Figure 1. View of the Peniel Mission, March 1990.
Photo credit: Karl Gurcke photo, on file, Klondike Gold Rush NHP, Skagway, Alaska.
TABLE OF CONTENTS

FOREWORD xi

INTRODUCTION 1
  Project Background 1
  Skagway History 1
  Peniel Mission and Lot History 5
  History of Excavation 9
  Research Design 11
  Methodology 12

STRATIGRAPHY 33
  GEOLOGIC SETTING 33
    Glacial History 33
    Skagway River 33
    Surficial Sediments 34
  STRATIGRAPHIC DESCRIPTION 34
    Basal Fluvial Sediments 34
    West Side Stratigraphy 35
    South Side Stratigraphy 50
    East Side Stratigraphy 55
    Shovel Tests 59
  STRATIGRAPHIC DATING 59
  SUMMARY 60

ARTIFACTS 62
  STRUCTURAL ARTIFACTS 63
    Construction Remains 63
      Nails 63
      Window Materials 63
      Masonry 63
      Lumber 64
      Interior Construction Materials 65
    Siding and Roofing 65
    Flooring 65
  Utilities 65
    Plumbing 66
    Electrical Hardware 66
    Stove Parts 68
  Hardware 68
    Door Fixtures 68
    Fasteners 69

DOMESTIC ARTIFACTS 70
  Beverage Bottles 70
  Beer Bottles 70
  Liquor Bottles 71
LIST OF FIGURES

Figure 1. View of the Peniel Mission, March 1990. .............................................. iv
Figure 2. Skagway, Alaska, location map. ................................................................. 2
Figure 3. Skagway Historic District. ............................................................................ 3
Figure 4. East end of Block 24, Skagway, 1897 and 1898. ........................................... 6
Figure 5. East end Block 24, 1900 and 1901. ............................................................... 7
Figure 6A. View of the Peniel Mission, looking southwest, drawing ......................... 14
Figure 6B. View of the Peniel Mission, looking southwest, photo ............................... 15
Figure 7A. View of Peniel Mission, looking southwest, taken spring/summer, 1901, drawing 16
Figure 7B. View of Peniel Mission, looking southwest, taken spring/summer, 1901, photo 17
Figure 8A. View of Peniel Mission, looking northwest, drawing ............................... 18
Figure 8B. View of Peniel Mission, looking northwest, photo ..................................... 19
Figure 9A. View of Peniel Mission, looking northwest, drawing ............................... 20
Figure 9B. View of Peniel Mission, looking northwest, photo ..................................... 21
Figure 10A. View of Peniel Mission, looking southwest, drawing .............................. 22
Figure 10B. View of Peniel Mission, looking southwest, photo ................................... 23
Figure 11A. View of Lots 2 and 3, looking west, drawing ........................................... 24
Figure 11B. View of Lots 2 and 3, looking west, photo ............................................... 25
Figure 12. Excavation Map of Site. .............................................................................. 26
Figure 13. Rhodes (1988) Figure 4.5 ........................................................................... 27
Figure 14A. View, looking west, of hip-roofed building (I) and flooded, frozen channel of Mill Creek, drawing .......................................................... 30
Figure 14B. View, looking west, of hip-roofed building (I) and flooded, frozen channel of Mill Creek, photo ................................................................. 31
Figure 15. Dump zones. .............................................................................................. 32
Figure 16. Harris-Winchester Matrix (Harris 1974). ..................................................... 39
Figure 17. Stream channel sediments. ....................................................................... 40
Figure 18. West side stratigraphy. ............................................................................... 41
Figure 19. South side stratigraphy. ............................................................................. 45
Figure 20. East side stratigraphy. ............................................................................... 47
Figure 21. Southeast corner stratigraphy. ................................................................... 49
Figure 22A. View, looking northwest, of boardwalk that extended along east side of Building I, ca. 1900, drawing .......................................................... 52
Figure 22B. View, looking northwest, of boardwalk that extended along east side of Building I, ca. 1900, photo ................................................................. 53
Figure 23. Stratigraphy of feature 18 trench. ............................................................... 54
Figure 24. Early features. ........................................................................................... 56
Figure 25. View of Peniel Mission looking southeast during remodeling, 1937. .......... 57
Figure 26. Late features. ............................................................................................ 58
Figure 27. Electrical wall switch base. ....................................................................... 67
Figure 28. Knob and tube insulator. .......................................................................... 67
Figure 29. Electrical wire guide. ................................................................................ 67
Figure 30. Cudahy jar. ............................................................................................. 77
Figure 31. Crescent extract bottle. ............................................................................. 77
Figure 32. Octagonal glass Schies jar. ....................................................................... 78
Figure 33. Biscuit bird figurine. ................................................................................ 82
Figure 34. Edward Clark base mark. ....................................................................... 85
Figure 35. Porcelain de Terre plate fragment. ............................................................. 86
Figure 36. Grindley & Co. teapot Lid. ........................................................................ 86
Figure 37. Grindley & Co. base mark. ..................................................................... 87
Figure 38. Small Limoges china serving bowl................................. 88
Figure 39. Rampant Lion base mark............................................. 88
Figure 40. J. & G. Meakin base mark.......................................... 89
Figure 41. Mellor-Taylor base mark........................................... 89
Figure 42. Whiteware octagonal plate fragment............................. 90
Figure 43. Poppy pattern porcelain bowl.................................... 92
Figure 44. Chinese celadon bowl............................................... 92
Figure 45. Brown printed chamber pot....................................... 98
Figure 46. Celluloid comb and hairpin....................................... 101
Figure 47. Tobacco jar............................................................ 107
Figure A1. Minimum bottle count............................................. 131
Figure A2. A.B.G.M. bottle..................................................... 133
Figure A3. Ale bottle neck....................................................... 134
Figure A4. Illinois Glass Co. maker’s mark................................. 135
Figure A5. NB Soda Works maker’s mark (probable)..................... 135
Figure A6. Owens-Illinois maker’s mark.................................... 136
Figure A7. Unknown maker’s mark............................................ 136
Figure A8. Streater Bottle and Glass Co. maker’s mark.................. 137
Figure A9. W. G. Co. maker’s mark......................................... 137
Figure A10. BALL canning jar trademark (copy)........................... 139
Figure A11. GEM canning jar sherds.......................................... 141
Figure A12. GEM jar glass insert lid......................................... 141
Figure A13. Lightning canning jar (mended)................................. 142
Figure A14. Mason’s Hero/1858 canning jar............................... 144
Figure A15. Mason’s Keystone/1858 canning jar sherds................ 144
Figure A16. Banded jelly jar.................................................... 146
Figure A17. Ribbed jelly jar (one-half pint)................................. 147
Figure A18. Ingram’s Milkweed Cream jar................................ 147
Figure A19. Capillaris Hair Tonic bottle................................... 148
Figure A20. Florida Water Cologne bottle.................................. 148
Figure A21. Pompeian Massage Cream brand name and trademark.... 149
Figure A22. Perfume bottle stopper............................................ 149
Figure A23. Cosmetic jar......................................................... 150
Figure A24. Unembossed cosmetic jar........................................ 150
Figure A25. Unembossed squat cosmetic jar................................ 150
Figure A26. Plain ketchup bottle.............................................. 151
Figure A27. Unembossed Maraschino cherry bottle....................... 152
Figure A28. Crescent Spice and Flavoring Extract bottle (tracing)... 152
Figure A29. Dodson Hills condiment jar.................................... 154
Figure A30. Durkee Salad Dressing bottles................................ 155
Figure A31. Gillett’s Highgrade Extract bottle (tracing)................ 156
Figure A32. Unembossed mustard jar........................................ 158
Figure A33. Olive bottle.......................................................... 159
Figure A34. Unembossed packer’s jar........................................ 159
Figure A35. P.S.C. Co. Syrup jar (Toboggan brand)...................... 160
Figure A36. Toboggan brand syrup label.................................... 160
Figure A37. Unembossed packer’s jar........................................ 161
Figure A38. Unembossed packer’s jar........................................ 161
Figure A39. Octagonal Schies jar and trademark......................... 162
Figure A40. Rectangular Schies jar........................................... 162
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A41</td>
<td>Sunny Side brand name and trademark</td>
<td>164</td>
</tr>
<tr>
<td>A42</td>
<td>Lee &amp; Perrins bottle</td>
<td>164</td>
</tr>
<tr>
<td>A43</td>
<td>Greer's Ammonia bottle sherd</td>
<td>165</td>
</tr>
<tr>
<td>A44</td>
<td>Frank Millers Shoe Dressing bottle</td>
<td>166</td>
</tr>
<tr>
<td>A45</td>
<td>Sanford's Paste jar</td>
<td>166</td>
</tr>
<tr>
<td>A46</td>
<td>Singer Sewing Machine Oil bottle</td>
<td>167</td>
</tr>
<tr>
<td>A47</td>
<td>Whittemore's Polish bottle</td>
<td>167</td>
</tr>
<tr>
<td>A48</td>
<td>Unembossed shoe polish bottles</td>
<td>168</td>
</tr>
<tr>
<td>A49</td>
<td>Carter's Ink bottle</td>
<td>169</td>
</tr>
<tr>
<td>A50</td>
<td>&quot;P&quot; inkwell</td>
<td>169</td>
</tr>
<tr>
<td>A51</td>
<td>Sanford's Ink bottle</td>
<td>170</td>
</tr>
<tr>
<td>A52</td>
<td>Sanford's Ink bottle base</td>
<td>170</td>
</tr>
<tr>
<td>A53</td>
<td>Sanford's Ink bottles</td>
<td>170</td>
</tr>
<tr>
<td>A54</td>
<td>L. H. Thomas Ink bottle</td>
<td>170</td>
</tr>
<tr>
<td>A55</td>
<td>AF Union Made bottle base sherd (tracing)</td>
<td>172</td>
</tr>
<tr>
<td>A56</td>
<td>Brandy bottle base (tracing)</td>
<td>172</td>
</tr>
<tr>
<td>A57</td>
<td>Champagne bottles</td>
<td>173</td>
</tr>
<tr>
<td>A58</td>
<td>Coffin (Shoo-Fly) flask</td>
<td>174</td>
</tr>
<tr>
<td>A59</td>
<td>Creme de menthe bottle (partially mended)</td>
<td>175</td>
</tr>
<tr>
<td>A60</td>
<td>C. S. &amp; Co. Brandy bottle base and neck</td>
<td>175</td>
</tr>
<tr>
<td>A61</td>
<td>Dallemund Sample Whiskey bottle neck</td>
<td>176</td>
</tr>
<tr>
<td>A62</td>
<td>Eagle flask (example)</td>
<td>176</td>
</tr>
<tr>
<td>A63</td>
<td>Magnolia brand etching on shot glass (tracing)</td>
<td>178</td>
</tr>
<tr>
<td>A64</td>
<td>Pacific Club Whiskey bottle (mended)</td>
<td>179</td>
</tr>
<tr>
<td>A65</td>
<td>Pumpkin seed flask (amber)</td>
<td>180</td>
</tr>
<tr>
<td>A66</td>
<td>Three-mold brandy bottle</td>
<td>180</td>
</tr>
<tr>
<td>A67</td>
<td>1894 seal on whiskey bottle neck</td>
<td>181</td>
</tr>
<tr>
<td>A68</td>
<td>1895 seal on whiskey bottle neck</td>
<td>181</td>
</tr>
<tr>
<td>A69</td>
<td>Sample whiskey bottle</td>
<td>181</td>
</tr>
<tr>
<td>A70</td>
<td>Bromo Seltzer bottle</td>
<td>183</td>
</tr>
<tr>
<td>A71</td>
<td>Bromo Seltzer advertisement</td>
<td>183</td>
</tr>
<tr>
<td>A72</td>
<td>California Fig Syrup advertisement</td>
<td>184</td>
</tr>
<tr>
<td>A73</td>
<td>St. Jacob's Oel bottle (mended)</td>
<td>186</td>
</tr>
<tr>
<td>A74</td>
<td>Mentholatum jar</td>
<td>187</td>
</tr>
<tr>
<td>A75</td>
<td>Mentholatum advertisement</td>
<td>187</td>
</tr>
<tr>
<td>A76</td>
<td>Oil of cloves bottle</td>
<td>189</td>
</tr>
<tr>
<td>A77</td>
<td>Vaseline jars</td>
<td>190</td>
</tr>
<tr>
<td>A78</td>
<td>Homeopathic vial</td>
<td>191</td>
</tr>
<tr>
<td>A79</td>
<td>Dr. Miles advertisement</td>
<td>191</td>
</tr>
<tr>
<td>A80</td>
<td>John Wyeth Laxative bottle</td>
<td>192</td>
</tr>
<tr>
<td>A81</td>
<td>Flared lip medicine bottle</td>
<td>192</td>
</tr>
<tr>
<td>A82</td>
<td>Clear medicine bottle</td>
<td>192</td>
</tr>
<tr>
<td>A83</td>
<td>Clear oval medicine bottle</td>
<td>193</td>
</tr>
<tr>
<td>A84</td>
<td>Square medicine bottle</td>
<td>193</td>
</tr>
<tr>
<td>A85</td>
<td>Plain glass bowl lid</td>
<td>195</td>
</tr>
<tr>
<td>A86</td>
<td>Pressed glass butter dish cover</td>
<td>196</td>
</tr>
<tr>
<td>A87</td>
<td>&quot;Thumbprint&quot; candy jar lid</td>
<td>196</td>
</tr>
<tr>
<td>A88</td>
<td>Salt or pepper shaker</td>
<td>196</td>
</tr>
<tr>
<td>A89</td>
<td>Beaded rim lamp chimney</td>
<td>199</td>
</tr>
<tr>
<td>A90</td>
<td>Crimped lamp chimney rims</td>
<td>199</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1: Peniel Mission features, 1987 .................................................. 36
Table 2: Mean dates of artifacts .............................................................. 37
Table 3: Inventory of lumber samples from the excavation ...................... 64
Table 4: Inventory of plumbing remains from the excavation .................... 66
Table 5: Inventory of miscellaneous electrical hardware ......................... 68
Table 6: Other door hardware inventory ............................................... 69
Table 7: Inventory of fastener types ...................................................... 69
Table 8: Inventory of seeds and seed fragments collected from the dump deposits and upper strata of the site .................................................. 73
Table 9: Inventory of faunal remains ..................................................... 74
Table 10: Inventory of glass tableware .................................................. 82
Table 11: Minimum counts of ceramic dinnerware ................................... 91
Table 12: Inventory of housekeeping artifacts ....................................... 93
Table 13: Inventory of clothing fragments .............................................. 99
Table 14: Clothing fasteners and shoe fasteners ..................................... 100
Table 15: Articles for personal ornamentation ....................................... 100
Table 16: Inventory of items relating to personal hygiene and grooming .. 101
Table 17: Articles for personal use found in the excavation ..................... 103
Table 18: School or office related artifacts ............................................ 104
Table 19: Description and provenience of minted U.S. coins ................... 107
Table 20: Percentages of structural and nonstructural artifacts ................ 109
Table 21: Percentage of structural artifact types .................................... 112
Table 22: Percentage of nonstructural artifacts found in the excavation .... 112
Table 23: Color and function of identified bottles from the excavation ....... 112
Table 24: Percentages of glass container types found in the excavation ....... 113
Table 25: Artifact classes from Skagway sites ....................................... 114
FOREWORD

