					5	81.82
	72N-21W	0	Bos taurus	Cattle - Domestic	1	317.00
Unit Total					1	317.00
	72N-27W	1	Bos taurus	Cattle - Domestic	2	253.00
Unit Total					2	253.00
	75N-06W	0	Bos taurus	Cattle - Domestic	1	157.00
Unit Total					1	157.00
	78N-27W	2	Mammalia, lg	Mammal - Large	3	9.15
Unit Total					3	9.15
	78N-29W	0	Mammalia, lg	Mammal - Large	1	.50
	78N-29W	1	Bos taurus	Cattle - Domestic	3	148.30
Unit Total					4	148.80
	79N-32W	1	Bos taurus	Cattle - Domestic	1	3.81
	79N-32W	1	Ovis/Capra sp	Sheep or Goat	1	.82
	79N-32W	2	Ovis/Capra sp	Sheep or Goat	2	32.14
	79N-32W	2	Mammalia, v lg	Mammal - Very large	1	1.37
	79N-32W	2	Mammalia, lg	Mammal - Large	2	2.12
Unit Total					7	40.26
	79N-34W	0	Sus scrofa	Pig - Domestic	1	33.58
	79N-34W	0	Bos taurus	Cattle - Domestic	2	228.08
	79N-34W	0	Ovis aries	Sheep - Domestic	1	11.77
	79N-34W	0	Artiodactyla	Even-toed Ungulates - Unid	1	2.65

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	79N-34W	1	Ovis aries	Sheep - Domestic	2	26.13
	79N-34W	1	Mammalia	Mammal - Unid	2	1.14
Unit Total					9	303.35
	79N-37W	1	Bos taurus	Cattle - Domestic	1	30.23
	79N-37W	2	Mammalia, v lg	Mammal - Very large	1	4.48
	79N-37W	2	Mammalia, lg	Mammal - Large	1	1.11
	79N-37W	3	Bos taurus	Cattle - Domestic	2	19.54
	79N-37W	3	Mammalia	Mammal - Unid	3	.10
	79N-37W	8	Ovis aries	Sheep - Domestic	5	19.47
	79N-37W	9	Bos taurus	Cattle - Domestic	3	46.05
	79N-37W	10	Bos taurus	Cattle - Domestic	2	56.52
	79N-37W	10	Ovis aries	Sheep - Domestic	1	12.56
Unit Total					19	190.06
	82N-38W	1	Sus scrofa	Pig - Domestic	1	1.06
	82N-38W	1	Odocoileus hemionus	Deer - Mule	1	13.12
	82N-38W	1	Bos taurus	Cattle - Domestic	9	243.82
	82N-38W	1	Ovis/Capra sp	Sheep or Goat	9	62.03
	82N-38W	1	Ovis aries	Sheep - Domestic	2	19.57
	82N-38W	1	Mammalia, v lg	Mammal - Very large	1	2.83
	82N-38W	1	Mammalia, lg	Mammal - Large	13	1.74
	82N-38W	2	Sus scrofa	Pig - Domestic	1	.94
	82N-38W	2	Bos taurus	Cattle - Domestic	7	86.29
	82N-38W	2	Ovis aries	Sheep - Domestic	1	9.72
	82N-38W	2	Artiodactyla	Even-toed Ungulates - Unid	1	1.19
	82N-38W	2	Mammalia, lg	Mammal - Large	14	17.13
	82N-38W	3	Bos taurus	Cattle - Domestic	2	49.78
	82N-38W	3	Ovis aries	Sheep - Domestic	1	3.31
Unit Total					63	512.53
	86N-28W	0	Bos taurus	Cattle - Domestic	2	351.90
Unit Total					2	351.90
	86N-31W	0	Bos taurus	Cattle - Domestic	1	16.60
Unit Total					1	16.60
	86N-38W		Mammalia, lg	Mammal - Large	1	.83
	86N-38W	0	Odocoileus hemionus	Deer - Mule	1	12.83
	86N-38W	1	Artiodactyla	Even-toed Ungulates - Unid	1	4.75
	86N-38W	1	Mammalia	Mammal - Unid	5	.63
Unit Total					8	19.04

Table 15: (cont.)

Feature	Unit	Level	Taxon	Common Name	Count	Weight(g)
	93N-57W	1	Bos taurus	Cattle - Domestic	1	19.06
	93N-57W	1	Mammalia, lg	Mammal - Large	4	2.86
Unit Total					5	21.92
	95N-13W	0	Bos taurus	Cattle - Domestic	1	23.55
	95N-13W	0	Mammalia, v lg	Mammal - Very large	1	6.16
Unit Total					2	29.71
	97N-16W	0	Bos taurus	Cattle - Domestic	1	46.58
Unit Total					1	45.58
	Unknown		Ovis/Capra sp	Sheep or Goat	1	3.03
	Unknown		Mammalia, lg	Mammal - Large	2	.59
Unit Total					3	3.62
Site Total					3963	58,944.73

Table 16: Distribution of Sawed Mammal Bone

	Cow		Sheep		Sheep/Goat		Pig		Artiodactyl		Mammal		Mammal, lg		Mammal, v lg		Total	
Element	Cnt	Wght(g)	Cnt	Wght(g)	Cnt	Wght(g)	Cnt	Wght(g)	Cnt	Wght(g)	Cnt	Wght(g)	Cnt	Wght(g)	Cnt	Wght(g)	Cnt	Weight(g)
Femur	18	1,578.30			5	109.05					1	.55			1	14.46	23	1,649.1
Fibula							1	4.94									1	4.94
Humerus	15	974.67			23	254.84	2	29.12					1	4.58			41	1,263.2
Ilium	3	46.75															3	46.75
Indeter.	12	115.68									2	.49	134	212.69	77	261.11	224	589.60
Innominate	19	561.57	1	48.18	10	34.19	4	51.88	2	8.40			1	3.87			36	704.61
Ischium					1	3.91											1	3.91
Limb	8	203.88			2	4.60							33	104.00	3	33.56	43	340.09
Metacarpal	1	32.13			2	4.00											3	36.13
Metapodial					1	3.88											1	3.88
Patella	1	48.83															1	48.83
Radius	14	1,084.2	3	38.57	6	97.17							1	5.42			24	1,225.4
Rib	68	1,401.4			9	35.93			7	20.00	1	.44	65	148.43	7	110.44	157	1,716.7
Sacrum	3	70.82															3	70.82
Scapula	9	174.89			15	61.99			1	1.61			3	11.78	2	20.22	30	270.49
Tarsal, astrag	1	120.25															1	120.25
Tarsal, calcan	2	214.80			3	14.82											5	229.62
Tibia	29	2,307.9	4	121.15	24	534.10	4	93.46	4	54.74							65	3,111.3
Tooth, molar							1	9.32									1	9.32
Ulna	4	89.04			2	13.51	1	15.46									7	118.01
Vert, atlas			2	33.78													2	33.78
Vert, axis	1	35.80							1	4.55							2	40.35
Vert, cervical	14	329.32			2	4.44			1	3.03			1	1.40			18	338.19
Vert, lumbar	37	774.43	1	.52	5	18.42			2	4.86			1	.86	1	5.12	47	804.21
Vert, thoracic	16	218.31			1	3.31	3	2.33					2	2.57			22	226.52
Vertebra	30	286.27	1	1.12	4	9.34			1	1.16			12	42.97	11	74.54	59	415.40
Total	305	10,669.3	12	243.32	115	1,207.5	16	206.5	19	98.35	4	1.48	254	538.37	102	519.45	827	13,484.5

Table 17: Distribution of Sawed Mammal Bone Elements

[illegible]

Table 17: (cont.)

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Table 17: (cont.)

Element	Part	Cow		Sheep		Sheep/Goat		Pig		Artiodactyl		Mammal		Mammal, lg		Mammal, v lg		Total	
		Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Weight
Ischium	Fragment					1	3.91											1	3.91
Limb	Shaft	4	99.30											15	34.83			19	134.13
Radius	distal epiph			1	5.21													1	5.21
Radius	Proximal	2	115.4	1	8.28													3	123.64
Radius	proximal shaft	1	74.96															1	74.96
Radius	proximal+shaft					1	33.42											1	33.42
Radius	Shaft	1	26.47			2	29.68											3	56.15
Rib	articlr surface	4	96.87															4	96.87
Rib	Proximal	1	3.75															1	3.75
Rib	Shaft	24	572.1			6	25.22			3	7.52			47	104.25	1	17.96	81	727.06
Rib	vertebral end													3	21.25			3	21.25
Scapula	Blade	1	37.08			2	16.26									1	14.17	4	67.51
Scapula	Fragment	1	6.96			3	11.28											4	18.24
Scapula	Proximal	1	23.98			1	5.56											2	29.54
Scapula	Spine					1	2.02											1	2.02
Tarsal,calcan	Most					1	9.59											1	9.59
Tibia	Distal	1	38.83	2	32.50													3	71.33
Tibia	distal epiph									1	3.79							1	3.79
Tibia	distal shaft									1	14.0							1	13.97
Tibia	distal+shaft	1	404.5			7	215.96											8	620.44
Tibia	Proximal	1	98.2															1	98.23
Tibia	Shaft	3	106.5			2	33.20	4	93.46	1	23.88							10	257.06
Ulna	Proximal	1	14.57			1	6.31											2	20.88
Ulna	Shaft	1	14.31															1	14.31
Vert,atlas	Most			1	17.13													1	17.13
Vert,axis	Fragment									1	4.55							1	4.55

Table 17: (cont.)

Element	Part	Cow		Sheep		Sheep/Goat		Pig		Artiodactyl		Mammal		Mammal, lg		Mammal, v lg		Total	
		Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Weight
Vert,cervical	articlr surface	1	11.64															1	11.64
Vert,cervical	Fragment	3	69.13															3	69.13
Vert,lumbar	articlr surface	2	19.21			1	1.57											3	20.78
Vert,lumbar	Centrum	3	55.94			2	12.09			1	2.88							6	70.91
Vert,lumbar	centrum frag	1	16.52															1	16.52
Vert,lumbar	Fragment	5	60.56															5	60.56
Vert,lumbar	Process	1	18.51															1	18.51
Vert,lumbar	Spine									1	1.98							1	1.98
Vert,lumbar	transvrs process	2	32.01															2	32.01
Vert,lumbar	Zygapophysis	1	1.59															1	1.59
Vert,thoracic	articlr surface	1	19.24					1	1.39									2	20.63
Vert,thoracic	centrum epiph	1	3.30											1	1.73			2	5.03
Vert,thoracic	Fragment	1	6.42															1	6.42
Vert,thoracic	Process	1	18.25															1	18.25
Vert,thoracic	Spine	3	30.78											1	.84			4	31.62
Vertebra	articlr surface	1	2.49															1	2.49
Vertebra	Centrum															1	3.43	1	3.43
Vertebra	centrum epiph	2	9.77											1	1.12			3	10.89
Vertebra	centrum frag													1	8.33			1	8.33
Vertebra	Epiphysis	1	6.71															1	6.71
Vertebra	Fragment	2	15.84			1	2.38							2	11.93	6	42.10	11	72.25
Feature Total		106	2,863.6	6	111.3	43	485.91	8	135.1	11	66.97	3	1.04	141	286.27	64	214.0	382	4,164.22
FEATURE 6, UNIT 46N-33W																			
indeterminate	Fragment															3	21.56	3	21.56
limb	distal shaft	1	50.53															1	50.53
limb	Shaft					1	.24							1	1.35			2	1.59

Table 17: (cont.)

Element	Part	Cow		Sheep		Sheep/Goat		Pig		Artiodactyl		Mammal		Mammal, lg		Mammal, v lg		Total	
		Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Weight
rib	Shaft	2	18.56															2	18.56
vertebra	Process															1	7.25	1	7.25
Feature Total		3	69.09			1	.24							1	1.35	4	28.81	9	99.49
FEATURE 8, UNIT 67N-27W																			
rib	Shaft	1	9.96															1	9.96
vert, thoracic	articl surface	1	20.43															1	20.43
Feature Total		2	30.39															2	30.39
FEATURE 9, UNIT 63N-27W																			
indeterminate	Fragment													1	1.42			1	1.42
FEATURE 10, UNIT 68N-55W																			
humerus	Shaft					1	5.26											1	5.26
rib	Shaft											1	.44					1	.44
Feature Total						1	5.26					1	.44					2	5.70
FEATURE 12, UNIT 14N-39W																			
vert, lumbar	Fragment	1	8.59															1	8.59
FEATURE 13, UNIT 34N-35W																			
innominate	Ilium					1	3.48											1	3.48
FEATURE 13, UNIT 34N-39W																			
indeterminate	Fragment													1	.71	1	3.45	2	4.16
rib	Shaft	1	14.18															1	14.18
Feature Total		1	14.18											1	.71	1	3.45	3	18.34

Table 17: (cont.)

		Cow		Sheep		Sheep/Goat		Pig		Artiodactyl		Mammal		Mammal, lg		Mammal, v lg		Total	
Element	Part	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Weight
FEATURE 14, UNIT 10N-35W (G.R. Privy)																			
femur	Fragment	1	27.69															1	27.69
humerus	Distal					1	11.48											1	11.48
indeterminate	Fragment	1	7.28											13	23.09			14	30.37
innominate	Ilium	2	25.21															2	25.21
limb	Shaft													3	30.04			3	30.04
radius	Distal	1	104.5															1	104.52
radius	Shaft													1	5.42			1	5.42
rib	Proximal	1	11.87															1	11.87
rib	Shaft	1	15.31			1	2.79			1	4.00							3	22.10
tibia	Distal	1	13.39															1	13.39
tibia	distal shaft									1	13.1							1	13.10
vert,cervical	Centrum									1	3.03							1	3.03
vert,cervical	centrum epiph													1	1.40			1	1.40
vert,lumbar	articlr surface	1	16.01															1	16.01
vert,lumbar	Fragment	1	3.17															1	3.17
vert,lumbar	Process	1	15.10											1	.86			2	15.96
vert,thoracic	Centrum	1	19.25															1	19.25
vertebra	articlr surface	1	4.92															1	4.92
vertebra	Centrum	1	8.90															1	8.90
vertebra	Fragment	3	20.89															3	20.89
Feature Total		21	364.9			5	118.13	1	9.32					20	63.80	1	30.08	51	606.37
FEATURE 14, UNIT 16N-35W (G.R. Privy)																			
rib	Shaft													1	1.49			1	1.49

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Table 17: (cont.)

Element	Part	Cow		Sheep		Sheep/Goat		Pig		Artiodactyl		Mammal		Mammal, lg		Mammal, v lg		Total	
		Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Weight
rib	vertebral end													1	.86			1	.86
scapula	blade	1	29.74			1	3.85											2	33.59
scapula	fragment					2	3.29											2	3.29
tibia	distal+shaft	1	245.5			1	23.41											2	268.94
tibia	proximal+shaft					2	42.18											2	42.18
tibia	shaft	2	46.63			1	6.43											3	53.06
ulna	distal							1	15.46									1	15.46
vert,cervical	fragment	2	44.41			1	1.85											3	46.26
vert,lumbar	articlr surface	1	4.74															1	4.74
vert,lumbar	centrum	1	15.89															1	15.89
vert,lumbar	fragment	2	15.27															2	15.27
vert,thoracic	centrum					1	3.31											1	3.31
vert,thoracic	spine	1	4.04															1	4.04
vertebra	epiphysis															1	6.80	1	6.80
vertebra	fragment													1	5.25			1	5.25
vertebra	spine	1	12.46															1	12.46
Unit Total		28	799.7			18	121.60	3	35.66					7	15.75	10	54.23	66	1,026.92
UNIT 10N-35W (Privy)																			
humerus	proximal shaft					1	91.00											1	91.00
humerus	shaft					1	5.66											1	5.66
indeterminate	fragment													1	2.99			1	2.99
innominate	ilium	1	25.62															1	25.62
limb	shaft	1	21.87															1	21.87
rib	shaft															1	30.08	1	30.08

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Table 17: (cont.)

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Table 17: (cont.)