This report is volume five in a series of reports describing the results of National Park Service (NPS) archaeological excavations in Klondike Gold Rush National Historical Park (KLGO) in Skagway, Alaska. This report describes the results of excavations in the Mill Creek dump and near the Peniel Mission in 1987 and continues earlier work carried out by Catherine Blee in 1983 and Diane Rhodes in 1985 (Rhodes 1988). The 1987 archaeological investigations were carried out in compliance with Section 106 of the National Historic Preservation Act in advance of the rehabilitation of the Peniel Mission. Ray Depuydt directed the 1987 excavations and was assisted by archaeologists Gwen Hurst, Alfred Cammisa, Stephanie Ludwig, and Ann Miletich Warder. Archaeologist Ken Graham assisted with drafting. We are especially grateful for Howard Newman’s and Anne DePuydt’s volunteer work on the project. A number of other people, including Becky Saleebey, Frank Norris, Karl Gurcke, Ken Schoenberg, Doreen Cooper, and Cathy Spude assisted with the review.

Since the site excavation and composition of the draft report, life has continued for Skagway and the Peniel Mission. The restoration and rehabilitation project was completed in early 1995, and the building again serves as housing for park seasonal employees. As part of Catherine Blee’s dissertation (1991), she completed research and analysis of the site and artifacts beyond what is presented in this report. Blee provides an excellent comparative analysis of several archaeological deposits from Skagway and other parts of the western United States. One of the challenges of interpreting the archaeology of the Mill Creek dump is the identification of contributors to that dump. Among other issues, Blee uses a rigorous statistical method for indicating which of Skagway’s residents contributed to the dump and their social context within the community. As a companion to this report, I highly recommend that readers consult Sorting Functionally Mixed Assemblages with Multiple Regression: A Comparative Study in Historical Archeology (Blee 1991), which provides more detailed and meaningful conclusions about the cultural and social contexts of this site and its former residents and neighbors.

At the same time that Blee was completing her dissertation, William Adams and David Brauner were compiling an Archaeological Overview and Assessment of the park’s downtown Skagway unit (Adams and Brauner 1991). That book, still in its draft form, is a very useful guide to the history of some 15 years of archaeological investigations in Skagway and includes a bibliography and suggestions for themes for archaeological research. Researchers who wish to use archaeological data from Skagway investigations to enhance our knowledge of Skagway’s history will need to refer to the overview and assessment.

The exterior restoration and rehabilitation of the Peniel Mission revealed some interesting information on the building’s architectural details. Architectural conservator Judith Quinn’s report on paint analysis for the Moore House and Peniel Mission provided data on the buildings’ appearance during the early twentieth century (Quinn 1994). Karl Gurcke, Cultural Resource Specialist at KLGO, has been in touch with the Sheldon Museum and Cultural Center in Haines, Alaska, on the subject of brick making in Haines. Evidently, the Haines Brick Yard supplied bricks for Fort William Seward in Haines, as well as the Peniel Mission and other post-gold rush buildings in Skagway (Gurcke 1996). More recently, Karl contacted Doris Shoemaker, who was born in Skagway in 1922 and whose missionary parents owned the Peniel Mission from circa 1920 to 1926. Ms. Shoemaker agreed to share stories of her childhood at the Peniel Mission and copies of photos of Skagway during the 1920s with the park. Denver Service Center staff completed a cultural landscape study of the lots adjacent to the Peniel Mission, which provides a better understanding of the site’s history, outdoor uses, and appearance (USDOI NPS 1995).

This report only begins to describe and explain the history and archaeology of the Mill Creek dump and the Peniel Mission. We would like to see other archaeologists continue work on the material presented here. To this end, the NPS will provide researchers with an electronic copy of the artifact catalogue database on request. The catalogue was entered in a dBASE III+ format; includes information on artifact functions, dates, and proveniences; is compatible with the Automated National Catalog System (ANCS); and is suitable for statistical analysis. Requests for this database should be directed to the Curator, Klondike Gold Rush National Historical Park, P O Box 517, Skagway, Alaska 99840. Telephone: (907)983-2921.

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xii
INTRODUCTION

The Klondike Gold Rush National Historical Park was authorized in 1976 to commemorate the 1898 Gold Rush. The park encompasses a portion of the Skagway Historic District, most of the abandoned town of Dyea, and portions of the White Pass and Chilkoot Trails, the routes the miners took to the Interior from the head of Lynn Canal. Both Dyea, at the foot of the Chilkoot Trail, and Skagway, at the foot of the White Pass Trail, began as boom towns servicing the miners traveling to the interior gold fields (Figure 2).

The National Park Service (NPS) acquired the Peniel Mission in 1978 as part of a program to preserve several gold rush era buildings in Skagway (Figure 3). The building is a two-story structure built in 1900 for the Peniel missionaries who provided religious services to the many transients moving through Skagway. The NPS property also includes an open yard to the west and south of the Peniel Mission, areas where buildings stood during the gold rush.

PROJECT BACKGROUND

Under a program of adaptive reuse, the exterior of the Peniel Mission will be restored to its 1900 appearance, to support the interpretation of the gold rush era historic scene in Skagway. The building’s interior will be used as housing for park seasonal employees (Blee, Spude, and Cloyd 1984:429). In order to provide structural stability and meet modern safety codes for residential use, the foundations and utilities serving the building will be replaced. Preliminary construction plans propose the excavation of an approximately 3-foot-wide, 4-foot-deep trench around the perimeter of the building and a 3-foot-deep crawl space under the structure.

These proposed construction activities necessitated an archaeological testing program to determine if any significant cultural resources would be impacted. In 1983, Catherine Blee of the Denver Service Center excavated a test trench and 11 shovel tests for a water line that ran southwest from the Peniel Mission to the new NPS garage. The discovery of gold rush material in the shovel test led to the excavation of Test Trench 21 (TT21), an 18-inch by 20-foot trench along the water line. This test was followed by the excavation of five 5-by-5-foot units in the yard west of the Peniel Mission by Diane Rhodes in 1985 (Rhodes 1988). Both of the excavations verified that significant deposits occurred in the lot and that further excavations were necessary to mitigate the impacts of foundation reconstruction. The 1987 excavation was designed to determine if cultural deposits existed underneath and around the building and to mitigate the impacts of foundation reconstruction on those resources.

SKAGWAY HISTORY

The discovery of gold in the Klondike region in Canada in 1896 by Skookum Jim, Tagish Charley, and George Washington Carmack precipitated the last of the nineteenth century gold rushes in North America. Hundreds of hopeful miners sailed daily from West Coast cities to disembarkation points along the Alaska coast. From there, the miners followed various trails over the mountains into the Interior and eventually the Yukon gold fields. The trails over the Chilkoot and White Passes at the head of Lynn Canal were the most popular trails because of the short distance over the mountains to Lake Lindeman. From there the miners could boat down to Dawson and the mouth of the Klondike River.

The trails leading from Lynn Canal into the Interior were owned by the Chilkat Tlingit Indians whose main village was along Chilkat Inlet located approximately 15 miles south of Skagway (Krause 1976:132). The Chilkat Tlingits controlled all trade into the Interior over the trails. At the beginning of the gold rush, there was a Native village on the Taiya River where the Chilkoot Trail began, and which appeared to be only a temporary seasonal camp. John J. Healy and Edgar Wilson started a trading post in the village between 1883 and 1887 (Rhodes 1988:66). There was no settlement where the White Pass Trail began in the adjacent Skagway River valley in the 1880s, a situation most likely due to the poor resources and inhospitable climate in the valley. Ben Moore does mention that a Native family was camped at Smuggler's Cove one-half mile east of the valley when he and his father arrived at the Skagway River in 1887. It is probable that the campsite was seasonally occupied.

Captain William Moore and his son, J. Bernard Moore (Ben), homesteaded the mouth of the Skagway River in 1887 in anticipation of a gold rush over White Pass. Capt. Moore had participated in
Figure 2. Skagway, Alaska, location map.
Figure 3. Skagway Historic District.
several gold rushes in North America as a miner, steamboat captain, and entrepreneur. He also constructed toll pack trails into the interior of both the Skeena and Stikine River country (Blee 1988:7). Moore and his son were convinced that the next rush was going to be in the Interior of Alaska or the Yukon, and were looking for an easier route into the Interior than the Chilkoot Pass. In 1887, Skookum Jim, one of the discoverers of gold in the Klondike, guided Moore over the White Pass when Moore was assisting William Ogilvie in his survey of the Upper Yukon. Moore, convinced that the White Pass was the best route into the Interior, homesteaded 160 acres in Skagway River Valley in 1887 and immediately began work on a cabin and wharf. The Moores planned to construct a wharf, a sawmill, a trail to the Interior, and eventually a steamship line on the interior lakes. The work was sporadic until 1896 when they received financial backing from Victoria, B.C., backers (Blee 1988:8). All these projects were only partially complete when the first waves of staked miners arrived in 1897, and the Moores were prevented from consolidating their control over the trail or their ownership of their 160-acre homestead.

At that time Skagway was competing with Dyea as the favored entry point into the Interior. Initially, the majority of newcomers landed at Dyea because the already-existing Chilkoot Trail was better publicized than the White Pass Trail (Rhodes 1988:66). Not only was it in better condition initially than White Pass, the Chilkoot Trail was greatly improved in the spring of 1898 when three tramways capable of carrying goods over Chilkoot Pass were completed. The tramways greatly improved the transportation of goods over the pass. Consequently, Dyea’s population swelled to an estimated 10,000 by that spring (Spude 1980:xii).

Moore, however, convinced boat loads of miners to land at his Skagway wharf by announcing that the White Pass Trail was complete and easier to cross than the Chilkoot (Satterfield 1978:15). Instead of finding an easier trail, however, the initial staked miners encountered an unfinished trail that turned the trek over the pass into a nightmarish ordeal moving at a snail’s pace. Although the trail was continuously upgraded, it was not until the spring of 1898 that George Brackett completed a wagon road to White Pass City and a sled road to the summit. Despite the poor trail over the White Pass, Skagway became an instant city due to the incredible influx of miners. The poor trail conditions convinced many staked miners to spend the winter in Skagway in hope that the wagon road would be completed in the spring (Bearss 1970:93). By spring 1898 the town swelled to 8,000 with 1,000 miners passing through each week. The completion of the railroad from Skagway to Lake Bennett in June 1899 assured Skagway’s position as the major entry point into the Interior (Spude 1983:41).

The rapid growth and the influx of a large number of opportunists, con men, and outright thieves led to a high crime rate and constant disputes over land and property claims. Following a tradition established in earlier mining communities, the people of Skagway formed a miners’ committee to arbitrate disputes and dispense justice (Spude 1983:40). A miners’ committee voted to ignore Moore’s claim to his 160-acre homestead and platted a townsite over his land, reserving only five acres for his homesite and mill. The town grid established 220-by-300-foot blocks containing 12 lots each. Except for the 80-foot wide Broadway, 60-foot wide streets separated the blocks and 20-foot-wide alleys divided them in half. Many structures had to be realigned to the new streets or even moved out of rights of way. A person could locate or claim the 50-by-100-foot lots for a $5.00 registration fee. After winning a lawsuit, Moore and his associates settled in 1901 for 25 percent of the assessed valuation of his lost properties.

Skagway’s economy peaked in early 1899 when its population was estimated at 10,000. Businesses of all types had sprung up to service and outfit the miners passing through on their way to the gold fields. In October 1897, the Skagway News boasted that Skagway had 15 stores, 14 restaurants, four meat markets, three wharfs, 11 saloons, six lumber yards, eight pack trains, six lawyers, and nine hotels (Spude 1983:6). By 1898, the town had a water system, electricity, five churches, several first-class hotels, a railroad, several outfitters, a host of flop houses, brothels, and as many as 80 saloons.

Skagway settled into a slower-paced economy after the Klondike Gold Rush began to subside in the latter half of 1899. New Canadian laws that prevented American miners from participating in subsequent rushes in the Atlin area stemmed the flood of miners passing through Skagway. The reduced traffic, plus new Canadian customs
restrictions on trade across the international boundary, led to the economic collapse of a number of outfitters who supplied the miners and exported goods to the Canadian mine fields (Spude 1983:42). Many Skagway residents and businesses migrated to the gold rush at Nome, which began in May 1899, and later to the Fairbanks stampede, which started in February of 1903. By 1900, the population of Skagway had shrunk to a little more than 3,000.

The presence of the railroad and the deep-water port enabled Skagway to survive by servicing passenger traffic boating up the Inside Passage and traveling into the Interior by train. The railroad was also carrying goods and equipment to the mines and ore to Skagway for shipment (Spude 1983:43). Skagway consolidated its business district between 1907 and 1909 by moving the more prominent hotels and businesses onto Broadway and by removing the shoddier structures and commercial sex establishments.

Foot and passenger traffic stabilized at lower levels, and by 1910 Skagway's population had dropped to 600. By 1930 the population had dropped even further to 492 (Rhodes 1988:89).

World War II brought another boom to Skagway, when the American military established a base in the town and began shipping men and material over the White Pass to construct an all-land route from the contiguous 48 states to Alaska. After the war, the military departed Skagway, leaving the town with an economy once more based on tourism and the railroad. The population declined to pre-war levels.

**PENIEL MISSION AND LOT HISTORY**

The Peniel Mission is located on Sixth Avenue in Lot 2, Block 24—a lot that used to be within the west boundary of the Moore homesite lot (Figures 4 and 5). Sixth Avenue originally extended east only to Moore's property line, which ran through Lot 3. Early photographs show Lot 2 empty with Moore's western boundary fence separating the lot from buildings on Lot 3. Apparently even the five acres reserved for Moore's homesite and mill were not protected against claims, for Block 24, Lot 2 was claimed by R.N. Wilson in December 1897 (City of Skagway 1897). He sold the property to Theodore Johnson, who in turn sold it to W.P. Ferguson—the head of the Peniel Missionaries. The founder of the Peniel Missions was Theodore Pollack Ferguson and his wife, Mamie Payne Ferguson. The first mission was founded in Los Angeles in November 1886 and was called the Los Angeles Mission. The name was later changed to the Peniel (pronounced "puh-NIGH-el") Mission. Peniel means "face of God" in Hebrew (Hittson 1975:3-7).

Although the area of Los Angeles where the first mission was built was not originally a skid-row neighborhood, it later became impoverished; and the Peniels evolved into a "rescue mission." The Peniel missionaries intended to bring the "word of God" to "all walks of life," but it appears that they increasingly worked with the down-and-out members of society—alcoholics, drug users, and the poor. In addition, the first missionaries probably had some medical training, enabling them to administer first aid to the sick and the injured that came to the mission (Hittson 1975:6,7).

The Peniel Mission was, and still is, Christian, evangelical, and nondenominational. It witnessed amazing growth from 1886 to 1907, having branches all over California: one each in San Pedro, San Francisco, Oakland, San Diego, San Bernardino, Vallejo, Eureka, Pasadena, Fresno, Long Beach, Santa Cruz, Santa Rosa, two in Sacramento, and two in Bakersfield—one of which was Chinese (Hittson 1975:11,12).

They also had branches in other states: Seattle and Tacoma, Washington; Portland and Astoria, Oregon; Juneau, Wrangell, Skagway, and Haines, Alaska; and Honolulu, Hawaii (Hittson 1975:11,12).

In Alaska the first missions were opened in 1895 in Juneau and Douglas. The Douglas branch appears to have closed shortly after it opened. In 1899, a mission opened in Wrangell, followed by a mission in Skagway (Hittson 1975:36).

When the missionaries first arrived in Skagway in early 1899, they held street meetings; but later in the year they obtained an abandoned blacksmith shop located in the middle of Sixth Avenue near the present site. In 1900 a new Peniel Mission was built with money donated by some of the townspeople (Daily Alaskan, July 18, 1900). The completion date of the building may be evidenced by a board found in the building with the note "Walter Cole and (illegible) December 5, 1900" (Blee et al. 1983:430). The Alaskan and Yukon Gazetteer and Business Directory (Polk 1903-1915) indicates that the Peniel missionaries occupied the building until at least 1911. The two-and-a-half story structure was false fronted, with two vertical windows per floor and a central door entry. It appears to have had an illuminated
Figure 4. East end of Block 24, Skagway, 1897 and 1898.
Figure 5. East end of Block 24, Skagway, 1900 and 1901.
sign marked "Peniel Mission" in front of the door (Blee, Spude and Cloyd 1984:444).

Meetings were held every night at 8:00 o'clock, except Monday. Bible meetings took place every weekday morning at 10:00 o'clock and on Sunday at 8:00 a.m. There were also meetings in the "Scandinavian language" every Sunday afternoon at 3:00 o'clock (Daily Alaskan, Nov. 2, 1902). The Scandinavian meetings were in response to the many Norwegians, Swedes, and Danes who immigrated to the United States during the gold rush. The missionaries advertised the meetings in the local newspaper along with the other religious sects, but added "there will be no collections," which seems to show that they were involved in attracting the down-and-out of Skagway society (Blee et al. 1984:431).

The mission also had guest speakers—missionaries from overseas, other Peniel branches, or elsewhere—who preached at revival meetings (Daily Alaskan: Feb. 22, 1906; March 6, 1906; April 25, 1908; June 26, 1909).

The Peniel Mission seems to have been abandoned around 1911 because it is no longer listed in the city's directories after that date (Polk 1903-1915). The Peniel missionaries witnessed a big decline, worldwide in the 1940s (Dorothy 1987).

In the first decade of this century, several structures stood to the south of the Peniel Mission in what is now the back yard of the lot. There was a small one-story building approximately 10 to 15 feet from the back wall (Figures 5 and 6). In the early photographs, a six-feet-wide shed runs along the back wall of the mission, and what looks like a privy stands between the shed and the small building to the south. In photographs dated from 1908 to 1912, the lot to the south is vacant, and the six-feet-wide shed is replaced by a 10-by-22-feet extension (Figure 7).

The Peniel Mission property was eventually sold to Martin Johnson in February 9, 1917. The property was then sold twice before 1920 when it was bought by William H. Shoemaker, who owned it until 1936 (Rhodes 1988:90). In 1937, Dr. Clayton Polley bought the building and remodeled it by converting the first floor into living quarters and the second into a dentist office (Rhodes 1988:90). He put in a new foundation, removed the false front, tore down the rear 10-by-22-feet shed, and replaced it with a 10-by-17-foot addition. He also put in an outside stairwell and a second story door on the west wall to provide access to the offices. He built a 6-to-7-feet wide greenhouse along the back wall and a fenced-in chicken yard and coop toward the southern boundary of the lot (Polley 1987). He sold the building to William and Beverly Feero in 1947. The property then changed hands five times before 1978 when the NPS purchased the building. Sometime before 1959, Lon Grey put in a new foundation and sidewalk (Cyr 1987).