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Table 17: (cont.)

Element	Part	Cow		Sheep		Sheep/Goat		Pig		Artiodactyl		Mammal		Mammal, lg		Mammal, v lg		Total	
		Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Weight
vert,lumbar	articlr surface	1	16.60															1	16.60
UNIT 93N-57W																			
indeterminate	fragment													1	1.65			1	1.65
rib	shaft	1	19.06															1	19.06
Unit Total		1	19.06											1	1.65			2	20.71
UNIT 95N-13W (Rosa/Br/ Panth)																			
limb	epiphysis	1	23.55															1	23.55
SITE TOTAL		305	10,669	12	243.3	115	1,207.5	16	206.5	19	98.4	4	1.5	254	538.6	102	519.5	827	13,484.5

Table 18: Distribution of Sawed 1" Thick Mammal Bone

	Cow		Sheep/Goat		Mammal v lg		Total	
Element	Count	Weight(g)	Count	Weight(g)	Count	Weight (g)	Count	Weight(g)
Femur	1	87.42					1	87.42
Indeterminate					1	7.31	1	7.31
Innominate	3	85.74	1	3.48			4	89.22
Rib					2	9.59	2	9.59
Sacrum	2	60.14					2	60.14
Scapula	1	23.98					1	23.98
Vert, lumbar	4	55.75					4	55.75
Vert, lumbar/s	2	23.84					2	23.84
Vertebra	1	5.74					1	5.74
Total	14	342.61	1	3.48	3	16.90	18	362.99

Additional Information:

Taxon	Element	Cut(A)	Comments	Count	Weight
Mammalia, v lg	Indeterminate	1	2 transverse cuts	1	7.31
Bos Taurus	Vert, lumbar	1	2 transverse cuts	1	11.42
Bos Taurus	Innominate	1	sirloin steak	1	40.86
Bos Taurus	Vert, lumbar	1	T bone	1	8.59
Bos Taurus	Sacrum	1	steak cut	1	41.03
Bos Taurus	Vert, lumbar	1	steak cut	1	18.51
Bos Taurus	Vert, lumbar/sacr	1	steak cut	2	23.84
Bos Taurus	Sacrum	1	minor burning	1	19.11
Bos Taurus	Innominate	1 ½	top sirloin	1	24.54
Mammalia, v lg	Rib	1 ¼	2 transverse cuts	2	9.59
Bos Taurus	Femur	2		1	87.42

Table 19: Distribution of Sawed 3/4" Thick Mammal Bone at KLGO

	Cow		Sheep/Goat		Mammal v lg		Total	
Element	Count	Weight(g)	Count	Weight(g)	Count	Weight(g)	Count	Weight(g)
Humerus			3	13.93			3	13.93
indeterminate					2	31.66	2	31.66
Innominate	4	73.05	1	3.91			5	76.96
Tibia	2	57.50					2	57.50
vert lumbar	2	23.28					2	23.28
vert thoracic	1	12.79					1	12.79
Vertebra	2	12.53			1	11.29	3	23.82
Total	11	179.15	4	17.84	3	42.95	18	239.94

<i>Additional Information</i>					
Taxon	Element	Cut	Comments	Count	Weight
Ovis/Capra sp	Humerus	¾	2 transverse cuts	2	9.78
Bos Taurus	Innominate	¾	2 transverse cuts	1	20.50
Bos Taurus	Innominate	¾	2 transverse cut steak cut	1	11.21
Bos Taurus	Tibia	¾	2 transverse cuts	1	23.07
Bos Taurus	Tibia	¾	2 transverse cuts round steak	1	34.43
Bos Taurus	vert thoracic	¾	2 transverse cuts	1	12.79
Mammalia, v lg	Vertebra	¾	transverse cut	1	11.29
Mammalia, v lg	Indeterminate	¾	steak cut	1	20.35
Bos Taurus	Innominate	¾	steak cut	1	30.44
Bos Taurus	vert lumbar	¾	steak cut	1	8.83
Bos Taurus	Vertebra	¾	steak cut	1	2.88
Ovis/Capra sp	humerus	¾	round steak	1	4.15

Table 20: Distribution of Sawed 1/2" Thick Mammal Bone

	Cow		Sheep/Goat		Artiodactyl		Mammal lg		Mammal v lg		Total	
Element	Ct	Wght(g)	Ct	Wght(g)	Ct	Wght(g)	Ct	Wght(g)	Ct	Wght(g)	Ct	Weight(g)
Femur	2	45.38	1	4.49							3	49.87
Humerus	2	63.73	2	8.01							4	71.74
Indeter.	8	89.08					1	2.99			9	92.07
Innominate	1	24.64	1	2.91							2	27.55
Limb	2	22.88					1	1.35	1	24.02	4	48.25
Radius	1	20.58									1	20.58
Scapula	2	43.71	6	25.02	1	1.61	2	4.19	1	6.05	12	80.58
Tibia	3	79.89									3	79.89
vert cervical	1	7.57									1	7.57
vert lumbar	4	34.95									4	34.95
Vertebra	8	68.71	2	5.08			1	5.25	2	11.31	13	90.35
Total	34	501.12	12	45.51	1	1.61	5	13.78	4	41.38	56	603.40

<i>Additional Information</i>					
Taxon	Element	Cut	Comments	Count	Weight
Bos Taurus	Femur	1/2	2 transverse cuts	1	18.75
Bos Taurus	indeterminate	1/2	2 round steak cuts	8	89.08
Mammalia, lg	indeterminate	1/2	2 transverse cuts	1	2.99
Bos Taurus	Limb	1/2	2 transverse cuts, round steak	1	2.44
Bos Taurus	Scapula	1/2	2 transverse cuts	1	13.97
Ovis/Capra sp	Scapula	1/2	2 transverse cuts	3	5.31
Bos Taurus	Tibia	1/2	2 transverse cuts, round steak	1	19.89
Bos Taurus	Vertebra	1/2	transverse cut	1	13.03
Bos Taurus	Vertebra	1/2	sagittal & transverse cuts	1	12.51
Ovis/Capra sp	Femur	1/2	steak cut	1	4.49
Ovis/Capra sp	Humerus	1/2	steak cut	1	3.61
Mammalia, v lg	Limb	1/2	steak cut	1	24.02
Bos Taurus	Radius	1/2	steak cut	1	20.58
Bos Taurus	Scapula	1/2	steak cut	1	29.74
Mammalia lg	Scapula	1/2	steak cut	2	4.19
Bos Taurus	Tibia	1/2	steak cut	1	23.27
Bos Taurus	vert lumbar	1/2	steak cut	2	18.27
Bos Taurus	Vertebra	1/2	steak cut	2	14.96
Mammalia, v lg	Vertebra	1/2	steak cut	2	11.31
Mammalia, v lg	Scapula	1/2	blade steak	1	6.05
Bos Taurus	Femur	1/2	round steak	1	26.63
Bos Taurus	Humerus	1/2	round steak	2	63.73
Ovis/Capra sp	Humerus	1/2	round steak	1	4.40
Bos Taurus	Limb	1/2	round steak, heat delaminated	1	20.44
Bos Taurus	Tibia	1/2	round steak	1	36.73
Bos Taurus	Vertebra	1/2	loin cut	2	18.01

Table 21: Distribution of Sawed 1/4" Thick Mammal Bone

	Cow		Sheep		Sheep/Goat		Mammal lg		Mammal v lg		Total	
Element	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Weight
femur					1	2.23			1	14.46	2	16.69
Humerus	2	18.51									2	18.51
Indeterminate							1	.37			1	.37
Limb							1	.57	1	5.44	2	6.01
Scapula	1	3.51									1	3.51
Tibia	1	16.09									1	16.09
Vertebra			1	1.12	2	4.26					3	5.38
Total	4	38.11	1	1.12	3	6.49	2	.94	2	19.90	12	66.56

Additional Information

Taxon	Element	Cut	Comments	Count	Weight
Mammalia, v lg	Limb	1/4	2 transverse cuts	1	5.44
Bos Taurus	Tibia	1/4	2 transverse cuts steak cut	1	16.09
Mammalia, lg	Indeterminate	1/4	steak cut	1	.37
Ovis aries	Vertebra	1/4	steak cut	1	1.12
Ovis/Capra sp	Femur	1/4	round steak	1	2.23
Ovis/Capra sp	Vertebra	1/4	veal cutlet	1	2.38
Bos Taurus	Humerus	1/4-1/2		2	18.51

Table 22: Distribution of Sawed 1/8, 3/8, 5/8" Thick Mammal Bone

	Cow		Sheep/Goat		Mammal lg		Total	
Element	Count	Weight(g)	Count	Weight(g)	Count	Weight(g)	Count	Weight(g)
Femur			1	.69			1	.69
Humerus					1	4.58	1	4.58
Indeterminate					1	.62	1	.62
Innominate	1	25.62	1	2.24			2	27.86
Limb			2	4.60	2	4.88	4	9.48
Scapula	2	47.15	2	5.22			4	52.37
Vertebra	1	8.29					1	8.29
Total	4	81.06	6	12.75	4	10.08	14	103.89

ADDITIONAL INFORMATION

Taxon	Element	Cut	Comments	Count	Weight
Ovis/Capra	Femur	1/8		1	.69
Ovis/Capra	Limb	1/8		1	.24
Mammalia, lg	Humerus	3/8	round steak	1	4.58
Mammalia, lg	Indeterminate	3/8		1	.62
Mammalia, lg	Limb	3/8	2 transverse cuts	1	3.27
Mammalia, lg	Limb	3/8	round steak	1	1.61
Bos Taurus	Innominate	5/8	steak cut	1	25.62
Ovis/Capra	Innominate	5/8	steak cut	1	2.24
Ovis/Capra	Limb	5/8	roast cut	1	4.36
Bos Taurus	Scapula	5/8		2	47.15
Ovis/Capra	Scapula	5/8	2 transverse cuts	1	1.72
Ovis/Capra	Scapula	5/8	blade steak	1	3.50
Bos Taurus	Vertebra	5/8		1	8.29

Table 23: Distribution of Cut Mammal Bone Elements

	Cow		Sheep		Sheep/Goat		Pig		Rabbit		Deer		Artiodactyl		Fox		Marmot		Mammal		Mammal, md		Mammal, lg		Mammal, vlg		Total	
Element	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt(g)
Carpal cuneiform	2	39.12			1	.86																				3	39.98	
Carpal lunar	2	40.68																								2	40.68	
Carpal trapezoid	1	14.66																								1	14.66	
Femur	5	172.05	5	93.41	4	60.10							3	9.24												17	334.80	
Fibula							2	7.00																		2	7.00	
Humerus	7	203.36			10	112.18																				17	315.54	
Indeterminate	1	2.32																	1	.51			54	86.68	25	58.26	81	147.77
Innominate	1	69.85			1	3.48	1	48.34	1	1.26							1	3.42								5	126.35	
Limb					2	6.86							1	4.17								15	27.51	1	24.54	19	63.08	
Metacarpal			1	35.58	2	32.02																				3	67.60	
Metatarsal			2	66.17	4	68.55																				6	134.72	
Patella	1	37.03																								1	37.03	
Phalanx					1	3.44																				1	3.44	
phalanx 1 st			1	3.97									1	3.57												2	7.54	
Radius	2	197.4	3	48.31	5	85.80							2	29.92												12	361.40	
Rib	25	546.1			21	41.08													2	2.28	25	60.42	4	70.13	77	719.97		
Sacrum	1	41.03			1	17.23																				2	58.26	
Scapula	2	44.04			2	10.05							1	1.61												5	55.70	
Sternebrae													1	1.19												1	1.19	
Sternum					1	1.39																				1	1.39	
Tarsal, navicular	1	74.69			1	2.84																				2	77.53	
Tarsal, astragalus	5	237.2			1	4.85																				6	242.03	
Tarsal, calcaneous	1	154.0			1	9.90																				2	163.87	
Tibia	7	451.3	3	50.88	6	164.91	3	39.86							1	1.44										20	708.41	
Ulna	1	14.57			2	10.15	1	6.43																		5	31.86	
Vert, atlas	1	34.83			1	15.28					1	13.12														3	63.23	
Vert, axis													1	4.55												1	4.55	
Vert, caudal	1	22.14																								1	22.14	
Vert, cervical	1	7.61			3	9.34							1	7.22												5	24.17	
Vert, lumbar	5	43.67	1	2.14	4	11.56																				10	57.37	
Vert, thoracic	10	136.0			2	6.06					1	9.57														13	151.70	
Vertebra	19	95.16			1	1.88																10	29.63	1	20.92	31	147.59	
Vertebrae	8	81.37																				3	14.70	2	7.24	13	103.31	
Total	110	2760.2	16	300.5	77	679.8	7	101.6	1	1.26	2	22.7	11	61.5	1	1.44	1	3.42	1	.51	2	2.28	107	218.9	33	181.1	370	4,335.9

Table 24: Distribution of Cut Mammal Bone Elements by Context

		Cow		Sheep		Sheep/Goat		Pig		Rabbit		Deer		Artiodactyl		Fox		Marmot		Mammal		Mammal,md		Mammal,lg		Mammal,v lg		Total		
Element	Part	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	
FEA 1, 03N-30W																														
Indeterminate	Fragment																								1	4.39			1	4.39
FEA 1, 03N-50W																														
Indeterminate	Fragment																										14	21.02	14	21.02
Limb	Shaft					1	2.02																					1	2.02	
Phalanx	Complete					1	3.44																					1	3.44	
Rib	Shaft																								5	2.85			5	2.85
Tarsal,astrag	Most	1	59.01																									1	59.01	
Vertebra	Centrum epiph	1	2.98																									1	2.98	
Feature Total		2	61.99			2	5.46																		5	2.85	14	21.02	23	91.32
FEA 2, 03N-50W																														
Humerus	Proximal					2	18.68																					2	18.68	
FEA 5, 04N-59W (Privy/Dump)																														
Carpal,cuneif	Complete	1	17.68																									1	17.68	
Carpal,cuneif	Most					1	.86																					1	.86	
Carpal,lunar	Complete	1	20.74																									1	20.74	
Femur	Condyle	1	20.84																									1	20.84	
Femur	Distal	1	17.78			2	2.35																					3	20.13	
Femur	Distal epiph			1	13.63																							1	13.63	
Femur	Distal shaft	1	26.62																									1	26.62	
Femur	Shaft					1	54.69																					1	54.69	
Humerus	Distal	1	44.88			2	14.96																					3	59.84	
Humerus	Proximal					1	13.29																					1	13.29	
Humerus	Proximal epiph	1	33.77																									1	33.77	
Humerus	Shaft					1	15.77																					1	15.77	
Indeterminate	Fragment																								8	11.07	7	27.01	15	38.08
Innominate	Most															1	3.42											1	3.42	
Limb	Shaft					1	4.84							1	4.17										11	21.69	1	24.54	14	55.24
Limb	Shaft, frag																								1	1.13		1	1.13	
Metatarsal	Complete					1	27.07																					1	27.07	
Metatarsal	Proximal					1	2.29																					1	2.29	
Metatarsal	Proximal+shaft					1	22.76																					1	22.76	
Patella	Most	1	37.03																									1	37.03	
Radius	Distal+shaft					1	17.81																					1	17.81	
Radius	Proximal			2	17.25	1	12.90																					3	30.15	
Radius	Proximal+shaft			1	31.06	1	26.88																					2	57.94	
Radius	Shaft													2	29.92													2	29.92	
Rib	Articlr surf					1	1.27																					1	1.27	
Rib	Fragment	1	10.19			1	1.91																					2	12.10	
Rib	Shaft	6	212.13			3	5.75																		17	44.54	1	17.96	27	280.38
Rib	Sternal end																								1	2.40		1	2.40	
Rib	Vertebral end	1	18.92																						1	7.20		2	26.12	
Sacrum	Proximal					1	17.23																					1	17.23	
Scapula	Blade	1	37.08			2	10.05																					3	47.13	

Table 24: Distribution of Cut Mammal Bone Elements by Context (cont.)