The adjacent Lot 3 has a much more complex history. Research of the Skagway deed records (City of Skagway 1897 and 1898) by NPS Historian, Frank Norris, indicates that the lot was located by William Bristol on August 19, 1897, and again by Eugene C. Ward on August 26, 1897. Ward and Robert J. Williams sold the lot to J. Cummings who in turn sold it to F.F. Frisbee on February 19, 1898. F.T. and Mattie Keeler, who acquired the west half of the lot on August 25, 1898, were assessed for taxes and improvements on the property until 1912. These improvement taxes must have been for the long, narrow, gabled building seen in photographs taken as early as April 1898. This building is most likely the Colorado Boarding House that was advertised in the June 17, 1898, issue of the Skagway News (Rhodes 1988:77). The Keelers were not assessed for improvements after 1911, which indicates that the building was removed. The building is seen in a photograph taken in 1910 (Figures 10 A&B). The June 1898 photograph also shows a hip-roofed building standing just west of the Moore fence on the east half of Lot 3 (Figure 11A and 11B). The tax records show that Mr. and Mrs. J. Mercier, who were possibly affiliated with the Moore Townsite Company, paid taxes on the east half of Lot 3 with improvements from 1900-1907. The 1908-1911 records are missing. Subsequent records show that a D.J. Rich, probably also of the Moore Townsite Company, paid the taxes for the east half of Lot 3 without any improvements from 1912-1914. The lack of an improvement assessment must indicate that the hip-roofed building was torn down or moved before 1912. The 1910 photograph does show the building still standing, suggesting that it must have been torn down in 1911.

The Bank of Alaska acquired both the east and west halves of Lot 3 in 1916 and then sold them to the Territorial Corporation, who paid taxes on the lot until 1928. Father Gallant of the Catholic Church on Fifth Avenue bought Lot 3 in 1929 and sold the north half to Harry Ask in 1931. Harry Ask paid taxes on
the lot until 1959 but was not assessed for any improvements until 1945. The improvements tax of $125 increased to $225 in 1949. The improvement assessment indicates that at least one structure was on the lot between 1945 and 1958. Dr. Polley remembers an old shed standing in the area north of the NPS garage (Polley 1987).

Father Gallant paid taxes on the south half of the lot between 1933 and 1958 but was never assessed for improvements during that period. In fact, the taxes were devalued from $300 to $100 in 1950. The Fraternal Order of Eagles purchased the south half of the lot from Father Gallant in 1958 and the remainder in 1959. They owned the entire lot until 1974 when Mr. and Mrs. John Edwards acquired the property. The Fraternal Order of Eagles was assessed for improvements on the lot until 1961, possibly indicating that Lot 3 was vacant after that period. The NPS acquired the property when it purchased the Peniel mission in 1978.

The lot to the east of the Peniel Mission was originally owned by Capt. William Moore, along with the Peniel Mission property and the remainder of the Pullen property (Spude 1983:24). The first structures to be raised on the property were a tent and an adjacent flat-roofed shack of similar height, shown in photographs taken in 1900 and 1901. These structures appear to have been located about 35 yards north of the Moore House and 18 yards east of the Peniel Mission. Early photos also show a fence along the east wall of the Peniel Mission and adjacent to it, separating the Mission from the Pullen and Moore properties.

Harriet Pullen bought the property and mansion, later called the Pullen House, from Moore about 1901. The two small structures no longer appear in 1903-1905 photos of the property, suggesting that they were removed shortly after the sale. Around 1910, Mrs. Pullen had her former husband’s house, the Cedar House, transferred to her property. However, it was described as being "surrounded by 2 streams," along with the two other buildings on her property, the Pullen House, and Moore office building. Therefore, none of the buildings could have been situated on the lot immediately east of the Peniel Mission (Spude 1983:31,160).

In 1913, Mrs. Pullen acquired the Johnson House and moved it to the "front boundary of her existing property" and rented it out (Spude, 1983:159). According to maps and records of that period (Spude 1983:138, 140), the Johnson House was located on the lot immediately east of the Peniel Mission, about 23 yards from house to house, where it stands today.

Harriet Pullen managed the Pullen House as a fine hotel until she died in 1947. After Mrs. Pullen's death her granddaughter managed the Pullen House until 1959, when the house and grounds were auctioned off (Spude 1983:160). No other structures are known to have been built on the lot east of the Peniel Mission.

**HISTORY OF EXCAVATION**

In 1983, Catherine Blee of the Denver Service Center excavated 13 one-foot-diameter shovel tests every 5 feet along the proposed water line between the Peniel Mission and the new NPS garage (Figures 12 and 13). Blee also excavated a 20-feet-long, 18-inches-wide trench along the water line after discovering ash, charcoal and artifacts in the shovel tests near the building. The excavation of the trench revealed that an early dump was deposited in a former stream bed near the Mission and that proposed foundation reconstruction would impact those deposits.

In 1985, Diane Rhodes of the Denver Service Center excavated five 5-by-5-feet units in the yard west of the budding in order to "determine the origins and integrity of these significant deposits and to expedite cultural resources compliance on proposed rehabilitative work, ..." (Rhodes 1988:11).

Rhodes placed her excavation units to intersect the right bank of the stream discovered in Blee’s TT21 and to maximize coverage of the yard (Rhodes 1988:17,20-21). She found that the stream flowed from the northwest, across the yard and underneath the southeast corner of the Peniel Mission. The stream was filled with dump materials for its entire length.

The trench and four of the excavation units had similar profiles (Figure 13). The excavations ceased at a sandy, rounded gravel that defines the stream bottom and the bank. This gravel is a channel lag deposit of Mill Creek that originally was deposited by the Skagway River. Stratum G, the first deposit of Mill Creek, lies above the gravel. Stratum G consists of a silty sand containing branches and, in the case of Unit 25A, an entire log. This organic deposit has been preserved by the present water table. The branches lie in a thin, highly organic
deposit at the contact of Stratum F and Stratum G. The branches, which made up the original cultural deposit in the stream, showed evidence of cut marks.

Rhodes found artifacts that were thought to be at the top of Stratum G in Unit 25A, but subsequent excavations determined that these artifacts belonged to a thin Stratum F. In TT21, the dump lens (Stratum F) consisted of an orange-to-brown silt, ash, and cinder deposit that was loaded with artifacts. Rhodes concluded that this stratum was a dump deposit because of the burned materials, the dense concentration of artifacts, and the placement of the material in a stream. Stratum E, lying above Stratum F, was a red, black and white deposit of silt, ash, cinders, coal, and artifacts. A sandy silt separated Stratum E from Stratum F for much of TT21. The two dump levels varied considerably in color and composition due to the relative amounts of ash, cinders, coal, and artifacts. Concentrations of metal artifacts, particularly cans, gave much of the dump a rusty orange hue. The presence of a fine silty sand in an otherwise mixed deposit appeared to be evidence that the dump was deposited into a slow-moving stream that was incapable of sorting out the heavier materials (Rhodes 1988:119-120).

In Unit 25A, the lower Stratum F was a thin lens that pinched out near the top of the bank. Two wooden posts were found in the lowest silty sand in the same unit.

The other excavation units proved somewhat more variable. A dark grayish brown silt (Stratum H) with an unusually high concentration of artifacts was found in the stream bottom in Unit 25B. Strata E and F lay above this lens. Two large angular granitic boulders, partially covered by Stratum E, were also found in Stratum F. These rocks, which do not appear to be intrusive, may have been used as foundation supports for the hip-roofed building. The dump, deposited around the rocks, would have postdated their placement.

No dump materials were found in Unit 25C because of a recent intrusion that was backfilled with gravel and rocks. In Unit 25D, an approximately 2-foot-thick Stratum E deposit was apparent, but no Stratum F was found. A water pipe and a sewer line were found to lie on the surface of Stratum E with fill dirt covering them, indicating that they were laid shortly after the deposition of Stratum E. The excavation for the water and sewer lines indicates they were laid shortly after the deposition of the stratum (Rhodes 1988:107).

Stratum D is somewhat of an enigma due to its considerable variability across the site. In TT21, Stratum D consists of a dark, grayish brown humic soil that appears to be a former sod. In Unit 25B, Stratum D shows as a mottled sand with cinders that appear to be fill. In Unit 25A, Stratum D appears as a compact mottled sandy soil with pea gravel. No clear Stratum D is evident in Unit 25C or D. Rhodes (1988) suggested that Stratum D may have been brought in as fill to level the dump around the construction of the Peniel Mission.

Stratum C is also inconsistent across the site. In TT21, Stratum C consists of a dark grey sandy silt that appeared to have been water laid. In other excavation units, the stratum is composed of a mixture of small lenses of sand, silt, and loam interspersed with artifacts, or a more mottled deposit of sand, silt, and loam mixed with cinders that may be fill.

Stratum B is identified as the former sod lens before it was covered by Stratum A—a fill material taken from the National Park Service’s restoration of the White Pass and Yukon Route Depot and General Office Building in Skagway.

Rhodes carefully examined historic photographs and records to document the early development of the Sixth Avenue area (Rhodes 1988:27 90). She concluded that the stream discovered in the excavation was the western branch of Mill Creek that joined the main stream approximately 150 feet east of the mission. Sometime before 1900, the southeast-flowing stream was filled with dump materials, which diverted the drainage to a south-flowing channel on Lot 2 (Figures 4 and 5).

Though Rhodes does not explicitly state it, the stream in Lot 3 must have been filled before the construction of the Colorado Boarding House and the hip-roofed building seen in photographs as early as April 1898 (Rhodes 1988:30). A June 1898 photograph (Figures14A&B) shows a marshy, wide channel behind the Moore House that appears to have been diverted to the east by the construction of the buildings on Lot 3. Materials strewn around the buildings and the adjacent Moore fence in the photo are possibly signs of the garbage dump discovered in Lot 2.

A later photograph from the winter of 1899 shows the same broad channel full of ice, but in this photo the water has overflowed the constricted bank shown
in the summer photograph taken in 1898 and surrounds the hip-roofed building and the first Peniel Mission located in the middle of Sixth Avenue. It appears that while the stream was partially diverted to the east by the construction of the buildings on Lot 3, flood-stage waters flowed around and underneath the structures (Figures 14A&B). An early 1900 photograph shows a boardwalk between the hip-roofed building and the channel. The Peniel Mission would have been constructed over the area occupied by the new channel and possibly the boardwalk. The portion of the stream in Lot 2 then could have been filled with dump materials any time before the construction of the Peniel Mission, provided that the dump is not considered to be the same age in Lot 2 as it is in Lot 3.

It appears that the leveling or soil forming processes occurred at different times on the two lots. Although there is no stratigraphic evidence for a difference in the time of deposition for the dump in the two lots, the different construction times for the buildings on Lots 2 and 3 may explain the differences in Stratum D across the site.

Rhodes concluded that Stratum C in TT21, Unit 25A and Stratum B and C in Unit 25B resulted from the "gradual accumulation of sandy humic silt deposits characteristic of an open yard situation" (Rhodes 1988:142). Artifacts found in this lens must therefore have been deposited after the hip-roofed building and the Colorado Boarding house were removed around 1910. The yard remained open until Harry Ask put a building on the north half of the lot between 1945 and 1947.

In her analysis of the artifacts from the site, Rhodes concluded that Strata E, F, and H were pre-1900 gold rush dump and landfill that altered the drainage of Mill Creek.

**Research Design**

In addition to mitigating the impacts of the proposed foundation reconstruction on the archaeological deposits around the Peniel Mission, it was hoped that the excavation would delineate the boundaries of the dump and further define the relationship of the deposits to the construction of the Peniel Mission. Knowing that the stream containing the dump extended under the southwest corner of the Mission, it was hoped that further excavation would determine if the dump was also beneath the building and if it was confined to the stream bed. Clarification was also needed between the relationship of the archaeological deposits and the building that stood in the adjacent yard west of Peniel Mission from 1898 to 1908.

Additional research questions arose after the discovery of a wood dump along the south wall of the Mission and a brick dump along the east wall (Figure 15). The fact that three dumps of completely different composition existed around the building suggested that one or all of the dumps postdated the construction of the Peniel Mission in 1900. If the dumps were not contemporaneous they would provide a unique opportunity to obtain large samples of the material culture from different periods in Skagway’s history. Also, excavations placed under the south end of the house would determine if the dumps were deposited around the building, hence postdating it.

A broader goal of the excavation and analysis was to collect an inventory from the dump of the material culture extant during the gold rush. Because it appears that this was a public dump during the gold rush, the deposits were considered to be a sample of the entire material culture of gold rush Era Skagway. Skagway was built almost overnight because of the influx of thousands of miners heading over the White Pass Trail into the Interior. The Peniel dump would therefore appear to contain a good sample of the material culture, not only of Skagway but of the entire mining community in the Yukon and Alaska.

The analysis presented here will also compare the composition of functional types of the different strata from the site to determine the sources and ages of the deposits. It can be expected that a household would produce a different suite of artifacts than a store or an industrial site. The surface sheet trash around the Peniel and the dumps from different periods ought to have different compositions of artifact types.

Skagway evolved from a boom town, servicing the thousands of miners arriving in ships and moving on to the gold fields in the Yukon, to a small town, surviving on tourism and as a transshipment point for goods and ore moving to and from Canada. During this period of adjustment (1900 to 1908), the population stabilized at around 900, and the economy settled into a much slower pace. The archaeological deposits ought to reflect this radical change in lifestyle that occurred in Skagway during the early twentieth century. The deposits of a turn-of-the-
century boom town hastily built by miners on their way to distant gold fields ought to be different from the remains left by a stable population of a small town on a transportation link. By examining the composition of functional types of artifacts from the site, it should be possible to determine whether the different periods in Skagway's history can be detected in an archaeological context.

**METHODOLOGY**

The 1985 grid of 5-by-5-foot units was expanded to incorporate the entire Mission building, the yard west of the Peniel Mission and a row of 5-foot units along the east wall (Figure 12k). The units were measured off from the central datum located at the southwest corner of the Mission and were given a number designation. Elevations were established using subdatum stakes set near the excavation units. These stakes were tied into the 1985 elevation datum, which was a small nail set on the west wall near the corner. This datum was tied to the city elevation markers.

Trenches along the west and south walls were dug by hand. A backhoe trench was dug along the east wall. After discovery of a brick dump in the south end of the east wall trench, a unit was excavated between the east and south wall trenches and another between the trench and the east wall of the building. Four units were also dug under the building to determine the nature of the deposits. Careful selection of unit location was necessary to avoid the extensive disturbances created by the 1937 and 1962 foundation reconstructions. The locations of Units 35 and 39 were selected to sample the north end of the building and to avoid the trenches dug around the perimeter and around foundation posts. Units 47 and 64 at the south end of the building were placed to determine whether the dump continued under the building.

The excavated units were dug by natural stratigraphy and the surfaces of the strata, the features, and the wall profiles were recorded. Features and all profiles were photographed. In order to expedite the recovery of the lower strata, the most recent strata and the fill from a 1964 builder's trench were not screened in most of the units.

The wet sticky nature of the dump matrix required water screening to collect the artifacts. The artifacts were bagged by unit, level, and strata because the large number of artifacts made three-point provenience impractical and perhaps pointless. The dump contained a plethora of ash, coal, cinders, slag, building materials of every description, tin cans, nails, and glass. It was evident from the beginning that a 100 percent sample of these materials was impractical. For that reason, fragments from cans, paper, and cement larger than one inch in diameter and representative samples of coal, tar, and slag were collected. Along the south wall, the entire matrix consisted of densely compacted wood. Only a portion of these highly decomposed remains was collected to provide a sample of the variety of lumber represented.

After the priority of preserving any possible information present (paint, silver, or metal coating, recycling residues), initial laboratory cleaning and processing of glass was begun by soaking fragments and bottles in warm water with a small amount of commercial TSP (tri-sodium phosphate) added. More strongly adhering material, such as rust, was removed by rubbing with full-strength isopropyl alcohol. Glass was then rinsed in clear water and placed on drying racks.

Associations or cross-mending of artifacts from differing units or separate stratigraphic layers were also noted during cleaning, and such individual fragments were tagged. The artifacts were then sorted, placed in zip-locked plastic bags labeled by provenience, and catalogued. After cataloguing, the associated and diagnostic sherds of glass and ceramics were held out for future cross mends, analysis, numbering, and mending. Sherd edges of mended glass or ceramics were cleaned with full-strength ammonia before mending with Epo-Tex 301 epoxy. All clear glass was sorted by mineral (flux) content: lead (or flint), manganese, selenium, and arsenic. This identification was double-checked by UVS (ultra-violet spectrum) long wave/short wave light sources.

U.S. Patents, Designs, Trade Marks and Label registrations published in the *Official Gazette* (U.S. Patent Office 1870-1930) provided the primary source of identification and dating of the Peniel Mission artifacts. However, the patent dates of the artifacts do not always reflect the initial period of their use. Consequently, this primary source was supplemented by published books and articles. Technological changes in glass manufacturing of specific bottles and jars, and some labeled brand names were identified by comparative bottle
Bottles constitute a large proportion of the recovered domestic artifacts. Rhodes (1988) provides a detailed description of bottle technology and nomenclature, so this report will not go into a detailed discussion on these subjects. An encapsulated history of the major technological advances in bottle production is presented below.

Dates given in this research have not been adjusted for time-lag in the transportation time to reach isolated outposts, although Adams and Gaw (1977:218-231) conclude that bottles were generally disposed of within two to three years after purchase, and Riordan and Adams (1985:113) proposed a 4.7 to 6.4 year time-lag of both bottles and jars. In addition, the dimensions of bottle lips, except for wide-mouth bottles and jars, are omitted. Also, the redundant "post mold" and "cup mold" base terms, of no assistance in dating or identification, are omitted. On the other hand, Owens machine suction scars and valve marks on bases, which do assist in dating this era of hollowware, are noted and recorded.
Figure 6A. View of the Peniel Mission, looking southwest; drawing. The hip-roofed building (I) west of the Peniel Mission (P) is the same building that occupied this area before the Peniel was built. Note the rear shed and privy that stood on the rear wall of the Peniel. Building (S) may be the original Peniel mission house that formerly stood at the end of Sixth Avenue. Drawing from enlarged detail from a Skagway overview photograph, credited to MacKay Collection, Archives, University of Alaska, Fairbanks (70-58-102). Copy on file, Klondike Gold Rush NHP, Skagway, Alaska (S08/7).
Figure 6B. View of the Peniel Mission, looking southwest, photo. The hip-roofed building (I) west of the Peniel Mission (P) is the same building that occupied this area before the Peniel was built. Note the rear shed and privy that stood on the rear wall of the Peniel. Building (S) may be the original Peniel mission house that formerly stood at the end of Sixth Avenue. Photo credits: Enlarged detail from an overview photograph of Skagway, credited to MacKay Collection, Archives, University of Alaska, Fairbanks (70-58-102). Copy on file, Klondike Gold Rush NHP, Skagway, Alaska (SO8/7).
Figure 7A. View of Peniel Mission, looking southwest, taken spring/summer, 1901, drawing. Photograph shows privy and building at the rear of the mission house. The fence along the east wall is thought to be the fence uncovered in the east wall excavations. Building (S) may be the former Peniel Mission building that was formerly located on Sixth Avenue. Drawing from: Enlarged detail of Skagway overview photograph, credited to Moore Collection (76-35-41), Archives, University of Alaska, Fairbanks. Copy on file, Klondike Gold Rush NHP, Skagway, Alaska (SO9/6).
Figure 7B. View of Peniel Mission, looking southwest, taken spring/summer, 1901, photo. Photograph shows privy and building at the rear of the mission house. The fence along the east wall is thought to be the fence uncovered in the east wall excavations. Building (S) may be the former Peniel Mission building that was formerly located on Sixth Avenue. Photo credits: Enlarged detail of Skagway overview photograph, credited to Moore Collection (76-35-41), Archives, University of Alaska, Fairbanks. Copy on file, Klondike Gold Rush NHP, Skagway, Alaska (S09/6).
Figure 8A. View of Peniel Mission, looking northwest, drawing. The photograph was taken between 1908 and 1912. Note the shed roof extension along the south wall of the building and the empty yard west of the Peniel. Drawing from: Enlarged detail from a Skagway overview photograph credited to Louis H. Pederson Collection, Alaska State Library, Juneau, Alaska (PCA 25-3). Copy on file, at Klondike Gold Rush NHP, Skagway, Alaska (SO31/140).
Figure 8B. View of Peniel Mission, looking northwest, photo. The photograph was taken between 1908 and 1912. Note the shed roof extension along the south wall of the building and the empty yard west of the Peniel. Photo credits: enlarged detail is from a Skagway overview photograph credited to Louis H. Pederson Collection, Alaska State Library, Juneau, Alaska (PCA 25-3). Copy on file, Klondike Gold Rush NHP, Skagway, Alaska (SO31/140).
Figure 9A. View of Peniel Mission, looking northwest, drawing. Photograph taken between 1913 and 1918. Note the new shed-roofed extension off the south wall of the building and the fence along the east wall. Drawing from enlarged detail of a Skagway overview photograph credited to Paul Sincic Collection, Alaska State Library, Juneau, Alaska (PCA 75-138). On file, Klondike Gold Rush NHP, Skagway, Alaska (SO45/377).
Figure 9B. View of Peniel Mission, looking northwest, photo. Photograph taken between 1913 and 1918. Note the new shed-roofed extension off the south wall of the building and the fence along the east wall. Photo credits: enlarged detail of a Skagway overview photograph credited to Paul Sincic Collection, Alaska State Library, Juneau, Alaska (PCA 75-138). On file, Klondike Gold Rush NHP, Skagway, Alaska (No. SO45/377).
Figure 10A. View of Peniel Mission, looking southwest, drawing from a photograph taken on Arbor Day, May 19, 1910. The Colorado Building stood between the two hip-roofed buildings to the west of the Peniel. Drawing from enlarged detail of photograph from the Stinebaugh Collection, Trail of '98 Museum, Skagway, Alaska. Enlarged detail of photograph on file, Klondike Gold Rush NHP, Skagway, Alaska (6th30/1538).
Figure 10B. View of Peniel Mission, looking southwest; photo taken on Arbor Day, May 19, 1910. The Colorado Building stood between the two hip-roofed buildings to the west of the Peniel. Photo credits: enlarged detail of photograph from the Stinebaugh Collection, Trail of '98 Museum, Skagway, Alaska. Enlarged detail of photograph on file at Klondike Gold Rush NHP, Skagway, Alaska (6dh30/1538).
Figure 11A. View of Lots 2 and 3, looking west, drawing. The Peniel Mission was built partially over the channel of Mill Creek, which flowed behind the Moore House (M). The hip-roofed building (I) stands between the fence and the Colorado boarding house (F). The fence is thought to be the same fence discovered in test units along the west wall of the Peniel. Drawing from enlarged detail from photograph labeled “Skagway, June 1898” in 56 Barr Collection, Archives, University of Alaska, Fairbanks (76-151-40). Copy on file at Klondike Gold Rush NHP, Skagway, Alaska (SO10/4).
Figure 11B. View of Lots 2 and 3, looking west, photo. The Peniel Mission was built partially over the channel of Mill Creek, which flowed behind the Moore House (M). The hip-roofed building (I) stands between the fence and the Colorado boarding house (F). The fence is thought to be the same fence discovered in test units along the west wall of the Peniel. Photo credits: enlarged detail from photograph labeled “Skagway, June 1898” in 56 Barr Collection, Archives, University of Alaska, Fairbanks (76-151-40). Copy on file at Klondike Gold Rush NHP, Skagway, Alaska (SO10/4).
Figure 12. Excavation map of site.
Figure 13. Rhodes (1988) Figure 4.5.
Figure 14A. View, looking west, of hip-roofed building (I) and flooded, frozen channel of Mill Creek, drawing. The channel flowed behind the Moore House (M) circa 1899. The Peniel Mission was constructed over a portion of the channel of Mill Creek just west of Moore's fence. The gabled building (K) north of the hip-roofed building is most likely the original Peniel mission house, which had been located at the east end of Sixth Avenue. Drawing from enlarged detail from a Skagway photograph, circa 1899, credited to Trail of '98 Skagway Historical Museum, Skagway, Alaska (79-32). Copy on file at Klondike Gold Rush NHP, Skagway, Alaska (SO126/5023).
Figure 14B. View, looking west, of hip-roofed building (I) and flooded, frozen channel of Mill Creek, photo. The channel flowed behind the Moore House (M) circa 1899. The Peniel Mission was constructed over a portion of the channel of Mill Creek just west of Moore's fence. The gabled building (K) north of the hip-roofed building is most likely the original Peniel mission house, which had been located at the east end of Sixth Avenue. Photo credits: enlarged detail from a Skagway photograph, circa 1899, credited to Trail of '98 Skagway Historical Museum, Skagway, Alaska (79-32). Copy on file at Klondike Gold Rush NHP, Skagway, Alaska (SO126/5023).
Figure 15. Dump zones.
STRATIGRAPHY