Element	Part	Cow		Sheep		Sheep/Goat		Pig		Rabbit		Deer		Artiodactyl		Fox		Marmot		Mammal		Mammal_md		Mammal_lg		Mammal_v_lg		Total	
		Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght
Scapula	Fragment	1	6.96																								1	6.96	
Tarsal_astrag	Most	1	50.22																								1	50.22	
Tarsal_calcan	Complete					1	9.90																				1	9.90	
Tarsal_calcan	Most	1	153.97																								1	153.97	
Tibia	Distal	3	98.65																								3	98.65	
Tibia	Distal shaft					1	5.30																				1	5.30	
Tibia	Distal+shaft					1	80.38																				1	80.38	
Tibia	Proximal shaft							1	9.12																		1	9.12	
Tibia	Shaft	1	36.73			1	16.04																				2	52.77	
Ulna	Distal			1	.71																						1	.71	
Ulna	Proximal	1	14.57																								1	14.57	
Ulna	Shaft					1	6.39																				1	6.39	
Vert_atlas	Fragment					1	15.28																				1	15.28	
Vert_axis	Fragment												1	4.55													1	4.55	
Vert_caudal	Most	1	22.14																								1	22.14	
Vert_cervical	Fragment					1	2.91																				1	2.91	
Vert_lumbar	Centrum					2	6.91																				2	6.91	
Vert_lumbar	Centrum epiph	2	11.11																								2	11.11	
Vert_lumbar	Fragment	1	8.75																								1	8.75	
Vert_thoracic	Articlr surf	1	20.14																								1	20.14	
Vert_thoracic	Centrum epiph	2	8.06																								2	8.06	
Vert_thoracic	Most					1	4.89																				1	4.89	
Vertebra	Centrum	1	6.86																								1	6.86	
Vertebra	Centrum epiph	4	15.79																								4	15.79	
Vertebra	Fragment	2	16.71																										
Feature Total		39	968.32	5	62.65	33	400.68	1	9.12				4	38.64			1	3.42						5	21.30	1	20.92	8	58.93
FEA 5, 47N-59W (G.R. Privy/Dump)																													
Tibia	Proximal													1	1.44												1	1.44	
FEA 6, 46N-33W																													
Femur	Head					1	3.06																				1	3.06	
Humerus	Distal+shaft					1	34.56																				1	34.56	
Limb	Shaft																							1	1.35		1	1.35	
Tars_navclrcu	Most					1	2.84																				1	2.84	
Feature Total						3	40.46																	1	1.35		4	41.81	
FEA 7, 46N-33W																													
Indeterminate	Fragment																								2	4.33	2	4.33	
Rib	Shaft	1	20.30																								1	20.30	
Feature Total		1	20.30																							2	4.33	3	24.63
FEA 10, 68N-55W														</															

Table 24: Distribution of Cut Mammal Bone Elements by Context (cont.)

		Cow		Sheep		Sheep/Goat		Pig		Rabbit		Deer		Artiodactyl		Fox		Marmot		Mammal		Mammal,md		Mammal,lg		Mammal,v lg		Total	
		Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght
FEA 13, 34N-35W																													
Innominate	Ilium					1	3.48																					1	3.48
FEA 14, 10N-35W (G.R. Privy)																													
Humerus	Proximal	1	26.65																								1	26.65	
Indeterminate	Fragment																								3	.63	3	.63	
Metacarpal	Proximal+shaft					1	14.06																				1	14.06	
Vert,thoracic	Fragment	1	5.96																								1	5.96	
Vertebra	Centrum epiph	1	3.25																								1	3.25	
Feature Total		3	35.86			1	14.06																	3	.63		7	50.55	
FEA 14, 16N-35W (G.R. Privy)																													
Tibia	Proximal epiph							1	7.98																			1	7.98
FEA 15, 6N-35W (G.R. Privy)																													
Rib	Shaft	1	2.49			1	2.59																				2	5.08	
FEA 20, 56N-29W																													
Rib	Shaft	1	10.15																								1	10.15	
FEA 21, 76N-36W (Privy)																													
Vert,cervical	Articlr surf	1	7.61																								1	7.61	
Vertebra	Centrum	1	12.49																								1	12.49	
Vertebra	Centrum epiph	1	4.99																								1	4.99	
Feature Total		3	25.09																								3	25.09	
FEA 21, 79N-32W (Privy)																													
Fibula	Most							1	4.84																		1	4.84	
Fibula	Proximal+shaft							1	2.16																		1	2.16	
Humerus	Proximal	1	12.38																								1	12.38	
Indeterminate	Fragment																							1	1.77	1	1.77		
Vert,cervical	Centrum												1	7.22													1	7.22	
Vert,lumbar	Centrum			1	2.14																						1	2.14	
Feature Total		1	12.38	1	2.14			2	7.00				1	7.22									1	1.77			6	30.51	
FEA 21, 79N-34W (Privy)																													
Indeterminate	Fragment																								2	.65	1	3.05	3.70
Innominate	Acetab+ilium							1	48.34																				48.34
Rib	Shaft	1	29.60			1	3.02																					32.62	
Tibia	Distal+shaft			1	18.48																							18.48	
Vert,thoracic	Centrum	1	15.43																									15.43	
Vert,thoracic	Epiphysis	1	21.50																									21.50	
Vertebra	Centrum	1	12.43																									12.43	
Vertebra	Fragment	1	11.88																							2	7.24	3	19.12
Vertebra	Spine																							1	.64		1	.64	
Feature Total		5	90.84	1	18.48	1	3.02	1	48.34															3	1.29	3	10.29	14	172.26

Table 24: Distribution of Cut Mammal Bone Elements by Context (cont.)

		Cow		Sheep		Goat		Pig		Rabbit		Deer		Artiodactyl		Fox		Marmot		Mammal		Mammal,md		Mammal,lg		Mammal,v lg		Total		
		Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	
FEA 22, 79N-37W (Privy)																														
Femur	Proximal+shaft			2	22.65																							2	22.65	
Indeterminate	Fragment																							1	1.80			1	1.80	
Tibia	Proximal+shaft			2	32.40																							2	32.40	
Vert,thoracic	Spine	1	25.44																									1	25.44	
Feature Total		1	25.44	4	55.05																			1	1.80			6	82.29	
FEA 23																														
Metacarpal	Complete			1	35.58																							1	35.58	
Metatarsal	Complete			1	28.39																							1	28.39	
Phalanx,1st	Complete			1	3.97																							1	3.97	
Unit Total				3	67.94																							3	67.94	
FEA 24																														
Vert,thoracic	Spine											1	9.57															1	9.57	
FEA 24, 80N-36W																														
Scapula	Fragment													1	1.61													1	1.61	
Vertebra	Centrum	1	7.22																									1	7.22	
Unit Total		1	7.22											1	1.61													2	8.83	
FEA 27 (Lined Trash Midden)																														
Femur	Shaft, distal	1	37.48																									1	37.48	
03N-50W (Dump)																														
Rib	Shaft																											1	1.06	
04N-59W (Dump)																														
Vertebra	Fragment																									1	2.64		1	2.64
06N-35W (Privy)																														
Humerus	Shaft	2	46.54																									2	46.54	
Indeterminate	Fragment																								6	6.93	1	2.85	7	9.78
Innominate	Most									1	1.26																	1	1.26	
Radius	Shaft					1	2.30																					1	2.30	
Rib	Proximal+shaft					3	7.53																					3	7.53	
Rib	Shaft	1	16.72			3	5.59																				1	5.39	5	27.70
Rib	Vertebral end					1	5.62																					1	5.62	
Tibia	Proximal+shaft					2	42.18																					2	42.18	
Ulna	Proximal							1	6.43																			1	6.43	
Vert,cervical	Centrum					1	4.65																					1	4.65	
Vert,thoracic	Centrum					1	1.17																					1	1.17	
Vertebra	Centrum	2	12.19																									2	12.19	
Vertebra	Centrum epiph	1	3.76																									1	3.76	
Vertebra	Fragment	2	7.23																									2	7.23	
Unit Total		8	86.44			12	69.04	1	6.43	1	1.26														6	6.93	2	8.24	30	178.34
10N-35W (Privy)																														
Sternum	Fragment					1	1.39																					1	1.39	

Table 24: Distribution of Cut Mammal Bone Elements by Context (cont.)

		Cow		Sheep		Sheep/Goat		Pig		Rabbit		Deer		Artiodactyl		Fox		Marmot		Mammal		Mammal,md		Mammal,lg		Mammal,v lg		Total		
		Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	
UNIT 13N-92W (Dump)																														
Carpal,cuneif	Complete	1	21.44																									1	21.44	
Carpal,lunar	Complete	1	19.94																									1	19.94	
Carpal,trapez	Fragment	1	14.66																									1	14.66	
Femur	Distal epiph	1	40.21											1	3.54													2	43.75	
Femur	Head	1	66.60																									1	66.60	
Humerus	Distal	1	39.14																									1	39.14	
Humerus	Proximal					1	4.12																					1	4.12	
Indeterminate	Epiphysis	1	2.32																									1	2.32	
Indeterminate	Fragment																							15	26.95			15	26.95	
Limb	Shaft																							1	2.16			1	2.16	
Metatarsal	Proximal+shaft					1	16.43																					1	16.43	
Phalanx,1st	Complete													1	3.57													1	3.57	
Radius	Distal epiph	1	54.06																									1	54.06	
Radius	Shaft					1	25.91																					1	25.91	
Rib	Fragment					2	2.19																					2	2.19	
Rib	Proximal+shaft	1	22.38																									1	22.38	
Rib	Shaft	3	62.59			5	5.61																			1	41.93	9	110.13	
Rib	Shaft, frag																				1	1.22						1	1.22	
Sacrum	Fragment	1	41.03																									1	41.03	
Tars,navclrcu	Complete	1	74.69																									1	74.69	
Tarsal,astrag	Most	3	127.95			1	4.85																					4	132.80	
Ulna	Proximal					1	3.76																					1	3.76	
Vert,atlas	Zygapophysis	1	34.83																									1	34.83	
Vert,cervical	Fragment					1	1.78																					1	1.78	
Vert,lumbar	Centrum					2	4.65																					2	4.65	
Vert,lumbar	Fragment	1	13.62																									1	13.62	
Vert,thoracic	Fragment	1	1.78																									1	1.78	
Vertebra	Articlr surf	1	2.11																									1	2.11	
Vertebra	Centrum	2	16.15																									2	16.15	
Vertebra	Centrum epiph	2	8.13																									2	8.13	
Vertebra	Fragment					1	1.88																		2	4.72		3	6.60	
Unit Total		25	663.63			16	71.18							2	7.11						1	1.22			18	33.83	1	41.93	63	818.90
UNIT 30N-39W																														
Indeterminate	Fragment																								2	20.16			2	20.16
Limb	Shaft																								1	1.18			1	1.18
Rib	Proximal shaft	1	30.46																									1	30.46	
Unit Total		1	30.46																						3	21.34			4	51.80
UNIT 34N-39W																														
Humerus	Distal					1	6.09																					1	6.09	
UNIT 47N-31W																														
Humerus	Shaft					1	4.71																					1	4.71	
Rib	Shaft																								1	3.43			1	3.43
Tibia	Proximal epiph	1	18.85																									1	18.85	
Vert,thoracic	Fragment	1	35.81																									1	35.81	
Unit Total		2	54.66			1	4.71																		1	3.43			4	62.80

Table 24: Distribution of Cut Mammal Bone Elements by Context (cont.)

		Cow		Sheep		Sheep/Goat		Pig		Rabbit		Deer		Artiodactyl		Fox		Marmot		Mammal		Mammal,md		Mammal,lg		Mammal,v lg		Total	
		Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Wght
56N-29W																													
Rib	Shaft																									1	4.85	1	4.85
58N-37W (Woodshop)																													
Indeterminate	Fragment																			1	.51							1	.51
Tibia	Distal+shaft	1	126.36																									1	126.36
Unit Total		1	126.36																	1	.51							2	126.87
59N-21W (Woodshop)																													
Vertebra	Centrum epiph																								2	.97		2	.97
60N-27W (Woodshop)																													
Rib	Shaft	1	8.40																									1	8.40
66N-15W (Woodshop)																													
Radius	Shaft	1	143.31																									1	143.31
66N-18W (Woodshop)																													
Femur	Proximal epiph													1	3.57													1	3.57
Innominate	Acetabulum	1	69.85																									1	69.85
Metacarpal	Proximal+shaft					1	17.96																					1	17.96
Metatarsal	Complete			1	37.78																							1	37.78
Rib	Shaft	1	16.62																									1	16.62
Tibia	Proximal							1	22.76																			1	22.76
Unit Total		2	86.47	1	37.78	1	17.96	1	22.76					1	3.57													6	168.54
66N-21W (Woodshop)																													
Rib	Articlr surf	1	37.43																									1	37.43
69N-18W (Woodshop)																													
Femur	Distal epiph			1	19.65																							1	19.65
78N-27W (Woodshop)																													
Indeterminate	Fragment																								1	8.58		1	8.58
82N-38W																													
Indeterminate	Fragment																												
Rib	Shaft	4	47.68																									4	47.68
Sternebrae	Fragment													1	1.19													1	1.19
Tibia	Distal	1	170.73																									1	170.73
Tibia	Shaft					1	21.01																					1	21.01
Vert,atlas	Most											1	13.12															1	13.12
Vert,lumbar	Epiphysis	1	10.19																									1	10.19
Vertebra	Centrum	1	12.44																									1	12.44
Vertebra	Epiphysis	1	5.93																									1	5.93
Vertebra	Fragment	1	13.99																							2	14.06	3	28.05
Unit Total		9	260.96			1	21.01					1	13.12	1	1.19											15	17.38	27	313.66
SITE TOTAL		110	2760.2	17	301.2	77	679.8	7	101.6	1	1.26	2	22.69	11	61.5	1	1.44	1	3.42	1	.51	2	2.28	107	218.9	33	181.1	370	4,335.9

Table 25: Distribution of Gnawed Mammal Bone Elements

		Cow		Sheep/Goat		Sheep		Pig		Artiodac- tyl		Artiodac- tyl, lg		Deer		Mammal,lg		Mammal, v lg		Total	
Element	Part	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Count	Weight
FEATURE 1 UNIT 03N-50W																					
humerus	distal			1	10.50															1	10.50
indeterminate	fragment															4	4.63	1	2.66	5	7.29
indeterminate	indeterminate															1	.57			1	.57
innominate	ilium															1	3.87			1	3.87
limb	shaft			1	2.02															1	2.02
phalanx	complete			1	3.34															1	3.34
phalanx	fragment									1	.62									1	.62
rib	proximal epiph	1	2.52																	1	2.52
rib	shaft	2	7.05													1	.55			3	7.60
tarsal,calcan	distal epiph	1	15.17																	1	15.17
tibia	distal	1	75.38																	1	75.38
tibia	proximal+shaft	1	45.83																	1	45.83
tibia	shaft			1	15.11															1	15.11
vert,cervical	fragment	1	30.64																	1	30.64
Feature Total		7	176.59	4	30.97					1	.62					7	9.62	1	2.66	20	220.46
FEATURE 5 UNIT 04N-59W (G.R. Privy/Dump)																					
carpal,cuneif	complete	1	21.05																	1	21.05
carpal,cuneif	most	1	18.35																	1	18.35
carpal,lunar	complete	1	26.18																	1	26.18
carpal,trapez	complete	2	53.96																	2	53.96
femur	condyle	1	20.84																	1	20.84
femur	distal	1	17.78																	1	17.78
femur	distal epiph	2	23.08																	2	23.08
femur	distal shaft	2	62.29																	2	62.29