GEOLOGIC SETTING

The Peniel Mission site is located on the southeastern margin of the north-south oriented Skagway River valley. This steep, glacially-carved valley forms the northern continuation of the Taiya Inlet fjord of Lynn Canal. The Skagway River delta and floodplain span the narrow valley floor, subjecting the town to occasional flooding (Yehle and Lemke 1972:12, 89). The water table is near the surface in the vicinity of the Peniel Mission, in a topographically low area along the southeastern edge of the valley. Mill Creek (commonly known as Pullen Creek), a spring-fed stream, flowed through the site area until it shifted eastward in the late 1800s.

At present the site lies about 1,400 feet (370 m) from the mean high tide line of Taiya Inlet. Before human modification of the shoreline and continued lowering of the sea level throughout the twentieth century, however, the "higher high water line" was within 200 feet (60 m) of the site area (Yehle and Lemke 1972: Figure 4).

GLACIAL HISTORY

During the last glacial maximum (ca. 18,000 B.P.) the ice covered Skagway to a thickness of nearly 5,000 feet (1,500 m) (Yehle and Lemke 1972:16). Global warming led to glacial retreat at the end of the Pleistocene, about 10,000 B.P. Minor glacial advances occurred during the Holocene throughout southeastern Alaska (Yehle and Lemke 1972:16).

Rapidly melting continental ice sheets at the end of the Pleistocene initiated a worldwide rise in sea level. In areas with thick ice such as southeastern Alaska, however, the decrease in weight due to rapidly melting ice allowed the land to rebound isostatically. In the Skagway area, an initial relative lowering of sea level at the end of the Pleistocene was followed by a relative lowering of sea level throughout the Holocene (Yehle and Lemke 1972:17). Episodes of glacial expansion and retreat in southeastern Alaska during the Holocene temporarily slowed the relative lowering of the sea level. An average rate of land uplift of 0.059 feet (1.80 cm) per year was recorded between 1909 and 1959 near Skagway (Yehle and Lemke 1972:18). A deposit of marine shells near Yakutania Point, Skagway, 32 feet (10 m) above mean sea level, and radiocarbon-dated at 2,880(+-250) B.P., indicate a previously higher sea level (Yehle and Lemke 1972:17). Tectonic activity, however, may also be partially responsible for changes in relative sea level (Yehle and Lemke 1972:18).

SKAGWAY RIVER

The Skagway River drains several glaciers in the White Pass and Skagway Valley area, and discharges only 14 miles downstream into Taiya Inlet (Yehle and Lemke 1972:9). Due to the high input of gravel and sand and its short course, the river remains braided in its lower reaches (U.S. Army Corps of Engineers 1974). The river contains a significant suspension load of silt and fine sand, resulting from its glacial source (Ashley et al. 1985). Daily water levels fluctuate greatly during the summer due to changes in the rate of glacial melting (Yehle and Lemke 1972:8).

High water stages typically occur twice during the year: during spring snow-melt and during high precipitation events in the fall (U.S. Army Corps of Engineers 1946:5). Flood waters usually rise quickly to peak flows lasting several hours followed by a sharp recession (U.S. Army Corps of Engineers 1974:6). Floods were recorded in 1901, 1909, 1919, 1927, 1936, 1937, 1943, 1944, 1949, and 1967 (U.S. Army Corps of Engineers 1974:6). (No discharge figures are available for 1909, 1937, and 1949 floods.) The most destructive flood, however, took place on October 22, 1937, when part of the city of Skagway was inundated by 6 inches (15 cm) of water (Yehle and Lemke 1972:89). The 1901 and 1909 outburst floods, "jokaulaps," resulted from a sudden outbreak of water from a glacier-dammed lake. Heavy fall precipitation all other floods (Yehle and Lemke 1972:89).

The floods in 1901, 1943, and 1944 were major and discharged about 30,000 cubic feet per second (cfs). Floods with a magnitude of about 15,000 cfs are reported for 1919, 1927, and 1936 (U.S. Army Corps of Engineers 1974:6). (No discharge figures are available for 1909, 1937, and 1949 floods.) The most destructive flood, however, took place on October 22, 1937, when part of the city of Skagway was inundated by 6 inches (15 cm) of water (Yehle and Lemke 1972:89). The 1943 and 1944 floods were of greater magnitude than the 1936 flood, but caused less damage because the U.S. Army Corps of Engineers had built flood control dikes along the Skagway River in 1940 (Yehle and Lemke 1972:89).

The Skagway River floodplain slopes eastward away from the river. During flood conditions, most of the
overbank flow passes through town and follows an abandoned Skagway River channel along the southeastern side of the valley (U.S. Army Corps of Engineers 1974:8). The former channel is now occupied by Mill Creek, which runs through the Peniel Mission vicinity.

SURFICIAL SEDIMENTS

Alluvial deposits of the Skagway River make up most of the valley floor, including the Peniel Mission vicinity (Yehle and Lemke 1972:Figure 5). Sediments consist of well-sorted beds of gravel, sand, some cobbles, boulders, and silt. Gravels and cobbles are generally well rounded. All deposits are loosely consolidated and well-bedded.

The alluvial deposits interfinger with deltaic deposits of the intertidal zone on the southern seaward side. Most of the deltaic deposits are covered by artificial fill. Considering the proximity of the Peniel Mission to the former higher high tide line (Yehle and Lemke 1972: Figure 5), tidal sediments may also be present in the site area. Continued land uplift throughout the 1900s, dredging, construction of a small boat harbor, and deposition of artificial fill have altered the shoreline so that the site is now about 1,200 feet (366 m) farther inland.

The seaward side of the delta is continually aggrading due to sedimentation from the Skagway River. Deltaic deposits consist of sandy gravel, gravelly sand, and cobbles, with minor amounts of boulders, shell fragments, and lenses of sand and silt. Deposits are generally well sorted and are loosely to well compacted (Yehle and Lemke 1972:30).

STRATIGRAPHIC DESCRIPTION

The basal sediments throughout the site consist of Mill Creek deposits. The stream channel west of the Peniel Mission is filled in by trash consisting of wood and coal stove debris. A construction dump covers the area south of the building. Artifacts in both dumps date from the late 1800s to the 1930s. The dumps are overlain by several strata of fine sands and silts alternating with dark, sandy loam. The fine sands and silts appear to be fluvial in some excavation units, but resemble fill in others.

The basal fluvial sediments are discussed in a single section. The overlying stratigraphy, however, changes so drastically on different sides of the Peniel Mission, that it is dealt with in three sections: (1) the excavation units west of the building; (2) the units along the south wall of the building; and (3) the East Trench and the unit east of the building. Several shovel tests, dug about 40 feet (12 m) south of the excavation area, are also discussed in a separate section.

The stratigraphy is difficult to follow around the perimeter of the building because several episodes of construction have destroyed much of the primary deposits and have also introduced later artifacts into the lower strata. The relative temporal relationships of the stratigraphic units outlined in the Harris-Winchester Matrix (Harris 1974:Figure 1) are thus provided tentatively (Figure 16). As discussed later in this chapter, the dated artifacts were of little help in aging the strata.

Each stratigraphic unit is given a chronological order designation (e.g., Roman numeral I, II, XI) and a locational designation ("w" for west of the Peniel, "s" for south, and "e" for east). Chronologic divisions follow those used by Rhodes (Figure 13). However, not every chronologic unit occurs at all three locations, and chronologic units may not represent the same depositional process on all three sides of the building.

The dating method used is the terminus post quern (TPQ), referring to the upper-limiting date for the youngest or most recent artifact in a stratum.

BASAL FLUVIAL SEDIMENTS

The fluvial deposits (Strata VIII-w, VIII-s, and VIII-e) were laid down by Mill Creek as it cut into older alluvial deposits of the Skagway River. The right bank of the western channel intersects Units 25-A (excavated by Rhodes in 1985) and 67, and can be seen in the plan view and profile (Figures 17, 18, and 19). The bank incorporates a coarse-grained channel lag deposit, composed of cobbles ranging between 0.1-foot and 0.3-foot in diameter (3.0-9.0 cm), in Units 25-A and 67. About 50% of the cobbles dip northward, indicating a southerly flow (Ashley et al. 1985).

A levee deposit in the west profile of Unit 67 (Figure 19) contains a charcoal lens. The distinct boundary, plus the absence of lamination within the charcoal lens, implies little or no water reworking. The levee deposit is capped with beds of coarse and medium sands. Both the compact silt and the overlying sands follow the contour of the gravel deposit.

The channel is almost three feet (1.0 m) deep. The deepest part of the western channel is visible in the northwest profile of TT21-B excavated by Blee in 1983
(Figure 13), the east profile of Unit 86, and the south profile of Unit 45 (Figures 18 and 19). A sand bar oriented northwest-southeast intersects the west profile of TT21-B and C.

The channel bottom in Units 85 and 86 and in other localized areas contains blue (oxygen-reduced) clays and silts with a sulfuric smell. These sediments may be similar to a stratum of "thin, blue, marine? clays" that were recorded by U.S.G.S. in 1953 when the clay was penetrated by several shallow water wells. Wells extending below the clay contained water fairly high in hydrogen sulfide (Yehle and Lenke 1972:31). Staining from petroleum also occurs in some excavated units.

The water table was encountered at approximately 2.0 feet (60 cm) below the surface in Units 86 and 69 near the southwestern corner of the Peniel Mission. Black muck, high in undecomposed organics such as branches, bark, and alder cones, overlies the oxygen-reduced sediments in areas where the water table was reached.

River bottom gravels, cobbles, and coarse sands occur in Units 68 to 74 along the west wall of the Mission building, and in Units 66, 45, 44, and 23 on the south side (Figure 19). A large, local cobbled deposit is evident in Unit 74. The stream sediments in Units 70 to 74 probably represent Mill Creek after it was diverted eastward in 1898, due to construction of the hip-roofed building. Channel bottom deposits continue eastward beneath the Peniel Mission. The basal sediments in Unit 35, located under the central northern end of the building, consist of medium sand, gravel, and cobbles.