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Table 25: (cont.)		Cow		Sheep/Goat		Sheep		Pig		Artiodac- tyl		Artiodac- tyl, lg		Deer		Mammal,lg		Mammal, v lg		Total	
Element	Part	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Count	Weight
tars,navclreu	complete	1	73.13																	1	73.13
tibia	shaft			1	27.43															1	27.43
Feature Total		1	73.13	1	27.43															2	100.56
FEATURE 20 UNIT 56N-29W																					
metatarsal	shaft					1	12.02													1	12.02
vert,thoracic	fragment	1	15.36																	1	15.36
Feature Total		1	15.36			1	12.02													2	27.38
FEATURE 21 UNIT 76N-36W (Privy)																					
indeterminate	fragment															1	.61			1	.61
phalanx	complete					1	1.37													1	1.37
rib	shaft					1	.89													1	.89
vert,cervical	articlr	1	7.61																	1	7.61
vert,thoracic	spine	1	8.85																	1	8.85
Feature Total		2	16.46			2	2.26									1	.61			5	19.33
FEATURE 21 UNIT 79N-32W (Privy)																					
carpal	complete	1	8.80																	1	8.80
carpal,magnum	complete	1	11.61																	1	11.61
humerus	proximal	1	12.38																	1	12.38
Feature Total		3	32.79																	3	32.79
FEATURE 21 UNIT 79N-34W (Privy)																					
metacarpal 4	proximal+shaft							1	3.72											1	3.72
metatarsal	shaft					1	11.88													1	11.88
rib	shaft																	1	4.95	1	4.95
Feature Total						1	11.88	1	3.72									1	4.95	3	20.55
FEATURE 22 UNIT 79N-37W (Privy)																					
humerus	shaft															1	9.19			1	9.19

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Table 25: (cont.)		Cow		Sheep/Goat		Sheep		Pig		Artiodac- tyl		Artiodac- tyl, lg		Deer		Mammal,lg		Mammal, v lg		Total	
Element	Part	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Ct	Wgt	Count	Weight
metapodial	distal																	1	4.48	1	4.48
phalanx	complete					1	1.72													1	1.72
phalanx	distal					1	2.22													1	2.22
tarsal,calcan	most					1	9.12													1	9.12
Unit Total						3	13.06											1	4.48	4	17.54
UNIT 82N-38W																					
cranial	pterygoid							1	1.06											1	1.06
indeterminate	fragment															12	3.07			12	3.07
metacarpal	most			1	23.19															1	23.19
metatarsal	shaft					1	9.72													1	9.72
rib	proximal	1	26.70																	1	26.70
vert,lumbar	epiphysis	1	10.19																	1	10.19
vertebra	fragment															1	7.91			1	7.91
Unit Total		2	36.89	1	23.19	1	9.72	1	1.06							13	10.98			18	81.84
UNIT 95N-13W (Rosalie/Brownell/ Pantheon)																					
vert,thoracic	spine																	1	6.16	1	6.16
SITE TOTAL		123	3,904.2	134	1,712.5	20	342.4	27	292.1	10	47.1	1	16.6	3	41.8	60	113.1	21	164.3	399	6,634.1

Table 26: Distribution Of Burned Mammal Bone Elements

		Cow		Sheep/Goat		Pig		Artiodactyl		Fox		Mammal		Mammal, sm		Mammal, md		Mammal, lg		Mammal, v lg		Total	
Element	Part	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Weight
FEATURE 1, UNIT 03N-50W																							
indeterminate	fragment																	5	2.01	2	6.33	7	8.34
limb	shaft																	1	1.39			1	1.39
rib	proximal shaft																	1	.92			1	.92
FEATURE 1, UNIT 132N-123																							
indeterminate	fragment																	2	1.19			2	1.19
limb	shaft																	2	1.18			2	1.18
FEAT 5, UNIT 04N-59W (G.R. Privy/ Dump)																							
Femur	distal							2	2.73													2	2.73
Femur	distal shaft	1	35.67																			1	35.67
Femur	proximal											1	.55									1	.55
Femur	shaft			2	60.18																	2	60.18
Indeterminate	fragment											23	12.01					313	153.14	10	5.86	346	171.01
Limb	shaft	1	20.44	1	4.84													34	27.56			36	52.84
Metacarpal	distal epiph			1	4.01																	1	4.01
Metacarpal	proximal+shaft			1	17.31																	1	17.31
Metapodial	distal			1	.64																	1	.64
Phalanx	distal							2	1.01													2	1.01
Phalanx	proximal													1	.09							1	.09
Radius	proximal shaft			1	10.09																	1	10.09
Rib	fragment																	1	.86			1	.86

[illegible]

Table 26: (cont.)		Cow		Sheep/Goat		Pig		Artiodactyl		Fox		Mammal		Mammal, sm		Mammal, md		Mammal, lg		Mammal, v lg		Total	
Element	Part	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Weight
FEATURE 12, UNIT 14N-39W																							
Indeterminate	fragment											5	1.25					2	1.51			7	2.76
FEATURE 13, UNIT 34N-39W																							
Indeterminate	fragment																	1	1.79			1	1.79
FEATURE 14, UNIT 10N-35W (G.R. Privy)																							
indeterminate epiphysis																				1	3.81	1	3.81
Indeterminate	fragment																	19	15.79			19	15.79
Limb	shaft																	2	.96			2	.96
Radius	shaft																	1	5.42			1	5.42
Rib	shaft																	3	1.25			3	1.25
Vertebra	articlr surface	1	3.01															1	1.21			2	4.22
FEATURE 14, UNIT 16N-35W (G.R. Privy)																							
Indeterminate	fragment																	1	.45			1	.45
FEATURE 15, UNIT 06N-35W (G.R. Privy)																							
Indeterminate	fragment																	2	1.07			2	1.07
FEATURE 16, UNIT 06N-35W (G.R. Privy)																							
Indeterminate	fragment																	2	.68			2	.68
UNIT 06N-35W (Privy)																							
Femur	head	2	51.61																			2	51.61
Indeterminate	fragment																	45	36.50			45	36.50
Rib	shaft	1	14.15	1	3.27																	2	17.42
UNIT 10N-35W (Privy)																							
tooth,molar	upr,pos2,complt					1	7.24															1	7.24
UNIT 13N-92W (Dump)																							
Indeterminate	epiphysis																	1	3.99			1	3.99
Indeterminate	fragment																	139	109.89	9	13.64	148	123.53

[illegible]

Table 26: (cont.)		Cow		Sheep/Goat		Pig		Artiodactyl		Fox		Mammal		Mammal, sm		Mammal, md		Mammal, lg		Mammal, v lg		Total	
Element	Part	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wt	Ct	Wght	Ct	Wght	Ct	Wght	Ct	Weight
Indeterminate	fragment																			1	20.35	1	20.35
UNIT 66N-18W (Woodshop)																							
Femur	proximal epiph							1	3.57													1	3.57
Sacrum	fragment	1	19.11																			1	19.11
Vertebra	fragment	1	5.03																			1	5.03
UNIT 68N-55W (Woodshop)																							
Innominate	acetabulum	1	37.32																			1	37.32
UNIT 75N-06W (Woodshop)																							
Femur	distal	1	157.0																			1	157.00
UNIT 86N-28W (Rosalie/Brownell/Pantheon)																							
Innominate	ilium	1	189.5																			1	189.50
Sacrum	articlr surface	1	162.4																			1	162.40
UNIT 86N-31W (Rosalie/Brownell/Pantheon)																							
vert,lumbar	articlr surface	1	16.60																			1	16.60
UNIT 95N-13W (Rosalie/Brownell/Pantheon)																							
Limb	epiphysis	1	23.55																			1	23.55
UNIT 97N-16W (Rosalie/Brownell/Pantheon)																							
Limb	distal epiph	1	46.58																			1	46.58
SITE TOTAL		18	815.1	21	237.4	2	20.4	11	18.0	1	1.4	33	15.5	1	.09	3	1.13	647	470.5	26	55.17	763	1,634.74

APPENDIX K

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APPENDIX L: POLLEN REPORT

APPENDIX L: POLLEN REPORT

POLLEN, PARASITE, STARCH, AND PHYTOLITH ANALYSIS OF SAMPLES FROM HISTORIC SKAGWAY, ALASKA

By

Linda Scott Cummings and Thomas E. Moutoux
Paleo Research Laboratories, Denver, Colorado
Paleo Research Labs Technical Report 98-49

Prepared for

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Skagway, Alaska, June 1998

INTRODUCTION

A total of 10 sediment samples were examined microscopically to interpret the use of plant foods in Historic Skagway. Samples were collected from areas of possible night soil use, privies, a possible gray water box, and from sediments under a saloon floor. All of the samples were examined for pollen and starch granule evidence of foods and for parasite eggs that would indicate parasitic infections. In addition, five of the samples were examined for phytolith analysis to augment the interpretation of plant food use.

METHODS

Pollen

A chemical extraction technique based on flotation is the standard preparation technique used in this laboratory for the removal of the pollen from the large volume of sand, silt, and clay with which they are mixed. This particular process was developed for extrac-

tion of pollen from soils where preservation has been less than ideal and pollen density is low.

Hydrochloric acid (10%) was used to remove calcium carbonates present in the soil, after which the samples were screened through 150-micron mesh. The samples were rinsed until neutral by adding water, letting the samples stand for two hours, then pouring off the supernatant. A small quantity of sodium hexametaphosphate was added to each sample once it reached neutrality. Then the beaker was again filled with water and allowed to stand for two hours. The samples were again rinsed until neutral, filling the beakers only with water. This step was added to remove clay prior to heavy liquid separation. Then the samples were dried, then pulverized. Zinc bromide (density 2.1) was used for the flotation process. The samples were mixed with zinc bromide and centrifuged at 1,500 rpm for 10 minutes to separate organic from inorganic remains. The supernatant containing pollen and organic remains was decanted and diluted. Zinc bromide was again

added to the inorganic fraction to repeat the separation process. After rinsing the pollen-rich organic fraction obtained by this separation, all samples received a short (20 minute) treatment in hot hydrofluoric acid to remove any remaining inorganic particles. The samples were then acetolated for three minutes to remove any extraneous organic matter. Parasite eggs were recovered during this process.

A light microscope was used to count the pollen to a total of 50 to 200 pollen grains at a magnification of 600x, with the exception of one sample that did not exhibit a sufficient concentration of pollen to obtain a pollen count. Pollen preservation in these samples varied from good to poor. Comparative reference material collected at the Intermountain Herbarium at Utah State University and the University of Colorado Herbarium was used to identify the pollen to the family, genus, and species level, where possible.

Pollen aggregates were recorded during identification of the pollen. Aggregates are clumps of a single type of pollen, and may be interpreted to represent pollen dispersal over short distances, or the introduction of portions of the plant represented into an archaeological setting. Aggregates were included in the pollen counts as single grains, as is customary. The presence of aggregates is noted by an "A" next to the pollen frequency on the pollen diagram. A plus (+) on the pollen diagram indicates that the pollen type was observed outside the regular count while scanning the remainder of the microscope slide. For sample 5, a plus indicates that the pollen type was observed, but that a count of 50 pollen grains could not be obtained. A single microscope slide from each sample was scanned in its entirety in search of parasite eggs.

Indeterminate pollen includes pollen grains that are folded, mutilated, and otherwise distorted beyond recognition. These grains are included in the total pollen count, as they are part of the pollen record.

Phytoliths

Extraction of phytoliths from these sediments also was based on heavy liquid floatation. Approximately 50 ml of sediment was added to 50 ml of sodium hexametaphosphate (0.1 molar solution) to suspend the clays. The sample was then sieved through 150-micron mesh. The sample was allowed to settle for two hours. Then the supernatant was poured off, which contained clay. This settling time allowed the phytoliths to settle to the base of the beaker. The samples were mixed with water, allowed to settle for two hours, and the supernatant discarded several times, until the supernatant was clear. Liquid bleach was added to the sample and allowed to sit overnight to destroy the organic fraction in the sample. Rinses were continued to remove the bleach, then the remaining clays. The last two times the sample was allowed to settle the time was reduced to one hour. This procedure removed most of the clays. Once most of the clays were removed, the silt-and-sand-size fraction was dried. The dried silts and sands were then mixed with zinc bromide (density 2.3) and centrifuged to separate the phytoliths, which will float, from the other silica, which will not. Phytoliths, in the broader sense, may include opal phytoliths and calcium oxalate crystals. Calcium oxalate crystals are formed by plants, such as yucca, prickly pear cactus, some trees, and some edible plants, such as spinach and bean pods. They are separated, rather than destroyed, using this extraction technique, since it employs no acids. If calcium carbonates are present, use of glacial acetic may be employed to dissolve

the calcium carbonates without destroying any calcium oxalates present. Any remaining clay is floated with the phytoliths, and is further removed by mixing with sodium pyrophosphate and distilled water. The samples are then rinsed with distilled water, then alcohol to remove the water. After several alcohol rinses, the samples are mounted in Cinnamaldehyde for counting with a light microscope at a magnification of 500x.

PHYTOLITH REVIEW

Phytoliths are silica bodies produced by plants when soluble silica in the ground water is absorbed by the roots and carried up the plant via the vascular system. Evaporation and metabolism of this water result in precipitation of the silica in and around the cellular walls. The general term phytoliths, while strictly applied to opal phytoliths, may also be used to refer to calcium oxalate crystals produced by a variety of plants, including cottonwood and willow. Opal phytoliths, which are distinct and decay-resistant plant remains, are deposited in the soil as the plant or plant parts die and break down. They are, however, subject to mechanical breakage and erosion and deterioration in high pH soils. Phytoliths are usually introduced directly into the soils in which the plants decay. Transportation of phytoliths occurs primarily by animal consumption, man's gathering of plants, or by erosion or transportation of the soil by wind, water, or ice.

The major divisions of grass short-cell phytoliths recovered include festucoid, chloridoid, and panicoid. Smooth elongate phytoliths are of no aid in interpreting either paleoenvironmental conditions or the subsistence record because they are produced

by a large number of grasses. Dendritic phytoliths, however, are common in the chaff of cereal grains and are not produced in many other grasses. Phytoliths tabulated to represent "total phytoliths" include all silica and/or calcium oxalate forms representing plants. Frequencies for all other bodies recovered are calculated by dividing the number of each type recovered by the "total phytoliths."

The festucoid class of phytoliths is ascribed primarily to the subfamily Pooideae and occur most abundantly in cool, moist climates. However, Brown (1984) notes that festucoid phytoliths are produced in small quantity by nearly all grasses. Therefore, while they are typical phytoliths produced by the subfamily Pooideae, they are not exclusive to this subfamily. Chloridoid phytoliths are found primarily in the subfamily Chloridoideae, a warm-season grass that grows in arid to semi-arid areas and require less available soil moisture. Chloridoid grasses are the most abundant in the American Southwest (Gould and Shaw 1983:120). Panicoid phytoliths occur in warm-season or tall grasses that frequently thrive in humid conditions. Twiss (1987:181) also notes that some subfamily Chloridoideae members produce both bilobate (panicoid) and festucoid phytoliths. "According to Gould and Shaw (1983:110) more than 97% of the native U.S. grass species (1,026 or 1,053) are divided equally among three subfamilies Pooideae, Chloridoideae, and Panicoideae" (Twiss 1987:181).

Buliform phytoliths are produced by grasses in response to wet conditions (Irwin Rovner, personal communication, January 1991) and are to be expected in wet habitats of floodplains and other places. Phytoliths referred to as "pillows" are the same as those reported by Rovner (1971). While these phytoliths are described, no taxonom-

ic or environmental significance has been assigned. They most probably represent grasses.

Trichomes and papilla represent epidermal hairs on grasses and/or sedges. Epidermal forms represent epidermal grass cells.

ETHNOBOTANICAL REVIEW

Historic records provide information concerning use of plants by people living in the last few centuries. Some of this information is drawn from accounts documenting Native American uses of plants, while other accounts document Anglo plant use. Ethnographic sources outside the study area have been consulted to permit a more exhaustive review of potential uses for each plant. For this study, pollen has been sorted into groups that represent probable native plants, weedy plants, and probable food and/or medicinal plants.

Weedy Plants

Muenschner (1987:3) describes weeds as “those plants that grow where they are not wanted. Whether a plant of a given species is considered a weed depends not only on its characteristics and habitats, but also on its relative position with reference to other plants and man.” Weeds are often able to thrive in diverse and adverse circumstances. They are commonly found in disturbed or in places undesirable to other plants. Many weed species produce enormous quantities of seeds, and these seeds are often widely dispersed. Other weed species are capable of reproducing vegetatively. These factors combine to produce a plant that is very successful in competition with other plant species. The word “weed” is assigned here to those plants that exhibit weedy

characteristics and were most likely not eaten by the users of this privy.

Low-spine Asteraceae (Includes *Ambrosia* (Ragweed))

Low-spine Asteraceae includes *Ambrosia* (ragweed), *Iva* (sumpweed), and *Xanthium* (cocklebur). Of these plants, *Ambrosia* is the most likely in this setting. Ragweed (also wild tansy, hogweed, bitterweed, mayweed, hay-fever weed, and blackweed) is an annual that grows in cultivated fields, old meadows, pastures, waste places, and gardens. Ragweed pollen is responsible for many cases of fall hayfever (Muenschner 1987:423-425).

Centaurea (Star-thistle)

Centaurea (star thistle) includes some cultivated and many weedy plants. Cultivated plants of this genus include bachelor's-button, or cornflower, and sweet sultan. All species are introduced from Europe or Asia. The majority of the species are considered weedy, and even the cultivated species often escape and become weedy, growing along roadsides, and in fields and waste places (Fernald 1950:1544-1545).

Cirsium (Common thistle)

Cirsium (thistle) may grow as an annual or biennial. Its prickly leaves often outweigh the beauty of the flowers and value of the seeds as natural bird food in assigning this plant to the category of weeds. This aggressive weed grows in clearings, pastures, along roadsides, in damp ground and thickets, in sandy ground, at the borders of woods, along lakeshores, and in many other habitats (Fernald 1950:1540-1541).

Liguliflorae (Dandelion, Chicory, etc.)

Members of the Liguliflorae, or Chicory tribe of Asteraceae, include such plants as dandelion, chicory, and prickly lettuce.

These plants may be weedy annuals, biennials, or perennials and grow in a variety of disturbed grounds. *Lactuca* (prickly lettuce, milk thistle) also includes the cultivated lettuce. Most species within the Liguliflorae are weedy, herbaceous plants found in a variety of habitats, some of which include cultivated fields, meadows, waste places, old fields, pastures, gardens, and lawns (Muenscher 1987:422, 480-484).

Astragalus (Milkvetch)

Astragalus (milkvetch, locoweed) usually grows at roadsides and in waste places. It is tolerant of dry and calcareous conditions (Fernald 1950:903-912; Muenscher 1987:290).

Brassicaceae (Mustard Family)

Wild mustards may be found in waste places, grain fields, pastures, neglected fields, cultivated areas, in ditches, and along banks of streams (Martin 1972:64-65; Muenscher 1987:232-236). *Erysimum* (treacle mustard) grows in waste places, on dry open soil, in open woods, and in graveled areas (Fernald 1950:712-714).

Cheno-ams (Pigweed and Amaranth)

Amaranthus (tumbleweed, pigweed, and redroot) often grow in fields and waste places. These annuals produce large quantities of seed that spread readily. *Chenopodium* (lambsquarters, goosefoot) is a common annual weed in gardens, cultivated fields, and waste places. Seeds are produced in abundance. Some of the *Chenopodium* may be difficult to pull because of strong roots, but may be hoed off below the ground surface (Muenscher 1987:183-196). Some species of *Amaranthus* may be planted as flowers because of their colorful heads.

Cyperaceae (Sedge family)

Members of the Cyperaceae (sedge) family are perennial or annual, grass-like herbs of wet places, although some are adapted to drier habitats. A number of plants in this family, especially those in the genera *Carex* (sedge), *Cyperus* (flatsedge), and *Scirpus* (bulrush), are found as weeds in grasslands or recently drained areas (Hickey and King 1981:448; Muenscher 1987:152).

Euphorbia (Spurge)

Euphorbia (spurge) plants are typically considered to be common, poisonous weedy plants. They occur as annual or perennial herbs, and many species have an acrid milky sap that will irritate the skin and eye and mouth membranes. Although most species are considered bothersome weeds, some species have been used in a variety of ways. Spurge has been used to treat snakebites, asthma, and bronchial congestion. The juice of *E. marginata* (snow-on-the-mountain) has been used in Texas to brand cattle, and other species, such as *E. pulcherina* (poinsettia), are grown as ornamentals. *Euphorbia* is found throughout the United States along roadsides, and in fields, meadows, pastures, waste places, gardens and yards (Kirk 1975:32; Muenscher 1987:298-305; Niering and Olmstead 1979).

Ipomoea (Morning Glory)

Ipomoea (morning glory) is generally not a serious weed. The blue, purple, red, pink, or white-flowered vines are commonly seen growing on trellises and fences. Morning glories are found in fields, gardens, and waste places, especially on alluvial soils (Martin 1972:93; Muenscher 1987:352-353).

***Lathyrus* (Vetchling, Wild Pea)**

Lathyrus (vetchling or wild pea) grows well in damp ground, whether it is sandy, gravelly, or marshy. It may be found along shores, in damp thickets, and in meadows. Some species are native, while others are naturalized from Europe. They also colonize areas along roadsides, waste places, and the borders of fields (Fernald 1950:932-935).

***Phacelia* (Scorpion-weed)**

Phacelia (scorpion-weed) prefers calcareous soils and open woods. It often grows as weeds in rich ground, although it also may be found growing in rich soils in woods (Fernald 1950:1193-1194).

***Polygonum* (Knotweed, Smartweed)**

Polygonum includes both knotweed and smartweed. These plants contain an acrid juice, which causes smarting. Most species are annuals, but a few species are perennials. The peppery leaves of certain species may be eaten raw in salads or cooked like spinach. *Polygonum* can become troublesome weeds, but are important foods for songbirds, gamebirds, and waterfowl. *Polygonum* species are partial to moist soils in pastures and cultivated fields, along ditches, and on trampled ground about yards, paths, roadsides, and waste places. *Polygonum aviculare* (knotweed) grows on seashores and in salt marshes, as well as in both alkaline and non-saline soils inland. *P. persicaria* is a weed of damp clearings, roadsides, and cultural ground (Fernald 1950:580, 585; Kirk 1975:56; Martin 1972:40-42; Muenscher 1987).

***Rumex* (Dock, Sorrel)**

Rumex (dock, sorrel) are mostly perennials with edible leaves and leaf stems. Some species are native to the United States, while others were introduced from Europe. *R. acetosa* (sour dock, garden sorrel) is a European dock that is sometimes grown in gar-

dens as a potherb. Native species sometimes become weeds in meadows and pastures, especially on low, wet ground. *Rumex* plants are widespread in meadows, pastures, fields, lawns, swampy or marshy places, and along roadsides (Martin 1972:38-39; Muenscher 1987:172-180).

***Silene* (Catchfly, Campion)**

Many species of *Silene* (catchfly, campion) are widespread and common in eastern North America. *S. stellata* often grows in wildflower gardens pollinated by butterflies and moths. Other species may be boiled and eaten like spinach. The fresh leaves are slightly bitter due to a harmless amount of the toxin saponin. *Silene vulgaris* is one of the weedy species. *Silene* is found along roadsides and railroads, and in fields, meadows, thickets, gardens, open woods, and waste places (Fernald 1950:632-633; Muenscher 1987:209; Niering and Olmstead 1979:459-461; Peterson 1977:34).

Foods and/or Medicines**Apiaceae (Umbel Family)**

The Apiaceae (umbel) family contains about 275 genera, several of which originated in the Mediterranean region. This family contains a number of plants of economic importance. *Pastinaca sativa* (parsnip) is valued as a vegetable. *Petroselinum crispum* (parsley), *Foeniculum vulgare* (fennel), *Anthiscus cerefolium* (chervil), and *Anethum graveolens* (dill) are cultivated for their leaves as spices, and *Apium graveolens* (celery) for its blanched leaf-stalks. Several members are valued for their “seeds” for use as flavoring, including dill, fennel, celery, *Carum carvi* (caraway), *Pimpinella anisum* (anise), *Coriandrum sativum* (coriander), and *Cuminum cyminum* (cumin). These “seeds” are not really seeds but complete

fruits. *Centilla*, *Bupleurum* (thoroughway), and *Angelica* are useful medicinal plants. Other members of the family are common weeds and wild-flowers (Hickey and King 1981:298; McGee 1984:206-208; Niering and Olmstead 1979; Ody 1993). *Daucus carota* (wild carrot, Queen Anne's lace) is the ancestor of the garden carrot. The cultivated varieties have larger and fleshier roots than the wild forms. These roots are eaten fresh or cooked as vegetables. *Daucus carota* is a biennial that was introduced from Eurasia. The plant is now widespread throughout North America and is considered a troublesome weed. *Daucus* can be found growing wild in old meadows, pastures, dry fields, and waste places (Hedrick 1972: 232; Muenscher 1987:325-327; Niering and Olmstead 1979:330).

Arecaceae, Including *Cocos nucifera* (Coconut)

Cocos nucifera (coconut) has many uses in the tropics where almost all parts of the plant are used. However, in the historic United States, evidence for use of coconut usually indicates consumption of the fruit. Edible portions include the "meat" and "coconut water" or "coconut milk". These portions do not contain phytoliths. After harvest, the nuts are cut in half and the meat gouged out to dry. Coconut oil has been used for cooking and making soap. Coconut meat is rich in protein and carbohydrates, as well as oil. The fibrous outer husk has been used to make rope, mats, rugs, filters, and as stuffing for furniture. Shells have been used for making hookah pipes and the manufacture of novelties. Leaves often are used for thatching or making baskets or hats (Heiser 1990:159-164). Recovery of coconuts in historic sites indicates trade with tropical areas that export them and a system of distribution.

Cerealialia (Wheat and Other Cereal Grains)

Cereal grains include such diverse grains as wheat, rye, barley, and oats. *Triticum* (wheat) was one of the first cultivated plants, and it was the most important cereal in ancient Mediterranean civilizations. Today, there are over 30,000 varieties of wheat, and it is the most widely cultivated plant in the world. Early wheat was parched, ground, and made into gruel. It also was fermented to make a type of beer. The Spanish brought wheat to Mexico in 1529, where it spread as an agricultural crop among the native peoples. Wheat grows best in cool weather, so crops could be grown in winter during the traditionally scarce time of year. Wheat is used for making bread because wheat's storage proteins form a complex called gluten when they are ground up and mixed with water. Gluten makes the dough stick together and gives it the ability to retain gases, resulting in the ability to make raised bread. The three types of modern wheat most commonly grown are based on hardness of the kernel, which is a measure of protein content. Durum semolina is the hardest and is used to make pasta products. Hard flour contains little free starch and is used for bread. Soft flour has high starch content; and weak gluten and is used for pastries, biscuits, cookies, and cakes (Heiser 1990:63-74; McGee 1984:234, 285-285). Barley (*Hordeum vulgare*) was one of the first plants domesticated in the Near East. In addition to being a valuable food for both humans and animals, barley is important in making malt for brewing and distilling. Rye (*Secale cereale*) and oats (*Avena sativa*) are more recent domesticates. Rye usually is mixed with wheat to make bread, since it has too little gluten to make good bread alone. Oats are highly nutritional, containing 15-16 percent protein and approximately 8 per-

cent oils. Oats have been a popular breakfast cereal and an important animal feed, particularly for horses (Heiser 1990:106-108).

***Eugenia* (Clove)**

Eugenia (clove) is an evergreen tree that is a member of the Myrtaceae family and a native to the Moluccas. The cloves, commonly used as a spice in cooking, are the unexpanded flower buds of this tree. Cloves originally were known throughout the Mediterranean countries. Cloves were imported into Europe during the Middle Ages and were sold at Frankfurt, Germany, around 1450 (Hedrick 1972:259). Cloves may be used in a variety of ways, including baking, seasoning hams, and in the preparation of foods, such as spaghetti and lasagna.

***Fragaria* (Strawberry)**

Fragaria (strawberry) is found growing naturally in both Eurasia and the Americas, with the American varieties producing larger berries. In the eighteenth century, a French engineer named Frezier brought some of the large American species back to Europe and began breeding today's modern varieties (McGee 1984:183-184). Wild strawberries are smaller and more flavorful than the domesticated ones. The leaves and berries are rich in Vitamin C, and a leaf tea was used to prevent scurvy and to treat diarrhea. Crushed, wild strawberries also were once used to whiten the complexion, remove freckles, and as a treatment for mild sunburn (Ody 1993:60). Wild strawberries are perennial herbs found in meadows, fields, woods, hillsides, and forest edges (Angell 1981:20; Kirk 1975:90). Strawberries are commonly eaten fresh, or cooked in pies, jams, jellies, and preserves.

Lamiaceae (Mint Family)

Members of the Lamiaceae family are often grown for use as flavoring, as tea, or as med-

icine. *Leonuris* (motherwort) is a perennial herb that was introduced from Europe. It is reported to have sedative, hypotensive, and antispasmodic effects, and has been used to treat insomnia, neuralgia, spasms, fevers, and stomachaches. A leaf tea was used as an aid in childbirth, for asthma, and for heart palpitations. *Leonuris* is often found growing as a weed in pastures, waste places, and along roadsides (Fernald 1950:1228; Foster and Duke 1990:162; Krochmal and Krochmal 1978:136). *Salvia* (chia, sage) is a strongly aromatic annual or perennial herb or shrub that was commonly used as a seasoning. Sage was documented in American gardens in 1806, although it is believed to have been used even earlier. A leaf tea may be used to treat coughs, colds, fevers, sore throats, stomach gas, and worms. Crushed leaves are used as an antiseptic and to relieve skin wounds and cuts. Sage oil can be rubbed on the skin to keep mosquitoes and gnats away, and strong solutions may be sprayed on garden vegetables as a natural insecticide. *Salvia* may be found growing wild in prairies, plains, fields, waste places, and along roadsides (Hedrick 1972; Heinerman 1983: 54-55; Kirk 1975:84; Krochmal and Krochmal 1978:198; Medsger 1966).

***Vaccinium* (Blueberry, cranberry, bilberry)**

Vaccinium (blueberry, cranberry, bilberry) are natives of North America and other temperate and arctic regions of the world. They are deciduous or evergreen shrubs that are found in the wild in North America and Europe (Schopmeyer 1974:840). Commercial blueberries and cranberries were cultivated from American varieties. Half of the annual cranberry crop in the United States comes from Massachusetts where cultivation began in 1840. In 1910, a USDA scientist and a New Jersey cranberry grower developed 15 improved varieties of blueberry (McGee 1984:

185). Blueberries and huckleberries (*Gaylussacia*) are very similar and may hybridize. Blueberries may be red, black, or purple, but are usually blue, often with a white powder. Berries are eaten raw, cooked, dried, and in pies, jellies, jams, muffins, and pancakes. Cranberries are red, juicy fruits commonly found at Thanksgiving and Christmas in the form of cranberry sauce, but also are used in relishes, salads, jellies, pies, juices, and as an addition to hot breads (Angell 1981:70). *Vaccinium* plants like wet or dry acidic soils and grow on peaty or fire-blackened land, and in bogs, tundras and barrens (Angell 1981:72,108; Peterson 1977:102,220).

***Vitis* (Grape)**

Vitis (grape) is a native of Asia Minor and North America that has been cultivated for wine and table grapes. The Egyptians are believed to have first cultivated grapes 6,000 years ago. The majority of wines and table grapes are made from varieties of the European *Vitis vinifera*. American jelly, grape juice, and northeastern wines are made from Concord grapes, a variety of the American *Vitis labrusca* (McGee 1984:187). Many other species of *Vitis* are native to the United States and produce edible fruit, which can be purple, blue, black, or amber. Wild grapes are often too tart to be eaten raw, but are used in jams, jellies, and juices (Angell 1981:156). Generally, wild grapes need more sweetening than cultivated grapes and contain plenty of pectin before fully ripe (Peterson 1977:198). Young grape leaves can be cooked as greens or used to wrap meat for baking. Internally and externally, leaves were used to cure snakebites and disorders of the internal organs. "In various parts of the world, including the West in pioneer times, grape leaves soaked in water were used as a poultice for wounds" (Kirk 1975:263). Wild grapes are found throughout the Southwest and Northeast United States

growing in thickets and edges of woods (Medsger 1966:53-59).