The left bank of the channel crosses East Trench (Figure 17). Judging from the orientation of the bank exposed in the 2.5 foot (80 cm) wide trench, it appears that the banks have about 37 feet (11.0 m) between them. The inside edge of the bank is visible in section D of the east profile. A lenticular channel lag deposit, consisting of gravel and cobbles, is incorporated into the left bank. The lag deposit intersects the east profile of East Trench in sections E, F, and G and the west profile in sections G and I (Figure 20).

**WEST SIDE STRATIGRAPHY**

Units west of the Peniel Mission include Units 68 to 74, Units 84 to 86, and the west wall of Unit 67. The stratigraphy on this side of the Peniel Mission has previously been described by Rhodes (1988:96-136), and the same stratigraphic divisions are generally followed here. Three strata of trash deposits, Stratum V (Rhodes "E"), VII.1 (Rhodes "F"), and VII.2 were found in the stream channel on the west side of the building.

**Stratum VII.2-w.** The oldest cultural deposit overlying the stream sediments is Feature 12, contained within Stratum VII.2-w (Figure 19) and shown in Figure 24. The deposit is situated on the inside edge of the southwestern bank in Units 68 and 67. The base of the 0.4 ft (12 cm) thick Stratum VII.2-w follows the contour of the streambank, dipping down toward the south. The deposit is composed of a silt, loam, and pebble matrix with a high content of organic refuse such as butchered bone and unburned wood. Other cultural remains found in Feature 12 include glass, ceramics, and coal. No signs of hydraulic reworking are evident except for some humic staining of the sandy sediments immediately south of Stratum VII.2-w. The other boundaries are distinct. The deposit is located on the inside edge of the southwestern bank in Units 68 and 67. The base of Stratum VII-w follows the contour of the streambank, dipping downward to the north.

According to dates inferred from the glass artifacts in Feature 12 within Stratum VII.2-w, the earliest limiting date for the deposit is 1921. This is based on the earliest date of manufacture for the most recent artifact. The mean artifact date for the feature is 1901. The mean date consists of the computed averages of the mean dates for all the artifacts found in the feature. This method is similar to South's (1977) mean ceramic date except that individual artifacts were used instead of the sherd count to calculate the mean date. This method was used to offset the skewing effect that certain recent bottles had on the mean date because of the large number of sherds. Table 2 also provides the mean dates computed, using sherd count.
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<td>VI</td>
</tr>
<tr>
<td>02</td>
<td>Stepping stones</td>
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<td>III</td>
</tr>
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<td>03</td>
<td>Sewer pipe excavation</td>
<td>44</td>
<td>II</td>
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<td>04</td>
<td>Box and pit (profile)</td>
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<td>II</td>
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Table 2. Mean dates of artifacts.

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<td>53</td>
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<td>1909.1</td>
<td>1921</td>
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Stratum VII.1-w  Stratum VII.1-w (the lower trash unit) is composed of a yellow-brown, silty matrix containing burned and unburned wood, wood ash, charcoal, bottles, glass sherds, nails, and metal objects.

Stratum VII.1-w is 1.2 feet (36 cm) thick in the northern part of Unit 86, thinning southward toward the streambank in Unit 67 where it occurs in discontinuous patches. The deposit also thins out gradually northward from Unit 86 into the southern end of Unit 72.

Stratum VII.1-w continues beneath the present south end of the Peniel Mission where an addition was built in 1903. Under the building the stratum is discontinuous and mixed with loam. Thus, the trash either predates construction of the addition, or the trash was redeposited under the building, perhaps by stream or flood action. A mean date of 1908 for Stratum VII- w was calculated by averaging the mean dates for all the artifacts found within the stratum.

The trash deposit is evident on both sides of fence remains in Units 68, 69, 70, and 71. In general, the deposit is equally thick on both sides of the fence. There is no sign of intrusion, suggesting that Stratum VII.1 postdates construction of the fence. By 1900 the fence was apparently destroyed, as it is not visible in a 1900 photograph (Figures 22A & 22B) but is apparent in photographs taken in 1898 and early 1899 (Figures 11A & 11B and 14A & 14B). The dump materials covering the lowest boards of the fence must have been deposited before it was demolished later in 1899. Otherwise these boards would have been removed, as well. Although this fence is in the same location as the original Moore fence, it is distinctly possible that this fence postdates the Peniel and was a property fence to Lot 3.
recent fill;
sandy loam; disturbed stratum with wooden box;

fine sands; 1943/44 floods;

organic s. loam;
stepping stones;

fine sands; 1936/37 floods;
staircase; west side pit;

organic s. loam with mixed-in St. V-w trash; brick dump

trash dump; redeposited brick;
large south side pit;

fine sands; 1919, 1927 floods;

trash dumps; organic silty loam;

1901 flood; east side fence;
1900 Peniel Mission built; well pipe; west side fence; boardwalk

organic refuse;

Mill Creek

Figure 16. Harris-Winchester Matrix (Harris 1974), showing temporal sequence of stratigraphy. Double lines indicate contemporaneity. Bold lettering describes stratigraphic units.
Figure 17. Stream channel sediments.
Figure 18. West side stratigraphy.
The 1900 photograph (Figure 22A & 22B) also shows a boardwalk west of the location where the Peniel Mission would be built later that year. Part of the boardwalk spans what appears to be a dry, but open channel, indicating that the streambed was not completely filled in by the trash dump at the time the Peniel Mission was built. The boardwalk in the photograph must therefore have been built later than the probable boardwalk remains found beneath Stratum VII.1-w in Units 68, 69, and 71.

Significant water-sorting is not evident in Stratum VII.1 where materials of different sizes are mixed together. In addition, the stratum contains charcoal, wood fragments, and other light materials that would have been swept away if they were being dumped into a fast-moving stream. Further, the upper surface of Stratum VII.1-w undulates greatly, suggesting that the trash had been piled into mounds. A high-energy stream would either have smoothed out the surface or cut channels through the deposit. This conclusion is supported by the 1900 photograph (Figures 22A & 22B), which shows that most of the water flowed in the channel east of the site.

Minor episodes of reworking by water, however, are visible as diffuse bands of color, lenses of certain-sized materials, and the localized consistent orientation of the larger tabular objects. The trash dump has a high ash content that would tend to form a cohesive paste rather than float away under low-energy hydraulic conditions. The partially filled-in channel may have been intermittently active as a flood channel or subject to stream overbank water from the nearby active channel.

**Stratum VII Features and Dating.** Three features found in association with Stratum VII provide some evidence of the age of the two trash units that comprise the stratum. Two wooden blocks (1.5 by 1.0 foot wide and 0.25 foot thick) with a north-south alignment, set into the stream bottom in Units 68 and 69, were also found. The blocks may have served as pilings for a boardwalk. Horizontal east-west oriented planks, suggesting a north-south running boardwalk, were found in Unit 71. Unfortunately, there is no stratigraphic continuity between these two features.

The possible boardwalk could be contemporaneous with a north-south oriented fence uncovered in Units 68 to 71. The fence may be the property-line fence built by Ben Moore, visible in an 1898 photograph (Figures 11A & 11B). Structural remains consist of two approximately 3.5-inch-square posts in Units 70 and 71, a vertical board in line with the posts, and numerous horizontal unattached boards.

Two trash deposits fill in the old stream channel. These dump deposits also cover and postdate the wooden blocks and planks of the fence and the possible boardwalk (Figure 19).

In Unit 67, a disconnected well pipe was found inside a wood-lined containment trench set into the old streambank. The trench had been backfilled with stream sediments of fine sand. Due to a secondary intrusion, it is difficult to say when this well was constructed, although its location suggests that it once serviced the Peniel Mission.

**Stratum VI-w.** Stratum VI-w is composed of several localized sand deposits (Figure 18). A 0.4 foot (12 cm) thick wedge of fine, light brown sand extends into the southeastern part of Unit 86 and northwestern part of Unit 68. Another pocket, 0.4 foot (12 cm) thick, of fine, light brown sand covers Stratum VII-w in Units 67 and 68. Fine sand also occurs in Units 70 and 68 as 0.05 foot (1.5 cm) thick, discontinuous lenses above Stratum VII.2-w. This stratum was also noted by Rhodes as a 7 foot (2 m) long, continuous lens in the southern end of the northwest profile of TT21 (Rhodes 1988, Figure 2.2).

These sands may be stream flood deposits, laid down when Mill Creek overflowed its banks. Such high water levels in Mill Creek may be associated with flood conditions of the Skagway River. Intermediate floods of the Skagway River are reported for 1919 and 1927, although no conclusive stratigraphic evidence has been found to prove an association.

**Stratum V-w.** The overlying ash, Stratum V-w, differs in composition and color from Stratum VI-w. Stratum V-w consists of cinders, coal, and ash in a reddish silty matrix, suggesting the burning of coal rather than wood, such as in Stratum VII-w. Artifacts found in Stratum V-w include bottles, metal objects, brick, and iron spikes, and display more extensive disturbance than in Stratum VI-w. Stratum V-w is thickest in Unit 85, where it is approximately 1.0 foot (30 cm) thick, gradually thinning south and eastward into Units 86 and 69, and northward into Units 70, 71, and part of 72
(Figures 19 and 23). Lenses and patches of redeposited material from Stratum V-w are found on the streambank in Unit 67. In Unit 84, the reddish ash and cinders are located south of the sand bar. The mean artifact date for V-w is 1905 with a terminus post quem (TPQ) date of 1936, suggesting that the stratum postdates construction of the south-end addition of the Peniel Mission in 1903.

Stratum V-w extends beneath the south end of the Peniel Mission where it becomes more mixed and loamy. In this location the deposit is discontinuous and disturbed, showing up below Stratum VI in Unit 64 under the house. Such reverse stratigraphy is characteristic of redeposited sediments. The disturbance in Unit 64 is most likely related to the placement or removal of a large, angular granitic rock found on the north wall of the unit. The rock, situated in fine sands instead of its natural depositional environment, was most likely carried in as a foundation support.

East of the fence in Units 69 to 71, Stratum V-w is thin and discontinuous with a pronounced loamy matrix. Most of the loose board fragments of the fence were found in this stratum, suggesting that the fence may have been dismantled during the time when the reddish trash was deposited.

Stratum V-w is similar to Stratum VI-w in that it shows only minor sorting by water. Large cinders located near each other frequently lie in the same orientation and follow the contours of the color changes. Otherwise, materials of different sizes tend to be mixed. The upper contact of Stratum V-w is undulating, with a distinct depression at the corner of Units 85, 86, and 70.

A continuous lens of pure, decomposing brick—with no ash, cinders, or sediment—is found above Stratum V-w in the southern end of Unit 86. The lens, which is up to 0.05 foot (1.5 cm) thick, extends southward across Unit 25-A (Rhodes 1988, Figure 4.4) into the northern end of Unit 67. Patches of decomposing brick are also evident above reddish ash and cinders in the west profile of Unit 67.

Stratum IV-w. Stratum V-w is overlain by Stratum IV-w, a dark brown, compact, organic, sandy, or silty loam. Stratum IV-w, which Rhodes (1988) termed "Stratum D," is approximately 0.2 foot (6.0 cm) thick. Stratum IV-w contains some evidence of deposition by water, or at least hydraulic reworking. The dark, sandy loam shows the influx of casts from the underlying stratum—evident in occasional brick fragments, pockets of nails, and lenses of reddish ash and cinders mixed with clay loam near the top contact of the stratum. In Units 71 to 74 near the northwestern corner of the house, ash, cinders, and artifacts predominate over the sandy loam. In Unit 73, Stratum IV-w consists of glass and wood in a matrix of medium and coarse sands and cobbles. The lower boundary of Stratum IV-w undulates while the upper boundary is fairly level.