***Zea mays* (Corn, Maize)**

Zea mays (corn, maize) is a New World cultigen that has become a very important resource. Central American native people first domesticated maize more than 1,000 years ago. Native Americans grew maize as a staple and introduced it to visiting Europeans. Today, corn is used for food, starch, alcohol, and animal feed. It is still a staple for millions of people in developing nations in Latin America, Africa, and Asia. Maize continues to be grown by native peoples in the Southwest, and it is big business for American farmers in the midwestern corn belt. Corn also is commonly grown in gardens. Fresh, boiled ears of corn are often eaten, and fresh corn kernels are canned and/or frozen. Kernels also are dried and made into cornmeal. Popcorn is a genetic variant whose kernels are heated and popped. Corn also is fermented into bourbon whiskey (Rhoades 1993:92-117).

PARASITES

Ascaris lumbricoides (intestinal roundworm) is a large parasite and commonly coexists in the intestine with *Trichuris trichiura* (whipworm) (Beck and Davies 1976:86). It is common in the mountainous areas of the southeastern United States, as well as on the fringes of many of the southern cities, even in modern populations. The adult female averages 30 centimeters (nearly 12 inches) in length, while the adult male averages 20 centimeters (8 inches) in length. Both are approximately 5 millimeters (nearly 1/4 inch) in diameter. Eggs produced by the female may be either fertile or infertile. The fertile eggs are rounder than are the infertile eggs. Infertile eggs may be the result of faulty

fertilization, egg laying prior to fertilization, or absence of males. An adult female intestinal roundworm may produce 200,000 eggs per day. These eggs are passed with the feces and may thus be introduced into soils.

Larvae appear within the eggs, usually within three weeks if conditions are ideal. Hatching takes place only after ingestion of the eggs. Eggs hatch in the small intestine where they burrow into the intestinal wall and enter the circulatory system. The small worms migrate to the heart and lungs, usually within seven days after infection. While in the lungs, the roundworms grow considerably in size and are then not able to pass back across the capillary walls. Instead, they migrate along the bronchial tree and trachea to the pharynx, where they are swallowed. Gravid females are noted in the intestine between five and eight weeks after initial infection. Both male and female roundworms have relatively short life cycles, surviving only a year, at most, before being passed from the intestinal tract. The eggs, which have heavy shell layers, are resistant to environmental changes within the soil. Both heat and desiccation, however, will kill roundworm ova. Careless defecation habits spread viable eggs to local soils, which may remain infective for five years. Children playing in areas of contaminated soil usually become infected through contact with the mouth by invariably dirty hands. If night soil is used as fertilizer, infections may be contracted through eating raw vegetables. Transmission through water may be caused by improper drainage of surface waters, thus polluting wells and local water sources, such as rivers. Use of privies or indoor toilets, as opposed to promiscuous defecation close to the home, are important in preventing infections (Beck and Davies 1976:87-90).

Symptoms accompanying *Ascaris* (intestinal roundworm) infection include fever

and cough, occasional bloody sputum, and pneumonitis, particularly with a heavy infection and during the stages when larvae migrate from the intestinal tract into the lungs or through the lungs. The condition may be referred to as *Ascaris* pneumonia. No eggs are present in the stool at that point, since the worms are immature and have not yet reached the intestinal tract. Most symptoms are associated with the presence of adult worms in the intestinal tract. Protein malnutrition may result from a heavy worm burden, particularly in growing children, if the diet is poor. Occasionally worms may group and ball up, causing intestinal obstruction, again usually in children. Because roundworms have an affinity for small orifices, they may migrate into the common bile duct or pancreatic duct, or block the airway if they migrate into the larynx or trachea. Death may be caused by *Ascaris* infestation through severe pulmonary invasion or an unrecognized migration of worms that result in asphyxia or obstruction of an essential organ (Beck and Davies 1976:87-90).

Trichuris trichiura (whipworm) resembles a buggy whip and may average 40 millimeters (nearly 16 inches) in length for the female. They have a thinner wall than do *Ascaris* eggs. Unlike *Ascaris* (roundworm), which lives free and unattached in the small intestine, whipworm lives primarily in the cecum, where it attaches itself to the intestinal wall. In heavy infestations, however, they may be found along the entire colon including the rectum. Whipworms are longer lived than roundworms, living for several years and producing eggs for discharge in the feces. Eggs develop into an infective larval stage within the eggshell in three to six weeks. Adverse conditions may delay development for several months or even years. Once embryos are ingested, larvae hatch in the jejunum, penetrating the intestinal villus, where it will

develop for three to ten days. The adolescent worm moves into the cecum, where it develops into an adult. Ninety days are required between ingestion and production of a gravid female (Beck and Davies 1976: 84-86).

Infections are common in areas of high humidity and hard clay soils, which hold moisture. Dense shade and warm climate are both necessities. Infection is usually heaviest among children, since hand to mouth contact in areas of soil pollution is a common vector in spreading these parasites. Whipworm eggs are less resistant to environmental changes, so infection may be more spotty than *Ascaris* (roundworm), with which it often co-occurs (Beck and Davies 1976: 84-86).

Light infestations with whipworm may produce no symptoms. Abdominal pain sometimes mimicking appendicitis, vomiting, constipation, fever, distension and flatulence, headache, backache, anorexia, and weight loss have all been associated with infestation by this parasite. If the infection is heavy, bloody diarrhea and emaciation may result. Prolapse of the rectum may also occur with heavy worm burdens. Fatalities are rare, even in malnourished and neglected children. Whipworm is more difficult to treat than roundworm, since the worms are embedded in the intestine (Beck and Davies 1976:84-86).

DISCUSSION

Soil samples were collected from four types of proveniences to provide information concerning plants used or consumed by occupants of historic Skagway. The night soil area is represented by samples 1 and 2 collected

from 3N/50W and 4N/59W respectively (table 1). These areas are located behind the Rainer Hotel. While these units were suspected to be privy areas, no privies were found. Therefore, this area is interpreted to represent a more casual use area, possibly an area where chamber pots were dumped. Seeds were visible in both areas, which resulted in the designation of this area as containing night soils (Doreen Cooper, personal communication, April 23, 1998).

The pollen record from this area was dominated by tree pollen including *Alnus*, Pinaceae, and *Pinus* (figure 1, table 2) as the major types. In addition, small quantities of *Betula*-type, *Picea*, *Tsuga*, and/or Cupressaceae pollen were noted. Together these pollens represent trees expected to have been part of the natural vegetation in and around Skagway. The remainder of the pollen record has been divided into probable native plants, weeds, and desirables. Since many of the pollen types could represent more than one plant that might fit into more than one category, placement within any one category is not considered to represent all possibilities. Probable native plants include High-spine Asteraceae, *Epilobium*-type, *Lathyrus*-type, Poaceae, and *Polygonum persicaria*-type. Probable weedy plants in this area include Low-spine Asteraceae (ragweed type), Brassicaceae, Chenopods, *Erysimum*-type, and *Phacelia*. Foods represented in the pollen record, whether native, cultivated, or imported, include cereal pollen representing cultivated cereals used for flour and baking and *Eugenia* (cloves). A few starch granules were recovered from this area that are typical of those produced by cereal grains. Monolet spores are the most abundant and represent ferns that are part of the natural vegetation. No parasite eggs or *Sporormiella* dung fungal spores were noted in either of these samples. While the pollen

record provides evidence of foods, it does not provide evidence that this area contains night soil.

Sample 2 also was examined for phytoliths. Dendritic elongate forms were very common in this sample (figure 2), probably representing cultivated cereal grains. These forms are quite abundant in the chaff or bran of cereal grains, and are interpreted to represent consumption of products made with cereal grains or discard of these products. This is the primary phytolith type recovered from the area that represents a probable food. Other phytoliths either represent local grasses, such as many of the festucoid grass forms probably do, or are not identifiable to type of grass, as the elongate smooth and spiny phytoliths. Dicot bulky forms probably represent conifer wood. Recovery of diatoms and sponge spicules indicates the presence of water.

A privy is represented by samples 3, 4, 5, and 6 (table 1) collected from units 6N/35W and 10N/35W. This privy was disturbed when a sewer line was put through in the 1940s. This privy probably was connected with the Rainer Hotel during the gold rush. The hotel was erected during the winter of 1897 to 1898. The privy probably was closed when the hotel expanded to the west, before 1914 (Doreen Cooper, personal communication, April 23, 1998). Sample 5 represents a small seed sample that did not contain a sufficient concentration of pollen to obtain a count. However, all pollen types that were observed are represented on the pollen diagram by a plus (+). Since there are no interpretations of use based on frequencies, this sample yielded as much information as other samples from the privy.

The pollen record for these three samples included evidence of a variety of trees including *Alnus*, *Betula*-type, Pinaceae, *Picea*,

Pinus, and *Tsuga*. Native plants appear to have included *Arenaria*-type, *Artemisia*, High-spine Asteraceae, probable *Eriogonum*, *Lathyrus*, Poaceae, and Rosaceae. Pollen representing weedy plants that probably grew near the privy include Low-spine Asteraceae (ragweed-type), *Astragalus*, Brassicaceae, Cheno-am, and *Euphorbia*. Brassicaceae (mustard family) and Cheno-am pollen might represent edible members of the mustard family and spinach, respectively. Recovery of elevated frequencies of these two pollen types in sample 4 suggests that they might represent foods rather than weedy plants. Alternatively, this sample might represent throwing dirt into the privy, and including a few weeds with the dirt. Foods represented in these privy deposits include Apiaceae (umbel family), Cerealia pollen representing cereal grains, *Eugenia* (cloves), *Fragaria*-type (strawberries), Lamiaceae (mint family), *Vitis* (grape), and *Zea mays* (corn). The mint family includes many plants used as flavorings and even for tea. The umbel family includes seasonings, such as anise and celery seed. Alternatively, both of these families include plants that might have been growing as weedy plants in the area of the hotel. Corn pollen might be present through importation of ears of corn or through use of corn meal, which probably was more common. Starch granules were not abundant in the privy deposits, but were noted occasionally. Parasite eggs were recovered only from sample 6. Both *Ascaris* and *Trichuris* parasite eggs were recovered, indicating that users of this privy probably arrived with parasites. Parasites cannot complete their life cycle outside the host humans in an environment like that in Skagway, Alaska; so, it is doubtful, but possible, that people arriving in Skagway with no parasites would contract parasites. Sample 6, representing the privy, yielded the highest concentration of parasite eggs per ml. of sediment.

The phytolith record from the privy is represented by samples 4 and 6. Sample 4 contained a large quantity of dendritic elongate forms, probably representative of cultivated cereals. These forms were not as abundant in sample 6, which contained more smooth elongate forms. Diatoms were much more abundant in sample 6, representing the presence of water. Both of the privy samples contained spherical spiny phytoliths typical of those produced by members of the palm family (Arecaceae). The most common edible members of this family include coconuts and dates, either of which could be represented.

Feature 12 (14N/39W) represents a large, wood-lined structure believed to have functioned as a gray water box. No evidence of night soil remained in the structure. By definition, gray water should be household water exclusive of chamber pot contents. Pollen recovered from this feature exhibits pollen representing local trees including *Alnus*, *Betula*-type, Pinaceae, *Abies*, *Picea*, *Pinus*, and *Tsuga*. Native plants in this vicinity appear to include *Arenaria*-type, *Artemisia*, Poaceae, and *Shepherdia canadensis*. Weedy plants include Low-spine Asteraceae, Liguliflorae, *Astragalus*, Brassicaceae, Chenopods, and *Erysimum*. Probable foods included Cereal and Lamiaceae. No starch granules or parasite eggs were recovered from this sample. A single *Sporormiella* dung fungal spore was recovered in this sample. These fungal spores represent a dung fungus that becomes more abundant in Historic Period sediments following the historic introduction of grazing animals. Its increasing presence in historic samples has been noted in numerous palynological studies (Davis, 1987). *Sporormiella* fungal spores are not confined to the dung of introduced grazers, but also occur in dung from moose, wild sheep, deer, elk, caribou, and rabbits. The increase of *Sporormiella* spores in

historic sediments may relate to changing land use patterns and increase in the length of time that herds of animals occupy any given area. Here it indicates the presence of manure.

Sediments beneath a saloon (79N/34W, 49N/32W, and 79N/37W) were examined. These samples represent Feature 21. All of the Feature 21 units represent sediment beneath the former Pantheon Saloon. Use of this building dates between 1903 and 1908, when the building was remodeled. "Snack" foods such as oysters and nutshells were recovered during excavation (Doreen Cooper, personal communication, April 23, 1998).

The pollen record for this group of samples exhibits a slightly different record than was recovered in other samples. Pollen representing trees is not abundant in samples 8 and 9, where it appears to have been replaced by large quantities of Low-spine Asteraceae pollen, probably representing growth of ragweed on disturbed sediments. Trees represented in these deposits include *Alnus*, *Betula*-type, Pinaceae, *Picea*, *Pinus*, *Pseudotsuga*, and *Tsuga*. Native plants include *Artemisia*, High-spine Asteraceae, *Epi-lobium*-type, probable *Eriogonum*, Poaceae, *Rhus*, and Rosaceae. Weedy plants include an abundance of Low-spine Asteraceae (ragweed-type), *Centaurea*-type, *Cirsium*-type, Liguliflorae, Brassicaceae, Chenopods, *Erysimum*-type, probable *Ipomoea* (morning glory), *Polygonum aviculare*-type, *Rumex*, and *Silene vulgaris*-type. Morning glory might represent either a weedy member of this genus, or a cultivated flower. Probable foods include a pollen type identified as a member of the palm family. Identification did not match coconut precisely, but it could have represented aberrant pollen of this food. Cereal pollen was relatively abundant, indicating that breadcrumbs probably were among the items spilled on the floor.

Recovery of *Eugenia* pollen indicates that foods prepared with cloves probably were served and spilled. Alternatively, cloves have been used medicinally, particularly when treating tooth disorders. If cloves were used medicinally and the patron was in the habit of spitting on the floor, this pollen type would be introduced into the sediments below the floorboards. Clove pollen was at least as abundant in sediments beneath the saloon floor as it was in privy deposits. Recovery of *Fragaria*-type pollen in all three of these samples indicates that strawberries were very likely served in the saloon. Recovery of *Vaccinium*-type pollen suggests that blueberries were served in the saloon, as does the presence of *Vitis* pollen indicate that grapes also were served. Recovery of *Zea mays* pollen from these sediments suggests that cornbread or another food made with cornmeal, or perhaps corn-on-the-cob was served in the saloon. In general, the pollen record from the sediments below the saloon contains more evidence of food plants than do privy deposits. This suggests that a variety of foods was served in the saloon, probably on a regular basis.

Samples 8 and 9 were examined for phytoliths also. Phytoliths were not very abundant in these samples relative to organic matter. Sample 8 yielded a small quantity of dendritic elongate forms, indicating that products were made with flour and that some flour probably was spilled. Sample 9 contained even fewer dendritic elongate forms. These are the best indicators of the presence of flour or foods made with flour. The majority of the other forms representing grasses in these samples probably represent local grasses that grew in this area before the construction of the saloon. Recovery of diatoms and sponge spicules, representing water or wet sediments, was variable in these samples.

SUMMARY AND CONCLUSIONS

Pollen, parasite, starch, and phytolith analysis of samples representing an area of night soil, privy and probable gray water box associated with the Rainer Hotel and the floor beneath the Pantheon Saloon provide information concerning the consumption of a variety of foods, seasonings, and/or herbal medicines. Cereal grains such as wheat, rye, and/or barley are represented by *Cerealia* pollen and dendritic elongate phytoliths. Corn or cornmeal also was part of the diet. A member of the palm family such as coconuts or dates is represented by the recovery of phytoliths and possibly by the presence of palm-type pollen grain. A member of the umbel or celery family appears to have been used, probably as a seasoning. Cloves also were used, again probably as a seasoning although they have medicinal properties. Strawberries, a member of the mint family, blueberries (or similar berries) also were consumed.

Recovery of parasite eggs from samples representing the privy and sediment under the saloon indicate that at least a few of the people living in Skagway arrived with parasites. Roundworm and whipworm parasites do not survive outside the human host in severe winters such as those in Skagway. It is much more probable, therefore, that people arrived in Skagway with a parasite infestation than that many became infected after reaching Skagway. Presence of parasite eggs in samples in Skagway is consistent with reports of people coming from many areas for the Klondike Gold Rush. The parasite load among occupants who used this privy does not appear to be very large. Recovery of parasite eggs from sediments beneath the saloon floor indicates presence of human feces. These may have come from use of

night soil in this area prior to the construction of the saloon, which is the most attractive interpretation. One must also consider the possibility that parasite eggs were introduced through the floor as the result of defecation in the saloon or in this area after the saloon closed.

In addition, native plants and weedy plants growing near these buildings were documented. Weedy plants probably included ragweed, star-thistle, common thistle, dandelions, vetch, mustard family, treacle mustard, pigweed and/or goosefoot, sedges, spurge, morning glory, vetchling, scorpion-

weed, knotweed and/or smartweed, dock, and catchfly. While it is possible that the mustard pollen represents use of mustard greens in flower as a food or perhaps even ground mustard, it appears more probable that it represents weedy members of this family. Also, the probable *Ipomoea* pollen might represent a cultivated morning glory rather than the weedy variety and *Centaurea* pollen might represent bachelor-buttons or sweet sultan that were planted, rather than weedy members of this genus. Local vegetation appears to have included numerous conifer trees, a few alder, and birch trees.

Table 1: Provenience Data for Samples from the KLGO Pantheon Project

Sample No.	Unit No.	Level	Feature No.	Lot No.	Description	Analysis
1	3N50W	3		95-35	Night soil	Pollen
2	4N59W	4	5	95-74	Night soil	Pollen Phytolith
3	6N35W	3		96-157A	Privy	Pollen
4	6N35W	1	16	96-161	Privy	Pollen Phytolith
5	6N35W				Privy seed sample from East Profile	Pollen
6	10N35W	4	14	96-139	Privy	Pollen Phytolith
7	14N39W	3	12	96-138	Grey-water box	Pollen
8	79N34W	8	21	97-35	Under saloon	Pollen Phytolith
9	79N32W	8	21	97-32	Under saloon	Pollen Phytolith
10	79N37W	1	22	97-50	Under saloon	Pollen

Table 2: Pollen Types Observed in Samples from the KLGO Pantheon Project

Scientific Name	Common Name
ARBOREAL POLLEN:	
<i>Alnus</i>	Alder
<i>Betula</i>	Birch
Cupressaceae	Cypress family
Pinaceae:	Pine family
<i>Abies</i>	Fir
<i>Picea</i>	Spruce
<i>Pinus</i>	Pine
<i>Pseudotsuga</i>	Douglas fir
<i>Tsuga</i>	Hemlock
NON-ARBOREAL POLLEN:	
<i>Arenaria</i>	Pussytoes
Asteraceae:	Sunflower family
<i>Artemisia</i>	Sagebrush
High-spine	Includes aster, rabbitbrush, snakeweed, sunflower, etc.
<i>Epilobium</i>	Fireweed
<i>Eriogonum</i>	Wild buckwheat
Poaceae	Grass family
<i>Rhus</i>	Sumac
Rosaceae	Rose family
<i>Shepherdia canadensis</i>	Canadian buffaloberry
WEEDS:	
Asteraceae:	Sunflower family
Low-spine	Includes ragweed, cocklebur, etc.
<i>Centaurea</i>	Star thistle
<i>Cirsium</i>	Thistle
Liguliflorae	Includes dandelion and chicory
<i>Astragalus</i>	Milkvetch, rattleweed, locoweed
Brassicaceae	Mustard family
<i>Erysimum</i>	Treacle mustard

Table 2: (cont.)

Scientific Name	Common Name
Cheno-am	Includes amaranth and pigweed family
Cyperaceae	Sedge family
<i>Ipomoea</i>	Morning glory
<i>Euphorbia</i>	Spurge
<i>Lathyrus</i>	Vetchling, wild pea
<i>Phacelia</i>	No common name
<i>Polygonum aviculare</i>	Knotweed/smartweed
<i>Polygonum persicaria</i>	Knotweed/smartweed
<i>Rumex</i>	Dock
<i>Silene vulgaris</i>	Common catchfly
FOODS:	
Apiaceae	Parsley/carrot family
Areaceae	Palm family
Cereal	Cereal grains such as wheat, rye, barley, etc.
<i>Eugenia</i>	Clove
<i>Fragaria</i>	Strawberry
Lamiaceae	Mint family
<i>Vaccinium</i>	Blueberry, cranberry, bilberry
<i>Vitis</i>	Grape
<i>Zea mays</i>	Maize, corn
Indeterminate	Too badly deteriorated to identify
SPORES:	
<i>Lycopodium</i>	Clubmoss
Monolete	Fern
Trilete	Fern
<i>Sporormiella</i>	Dung fungus
PARASITES:	
<i>Ascaris</i>	Roundworm
<i>Trichuris</i>	Whipworm

APPENDIX L REFERENCES CITED

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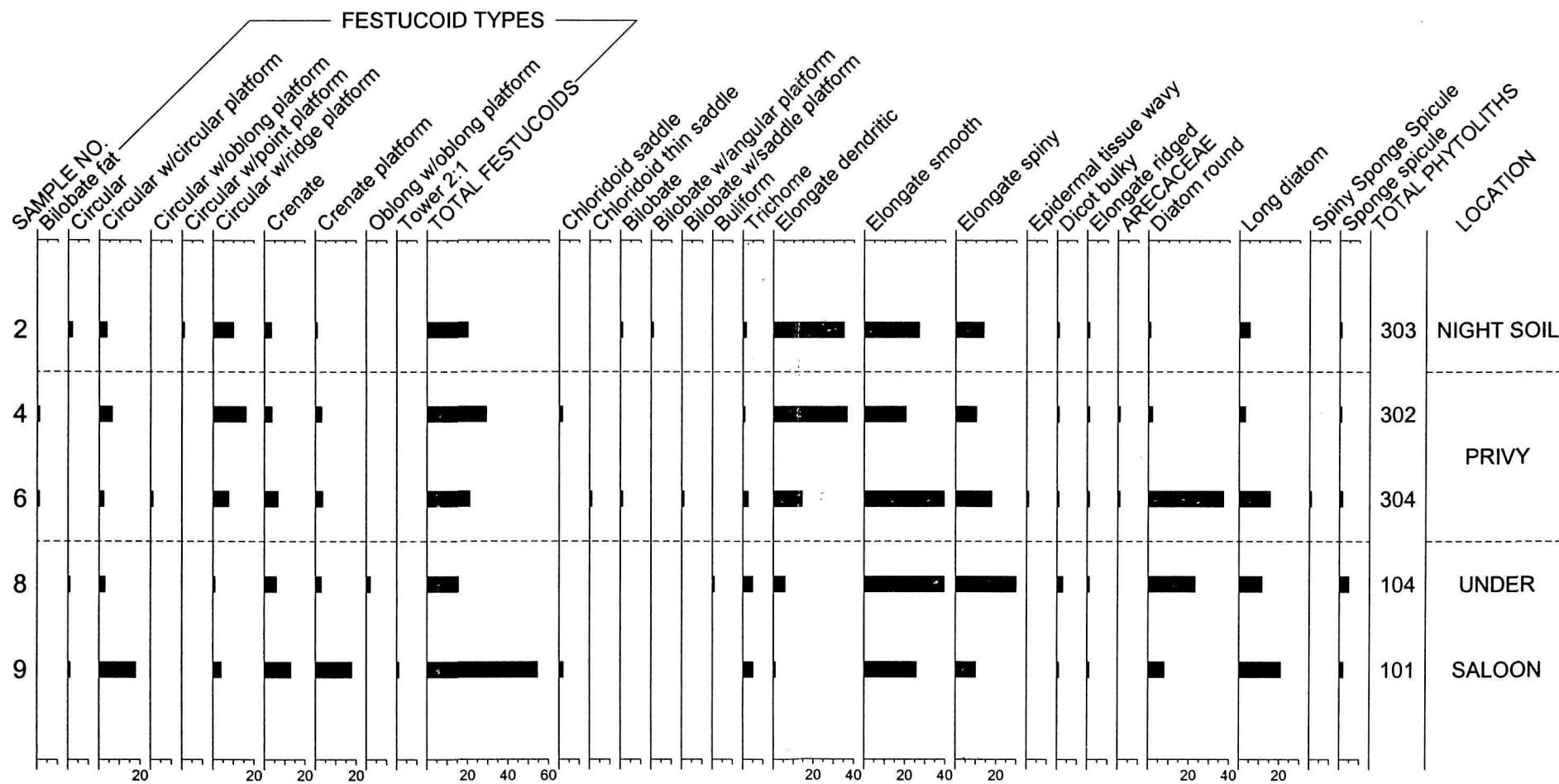


FIGURE 2. PHYTOLITH DIAGRAM FOR THE KLGO PANTHEON PROJECT.

APPENDIX M: MACROBOTANICAL REPORT

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MACROBOTANICAL ANALYSIS OF SOIL SAMPLES FROM THE RAINER HOTEL, PANTHEON SALOON, AND FASEL PIONEER PAINT STORE, KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK, ALASKA

Steve L. Martin
Virginia S. Popper
Paleoethnobotany Laboratory, Institute of Archaeology
University of California, Los Angeles

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INTRODUCTION

Ongoing data recovery excavations conducted by the National Park Service in the mixed residential/commercial area of Skagway in Klondike Gold Rush National Historical Park, Alaska, have resulted in the collection of a number of sediment samples and excavation specimens for macrobotanical analysis. A total of 14 samples (four preprocessed) were submitted to the Paleoethnobotany Laboratory, Institute of Archaeology, UCLA for macrobotanical analysis (table 1). Additional specimens collected during excavations were also submitted for identification (table 6). The primary objectives of this analysis were to document the type and frequency of botanical remains recovered from the samples and compare the recovered plant assemblage to previous macrobotanical investigation in Klondike Gold Rush National Historical Park.

A majority of the soil samples (8), three of which were preprocessed (EB-1899, 1900, 1901), were recovered from areas associ-

ated with the Rainer Hotel, which was erected during the Klondike Gold Rush in the winter of 1897-98. Samples from Units 6N35W (Feature 15) and 10N35W (Feature 14) were recovered from a privy associated with the hotel. Units 3N50W (Features 1 and 2) and 4N59W (Feature 5) were located behind the hotel in what were suspected to be privy areas. No evidence of a privy was found, however. Units 79N32W, 79N34W, and 79N37W (Features 21 and 22) were located underneath what used to be the Pantheon Saloon. Feature 27 was an approximately 1 m x 1 m, wood-lined trash pit found behind the Fasel Pioneer Paint and Wallpaper store, which operated from 1898 until 1902, at which time it became a general merchandise store.

METHODS

Four sediment samples (EB-1899, 1900, 1901, 1902) underwent manual flotation in the field. Sediment was placed in a water-filled barrel, and the botanical material that floated (light fraction) was skimmed off. The light fractions were submitted to the

Paleoethnobotany Laboratory for further analysis.

Unprocessed soil samples were processed at UCLA in a mechanical flotation device following Watson's (1976) design and processing procedure. The flotation device consisted of a 55-gallon, water-filled drum with an insert screen of 0.50 mm mesh. Soil samples of known volume were slowly poured into the partially submerged insert screen. Low density carbonized botanical remains (light fraction) floated to the surface and were directed out of the drum, via a sluiceway, into chiffon netting (0.02 mm mesh). High density, carbonized botanical remains were brought to the surface by the action of water agitation and stirring. This procedure was performed until no carbonized plant material was seen flowing into the netting. A siphon was then used to remove any carbonized material that had become waterlogged and remained submerged (Gumerman and Umemoto 1987). Once the siphon process was completed, the netting was hung to dry and the material remaining in the insert screen (heavy fraction) was set out to dry and saved for future analysis. All heavy fractions were examined for the presence of botanical material. The recovery rate of the mechanical flotation device has been tested using the poppy seed method (Wagner 1982) and yielded recovery rates $\geq 90\%$.

All light fractions from the submitted samples were sifted through a series of nested sieves (2.00, 1.00, and 0.50 mm), yielding four size fractions (>2.00 mm, 2.00-1.00 mm, 1.00-0.50 mm, and <0.50 mm) in preparation for sorting. The light fraction was divided as such for two reasons. It was easier to sort material of similar size, given the shallow depth of field of the incident light binocular microscope (10-40x) employed. It also allowed one to selectively

remove distinct materials from each fraction. In this analysis, carbonized wood and an unknown material were only removed from the >2.00 mm fraction and weighed. All other plant material was removed from the 2.00-1.00 mm and 1.00-0.50 mm fractions and counted or weighed. Material <0.50 mm was quickly scanned for whole seeds, of which none was present.

A number of the light fractions were very dense in botanical material and had to be subsampled. The percentage of the light fractions analyzed (weight/weight) was determined and then used to adjust sample volumes for the density (count/volume or weight/volume) calculations (tables 4 and 5).

Finally, the recovered plant remains were identified. This was achieved through the use of comparative plant and seed collections and seed manuals located in the Paleoethnobotany Laboratory in the Institute of Archaeology at UCLA.

RESULTS

Fourteen samples representing a total soil volume of 20.1 L were analyzed. The results of the macrobotanical analysis are presented in tables 2, 3, 4, and 5. Tables 2 and 3 present absolute counts and weights, whereas tables 4 and 5 present densities (counts/liter or grams/liter) for the recovered material.

Seeds are rarely identified to the species level because seeds within the same genus are often morphologically very similar. Some seeds could not be identified to the genus level and, based on morphology, were placed in the Cyperaceae (sedge) and Solanaceae (nightshade) families. Any identification that carries some uncertainty is indicated as cf. All the wood recovered was

carbonized. Plant parts that could not be placed in general morphological categories are designated as unknown plant part(s). Some plant parts, such as pine needles (carbonized), fruit attachments, and nutshell, were also recovered. Non-plant material was also recovered from a number of the light fractions including: eggshell, animal bone, newsprint, fibers, fragments of oxidized iron, and a woven fiber coated with what appeared to be a rubber-like substance. A relatively large amount of an unknown material that can best be described as coal was recovered from a number of samples as well.

The following identifiable seeds were recovered from the flotation samples: Cyperaceae (sedge family), *Ficus* sp. (fig), *Fragaria* sp. (strawberry), *Lycopersicon esculentum* (tomato), *Polygonum* sp. (knotweed), *Rubus* sp. (blackberry, raspberry), Solanaceae (nightshade family), *Verbena* sp. (vervain), and *Vitus* sp. (grape). In addition to the above taxa, the following specimens were recovered during excavations: *Bertholletica excelsa* (Brazil nutshell), *Pinus* sp. (nutshell), *Prunus* sp. (cherry, apricot seeds). An unknown nutshell, which differed from that recovered from the flotation samples, was also present (table 6).

Since the soil volumes of the preprocessed and flotation samples varied, density values were calculated to allow for comparisons across all samples. The seed density values, which are presented in tables 4 and 5, range from 185 to 5,856. The relatively high seed densities reflect the excellent state of preservation and recent age of the deposits. Additionally, most of the samples represent human feces and dense refuse, the very types of deposits that yield high densities. Whereas all of the unprocessed samples were <1.0 L in size, the preprocessed

samples were between 3.0 L to 5.0 L and all required subsampling.

DISCUSSION

Overall, the types of taxa recovered and their relative abundances are indicative of privy deposits found in Klondike Gold Rush National Historical Park (Cummings and Puseman 1993; Martin and Popper 1998; Puseman 1995). The exception here is Unit 79N37W, Level 7 (Feature 21), which contained essentially no botanical or cultural material. Seed densities and diversity are somewhat lower than those reported previously. This is probably the result of the mixed nature of the deposits as evidenced by the presence of refuse items, such as eggshell and bone.

Those soil samples recovered from areas associated with the Rainer Hotel (tables 2 and 4) yielded a number of seeds representing food items, including grape (*Vitus* sp.), fig (*Ficus* sp.), and strawberry (*Fragaria* sp.). Tomato (*Lycopersicon esculentum*), which cannot be cultivated in the Skagway region without the use of a hothouse, was also recovered. Seed totals are dominated by raspberry/blackberry (*Rubus* sp.) whose fruit ripens in the summer or early fall and produces between 300 to 1,000 seeds/gram (Young and Young 1992:307). The Solanaceae represents a food item as well, however, it could not be identified below the family level. The vervain (*Verbena* sp.) and Cyperaceae represent weedy plants that thrive in disturbed places. Many species of these plants prefer moist habitats as would have been found close to sources of permanent water. All of the berries recovered from the samples represent genera that are found locally, making it difficult to determine their source. Whether the berries recovered here were harvested from the wild, cultivated, or

imported is difficult to assess and is better determined through an analysis of the historical records.

Units 6N35W (Feature 15) and 10N35W (Feature 14), believed to be associated with the hotel, clearly represent privy deposits. These samples also contained bone, fiber, eggshell, and newsprint. Units 3N50W (Features 1 and 2) and 4N59W (Feature 5), on the other hand, were located behind the hotel in what were suspected to be privy areas. No evidence was found during excavations, however, to confirm this suspicion. The types and frequencies of seeds recovered were very similar to Units 6N35W (Feature 15) and 10N35W (Feature 14) and suggest the samples represent privy deposits. These samples also contained bone and eggshell but no newsprint.

Units 79N32W, 79N34W, and 79N37W (Features 21 and 22) were located underneath what used to be the Pantheon Saloon (tables 3 and 5). The only new taxa to appear here is knotweed (*Polygonum* sp.), a weedy plant that prefers moist habitats. These samples were thought to be more general refuse disposal areas; in addition to fiber, bone, eggshell, and newsprint, however, the samples yielded seed assemblages similar to those recovered from known privy deposits. Thus, as above, these samples appear to represent privy deposits.

Feature 27 (tables 3 and 5), an approximately 1 m x 1 m wood-lined trash pit found behind the Fasel Pioneer Paint and Wallpaper store, yielded large amounts of non-plant material including burned bone; fiber, large pieces of carbonized wood adhering to heavily oxidized nails; and a woven fiber coated with what appeared to be a rubber like substance. Although the feature's main function may have been general waste

disposal, the seed assemblage suggests that human feces were disposed of there as well.

Three types of plants are represented in the samples analyzed here. First, and most abundant, are the wild berries (*Fragaria* sp. and *Rubus* sp.), which may have been imported, cultivated, or collected locally. They could have been consumed fresh, cooked in pies, dried, canned, or preserved in jams and jellies. These fruits were composed of large numbers of small seeds, which were consumed with the fruit and passed through the digestive system intact. Second are the weedy plants (*Cyperaceae*, *Polygonum* sp., and *Verbena* sp.), which produce large numbers of small seeds. These plants thrive in disturbed soils and would have been common around the residence and probably represent wind blown contamination. Third are the fruits (*Ficus* sp., *L. esculentum*, *Prunus* spp. (cherry, apricot), and *Vitus* sp.) that were more than likely imported.

The results presented here are consistent with those from other historic privy sites in Klondike Gold Rush National Historical Park, Skagway, Alaska. Macrofloral remains recovered from a coprolite found in a privy associated with the resident Roman Catholic priest's rectory (1903-1914) in Skagway yielded the same taxa in similar quantities (Cummings and Puseman 1993). A trash level from the same privy yielded larger remains, namely the nutshell of *Corylus* sp. (hazelnut), the seeds of *Prunus* spp. (peach and plum), and *Olea europaea* (olive). Larger remains were also recovered from privies associated with the Moore and Kirmse House (Martin and Popper 1998) as well as from the fill of four privies from Skagway dating from 1897 to 1920 (Puseman 1995). In the current study, the few nutshells and large seeds came primarily

from the hand-picked samples (table 6). The presence of non-plant remains in all of the privies analyzed thus far, as well as the presence of large food remains, suggests the dumping of some food waste in these areas. Therefore, the relative lack of large plant food remains from the samples analyzed here suggests a more restricted disposal of plant foods in the sampled areas.

The privies associated with the Moore and Kirmse House also yielded a greater variety of wild berries such as *Amelanchier* sp. (serviceberry), *Arctostaphylos uva-ursi* (bearberry), *Sambucus* sp. (elderberry), *Viburnum* sp. (high bush cranberry) and weedy plants (Martin and Popper 1998). Macrofloral remains from the fill of four privies from Skagway dating from 1897 to 1920 also yielded some taxa not present here, such as *Cucurbita* sp. (squash) (Puseman 1995). However, the only taxon found in all of the previous analyses that is lacking here is *Vaccinium* sp. (blueberry). It

seems unlikely that its absence is the result of seasonality, restricted access, or dietary preference.

In general, the results of this study suggest that the diet changed little, at least in the items preserved in the archaeological record, during the time period (1897-1920) and varied little among residencies. Although coprolites and fecal deposits offer direct evidence of diet, they are by no means a complete and unambiguous source of such information. Only the indigestible parts of items consumed can be recovered, and various items may not have been consumed for their nutritive value but for medicinal purposes. All of the seeds recovered in this study from the privy deposits come from wild and imported fruits. Vegetables and grains were surely consumed as pollen and phytolith analyses indicate (Cummings and Puseman 1993); however, the whole seeds of these items are rarely eaten.

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Table 1: Provenience Information for the Analyzed Samples from the Rainer Motel, Pantheon Saloon and Fasel Pioneer Paint Store

EB No. ^a	Unit	Level	Feature	Volume (L)	Comment
1891	10N35W	4	14	0.3	
1892	79N34W	5	21	0.2	
1894	79N32W	7	21	0.2	
1893	79N34W	7	21	0.2	
1902	79N37W	2	22	3.0	Preprocessed
1899	04N59W	6	5	4.0	Preprocessed
1895	79N37W	7	21	0.4	
1898	04N59W	4	5	0.2	
1897	06N35W			0.5	Sample from E. Profile
1900	03N50W	5	1	5.0	Preprocessed
1901	03N50W	1	2	5.0	Preprocessed
1890	10N35W	3	14	0.3	
1896	06N35W	2	15	0.3	
1889			27	0.5	

^a The EB number is the accession number of the UCLA Paleoethnobotany Laboratory.

Table 2: Plant Material Absolute Counts and Weights (g) from the Rainier Hotel Soil Samples

TYPE	Unit							
	3N50W		4N59W		6N35W		10N35W	
	Level 1	Level 5	Level 4	Level 6	Level 2	E. profile	Level 3	Level 4
Seeds								
Cyperaceae	2	1		1				
<i>Ficus</i> sp.	594	454	143	405	290	67	572	33
<i>Fragaria</i> sp.	4	28	85	162	15		36	94
<i>Lycopersicon esculentum</i>	118	35	19	44	84		72	59
<i>Rubus</i> sp.	5068	1115	198	1796	28	71	98	35
Solanaceae				2		26	5	
<i>Verbena</i> sp.								1
<i>Vitis</i> sp.	72	1	2	5	14	21	2	4
Seed Total ^a	5858	1634	447	2415	431	185	785	226
Plant Parts^b								
Wood	0.03	0.11	0.07		0.32	0.11	0.16	0.38
Attachment					5			
Pine needle	9	1		1				
Unk. material			0.65		0.14		0.26	

^a Seed total includes unidentifiable seeds and fragments.^b Weights (in grams) for wood and unknown material only

Table 3: Plant Material Absolute Counts and Weights (g) from the Pantheon Saloon and Fasel Pioneer Paint Store Soil Samples

Unit						
	79N32W	79N34W		79N37W		
TYPE	Level 7	Level 5	Level 7	Level 2	Level 7	Feature 27
Seeds						
<i>Ficus</i> sp.	130	124	43	39		136
<i>Fragaria</i> sp.		111	57	32		235
<i>Lycopersicon esculentum</i>	128	179	33	37		119
<i>Polygonum</i> sp.				1		
<i>Rubus</i> sp.	165	284	363	186		285
Solanaceae	1	5	3			
<i>Vitis</i> sp.	2	1	4	1		1
Seed Total ^a	426	704	503	296	0	776
Plant Parts^b						
Wood						2.39
Pine needle				1		
Nutshell	12					
Unknown plant part	12		1			
Unknown material		0.11			0.13	

^a Seed total includes unidentifiable seeds and fragments.^b Weights (in grams) for wood and unknown material only

Table 4: Plant Material Densities (counts/liter or grams/liter) from the Rainier Motel Soil Samples

Unit								
	3N50W		4N59W		6N35W		10N35W	
TYPE	Level 1	Level 5	Level 4	Level 6	Level 2	E. profile	Level 3	Level 4
Seeds								
Cyperaceae	2	1		1				
<i>Ficus</i> sp.	540	227	715	368	967	134	1907	110
<i>Fragaria</i> sp.	4	14	425	147	50		120	313
<i>Lycopersicon esculentum</i>	107	18	95	40	280		240	197
<i>Rubus</i> sp.	4607	558	990	1633	93	142	327	117
Solanaceae				2		52	17	
<i>Verbena</i> sp.								3
<i>Vitis</i> sp.	65	1	10	5	47	42	7	13
Seed Total ^a	5325	819	2235	2196	1437	370	2618	753
Plant Parts^b								
Wood	0.03	0.06	0.35		1.07	0.22	0.53	1.90
Attachment					17			
Pine needle	8	1						
Unk. material			3.25		0.47		0.87	

^a Seed total includes unidentifiable seeds and fragments.^b Weights (in grams) for wood and unknown material only

Table 5: Plant Material Densities (counts/liter or grams/liter) from the Pantheon Saloon and Fasel Pioneer Paint Store Soil Samples

Unit						
	79N32W	79N34W		79N37W		
TYPE	Level 7	Level 5	Level 7	Level 2	Level 7	Feature 27
Seeds						
<i>Ficus</i> sp.	650	620	215	49		272
<i>Fragaria</i> sp.		555	285	40		470
<i>Lycopersicon esculentum</i>	640	895	165	46		238
<i>Polygonum</i> sp.				1		
<i>Rubus</i> sp.	825	1420	1815	233		570
Solanaceae	5	25	15			
<i>Vitis</i> sp.	10	5	20	1		2
Seed Total ^a	2130	3520	2515	370	0	1552
Plant Parts^b						
Wood						4.78 ^c
Pine needle				1		
Nutshell	60					
Unk. plant part	60		5			
Unk. material		0.55			0.33	

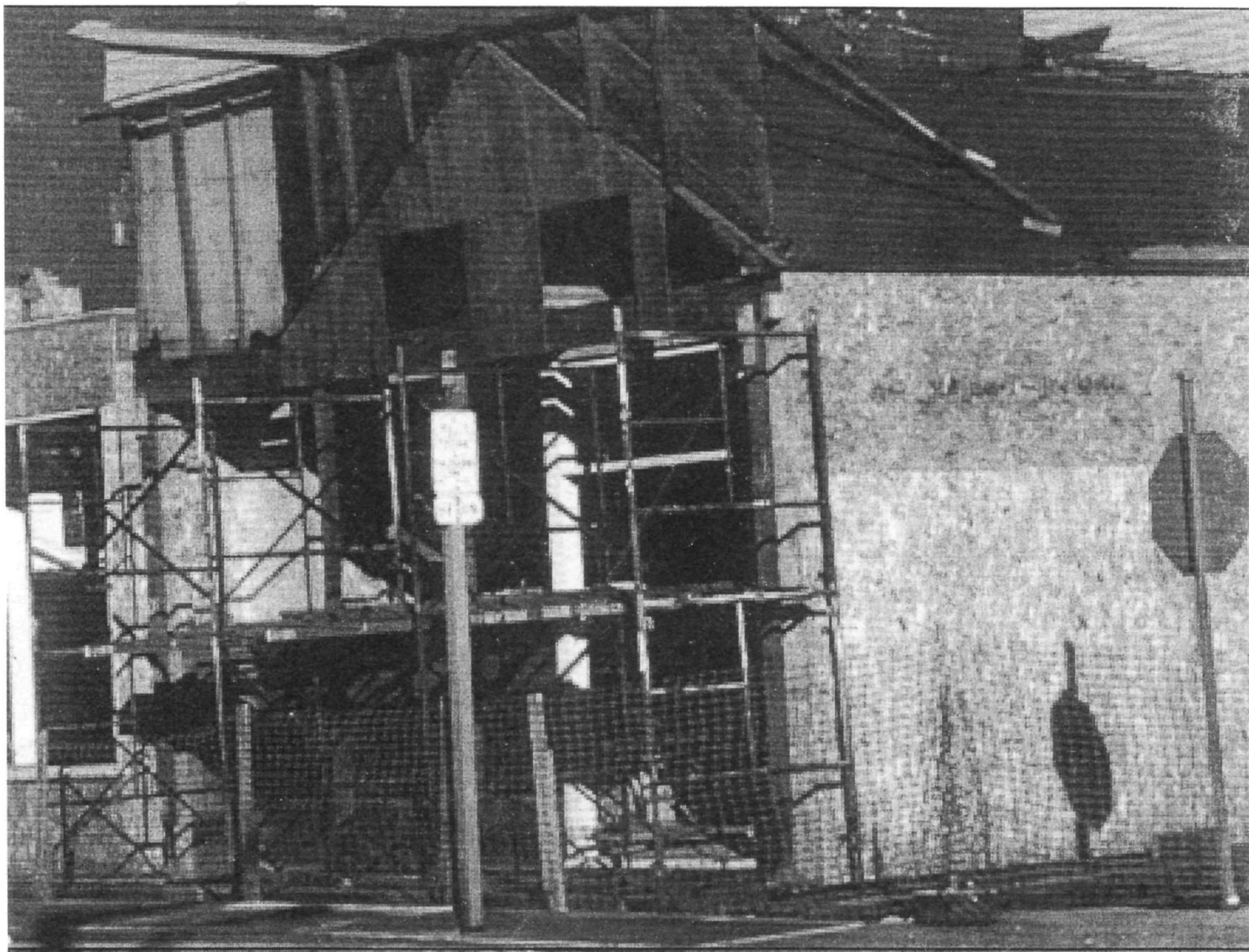
^a Seed total includes unidentifiable seeds and fragments.

^b Weights (in grams) for wood and unknown material only

^c This does not include the wood charcoal that was adhering to oxidized nails.

Table 6: Macrobotanical Specimens Recovered During Excavations of the Rainer Hotel, Pantheon Saloon, and Fasel Pioneer Paint Store Units

EB No. ^a	Unit	Feature	Level	Artifact No.	Identification	Common Name(s)
1905	80N36W	24	3	97-60	Unknown nutshell	
1906	46N33.5W	6	1	95-86	<i>Prunus</i> sp.	Apricot cf.
1907	79N32W	21	8	97-32	<i>Pinus</i> sp. nutshell cf. Unknown nutshell	Pine
1908	80N36W	24	3	97-60	<i>Bertholletica excelsa</i>	Brazil nut
1909	79N32W	21	9	97-34	<i>Prunus</i> sp.	Apricot cf.
1910	79N32W	21	8	97-32	<i>Vitus</i> sp.	Grape
1911	79N43W	21	6	97-17A	<i>Prunus</i> sp. cf.	Cherry
1912	79N32W	21	9	97-34	<i>Prunus</i> sp.	Cherry
1913	79N34W	21	7	97-21	Bark ?	
1914	79N34W	21	10	97-37	Unknown nutshell	



Pantheon Saloon in June 1998 reveals its original 1897-1898 storefront during the building's restoration to its 1903-1916 period appearance.