In Units 85, 86, 69, 70, and 71, the dark, sandy loam is mixed with a 0.1 to 0.2 foot (3.0 to 6.0 cm) thick deposit of light brown, fine sand near the base of Stratum IV-w (Figures 18 and 23). The dark, sandy loam occurs as humic banding. The fine sand appears to be stream flood deposits filling in depressions in the Stratum V-w surface. In Units 70 and 71, Stratum IV-w occurs as a series of alternating bands of dark, humic, sandy loam, and light brown, fine sand (Rhodes 1988:129) In Unit 71, the sandy loam layers cease at the boundary of the fence with fine sand continuing eastward. Apparently, the sandy loam built up west of the fence, while the sand was washed through the fence slats. This change in matrix is evidence that the boards were exposed while Stratum IV was being deposited.

Stratum IV-w could be a channel fill deposit, which sometimes forms due to an extreme increase in the rate of sedimentation (Reineck and Singh 1980:292). In this case, the dumping of ash and other garbage into Mill Creek could have formed such a deposit. Since Mill Creek was filled in, the area west of the Peniel Mission has remained a low area with a high water table, and a resulting marshy environment. The organic-rich, sandy loam in this area represents infilling from overbank flows of the nearby active channel, mixed with the underlying Stratum V-w material.

The undulating Stratum IV-w does not continue under the Peniel Mission. The thickest portion of the deposit is 0.3 feet (9.0 cm) thick in Units 85 and 86, thinning northward into Units 69 to 71, and also thinning and mixed east of the fence. Such a pattern of thinning may be partly due to disturbance from the most recent repair of the foundation of the Peniel in 1967.

Earliest lower-limiting dates for Stratum IV-w
are 1908 in Units 86 and 1911 in Unit 85. Because these dates are based on artifacts most likely mixed in from the underlying ash layers, the deposit is probably more recent than the artifacts suggest.

In Unit 74, Stratum IV-w contains feature 16, the base of a pier placed on top of stream deposits (Figure 24). The pier once supported a staircase built in 1937 by Dr. Polley, as documented in a photo (Figure 25). The stair foundation consists of a 5-inch-square post set onto a 2-inch-thick foundation board. The board may have been set into Stratum IV-w, thus postdating it.

A large pit, measuring approximately 12.0 feet (3.7 m) north-south by more than 10 feet (3.0 m) east-west, penetrates through Stratum IV-w to stream deposits (VIII-w). The pit, which is reminiscent of a cesspool, is backfilled with wood, cobbles, and gravels (Figure 26). The pit covers the southwestern portion of Unit 74, the western edge and southern half of Unit 73, the western three quarters of Unit 72, the northeastern portion of Unit 84, and all of Unit 25-C (excavated by Rhodes in 1985). This pit is most likely the one that can be seen in a photograph taken during remodeling of the Peniel Mission in 1937, in which a board serves as a bridge across an apparent pit at the foot of the outside stairs (Figure 25). The photo also shows a mound of backfill adjacent to the staircase. The staircase support is located adjacent to and not in this excavation, however.

**Stratum III-w.** The dark, silty loam of Stratum IV-w is overlain by a light brown, fine sand, Stratum III-w, referred to as "Stratum C" by Rhodes (1988:131). The sands surround the pier in Unit 74 with no sign of intrusion, indicating that they postdated the pier. Stratum III-w may correlate with one or both strata of fine sand and silts that appear south (III.1-s, III.3-s) and east (III.1-e, III.3-e) of the Peniel Mission. The intervening dark, sandy loam strata found on the south and east sides of the building (Stratum III.2-s and Stratum III.2-e) are not present on the west side. Water deposition of Stratum IV-w is indicated by bands of sandy loam in some excavation units, probably representing material mixed in from the underlying dark silty loam. The fine sands may be stream overbank deposits, possibly relating to flooding of the Skagway River in 1936, 1937, 1943, and 1944. Extensive iron-oxide staining of the fine sand is evident in some excavation units.

Stratum III-w is almost 2.0 feet (0.6 m) thick in Units 72 to 74 toward the northwestern corner of the building. In Unit 71, however, its thickness decreases, thinning to about 0.2 feet (6 cm) thick near the southwestern corner of the Peniel Mission in Units 85 and 86, and becoming discontinuous toward the streambank in Unit 67. The fine sand extends eastward, forming the surface sediments beneath the Peniel Mission. Unit 35, under the northern portion of the building, contains fine sands and silts with occasional cobbles overlying the channel bottom deposits. The stratigraphy shows no sign of intrusion where a foundation post for the building would have intersected the excavation unit, indicating that Stratum III-w postdates construction of the building.

A vertical change in color occurs within the fine sands of Stratum III-w in Units 71 to 74 (Figure 27). The lower sands of Stratum III-w are gray with some iron-oxide staining; the upper sands are light brown mixed with dark brown, sandy loam with no banding, giving the appearance of backfill. In Units 71 and 72, this color change is separated by a layer of broken linoleum. The color change may reflect a separation of sediments laid down by the floods of the 1930s and 1940s. Alternatively, the sands in the southwestern corner of the building may only correspond in part to the Stratum III sands in Units 71 to 74.

Unlike the units near the southwestern corner, the fine sands of Stratum III-w in Units 71 to 74 near the northwestern corner of the building do not show any humic banding or laminae of different textures. This sequence could indicate that the sand may be artificial fill. Alternatively, the sand may be primary fluvial deposit that was later disturbed by trampling, destroying its depositional structure. By contrast, the fine sands and silts in Unit 35 under the building have extensive, eastward-sloping bands of sandy loam that are better preserved than in deposits outside the building.

Stratum III-w sands fill a one to two foot-wide cut into Strata IV-w and V-w, and partially into Stratum VIII-w deposits in Units 73 and 74. This trench and the sands within it may date from the 1937 reconstruction, in which an access trench was excavated and later filled with construction debris and sand. The fact that artifacts from Stratum III
Figure 19. South side stratigraphy.
Figure 20. East side stratigraphy.
Figure 21. Southeast corner stratigraphy.
along the west wall mend with sherds from the underlying dump levels is probably the result of the trench excavation and the placement of the staircase.

**Stratum II-w.** Stratum II-w consists of a buried soil horizon, 0.1 to 0.2 foot (3.0 to 6.0 cm) thick. The deposit, characterized by a dark brown, sandy loam, overlies the fine sands throughout the units west of the Peniel Mission. Stratum II-w is difficult to distinguish from Stratum IV-w where the intervening Stratum III-w sands are lacking.

Sometime after deposition of Stratum IV-w and perhaps Stratum II-w, a trench was dug down to the containment trench for the well, possibly to disconnect the well pipe. A Johnson Brothers ceramic bottle, manufactured around 1913+, was found in the containment trench. Since the containment trench stratigraphically appears to predate Stratum V-w, the bottle probably does not date from the original construction of the well and may have been deposited during the second intrusion. In addition, the re-excavation of the well is most likely the cause of the distribution of sherds from the same bottle in more than one stratum in Unit 67.

**Stratum I-w.** Stratum I-w, a recent fill identified by Rhodes (1988:133) as "Stratum A," covers Stratum II-w. The recent fill, placed over the site area by the NPS in 1982, is between 0.2 and 0.5 foot (6.0 to 15 cm) thick. A modern soil is developing in the recent fill.

Post-depositional deformation of Strata II-w, III-w, IV-w, and V-w above the buried fence remnants in Unit 69 possibly reflects settling and disturbance of water-saturated sediments above a porous material (such as the buried wooden fence remains). Compaction of the ground could also have contributed to the depression. According to Dr. Polley (1987), children used to play in the perpetually standing water at the southwest corner of the building. Although the present roof of the house is not in the proper position above the depression, this trough could also be a dripline formed below the eave of the original roof.

**SOUTH SIDE STRATIGRAPHY**

The south profiles of Units 21/2, 23, 44, 45, 66, and 67 and the east profiles of Units 23 and 24/21, are the main focus of the stratigraphic study south of the Peniel Mission (Figures 19 and 21). The northern portions of all these units were severely disturbed by repairs made to the building foundation in 1937 and 1967. These disturbances are also reflected by some gravel deposits that lie directly above the lowest dump levels.

Stratum VII.1-s immediately overlies the channel bottom deposits. The mean artifact date is 1906.7 with a *terminus post quern* of 1959. This late date for a TPQ is probably a result of a rather recent intrusion into the lower dump. A former resident of Skagway described digging for bottles along the back wall of the building during the 1950s. Stratum VII.1-s, which is up to one foot thick, consists of sandy loam with localized areas of wood planks and chips or metal objects and debris in Units 23, 44, 45, and 66. The matrix is generally dark reddish brown, with pockets containing a concentration of metal fragments stained yellowish red. Other lenses within Stratum VII.1-s consist of light brown silt and pale brown clay loam, with ash, intact bottles, glass sherds, porcelain, and brick. In some areas the cultural remains are so densely packed as to preclude a sedimentary matrix. A thin layer of white ash similar to the lowest levels of VI-w occurs at the bottom of Stratum VI-s.

East of Unit 23, in Units 24/21 and 2/21, Stratum VII.1-s consists of a 0.6-foot (18 cm) thick layer of dark brown, sandy loam with brick, wood, pockets of reddish ash, and metal objects including part of a wood stove. The matrix is the same dark gray sandy loam with localized yellowish red staining as the lowest lens in Unit 23.

Evidence of fluvial deposition in Stratum VI-s is limited to occasional pockets of ash, presumably washed down from Strata VI-w and V-w. This area was probably very moist due to its low elevation, resulting in a sandy loam matrix high in organics. Material redeposited from the trash dumps on the west side suggests that Strata VI-w and V-w were still exposed during the formation of Stratum VI-s.

The appreciable amount of wood and nails in Stratum VI-s may be due to construction activities during the early twentieth century. A south-end addition to the Peniel was built in 1903, torn down and replaced by a larger addition sometime between 1906 and 1912, and once more remodeled in 1936. Several other buildings south of the Peniel Mission were also constructed and removed during the early twentieth century.
A north-south aligned fence was exposed in Unit 2/21. The fence appears to predate Stratum VI-s because no sign of intrusion is apparent. A fence at this location is visible in a 1901 photograph (Figures 7A & 7B), indicating that the stratum in Unit 2/21 was laid down after the gold rush.

A pit, 9.0 feet (2.7 m) in diameter, and 1.2 feet (36 cm) deep, and backfilled with coarse sand, gravels, cobbles, and artifacts, was found in Units 23, 44, and 45. The pit appears to have been dug sometime after the deposition of Stratum VI-s, as bottle sherds from this intrusion mend together with sherds from the underlying dump.

Water-deposited lenses of Stratum VI-s, grayish brown, silty sand, and Stratum V-s dump material occur above, and follow the contour of the streambank in Unit 67. The lenses of Stratum V-s, probably washed down from Stratum V-w, consist of pure decomposed brick, cinders, ash, metal, and wood in a fine, sandy matrix. A 0.05 foot (0.15 m) thick lens of Stratum V-s also occurs in Unit 23.

The overlying Stratum IV-s is composed of a dark brown, sandy loam with ash, cinders, and charcoal. This stratum is distinguished from the lower sandy loam (Stratum VII-s) by less reddish hues, less wood, and more ash and charcoal. Stratum IV-s partially overlies the large pit in Units 23, 44, and 45. Stratum III.3-s is composed of a fine light brown sand similar to the sand in III-w, but unfortunately the two strata lack stratigraphic continuity. Generally, Stratum III.3-s is homogeneous, with no banding or textural changes except for occasional clumps of silt. The sand is slightly less consolidated than in Stratum III-w. Stratum III.3-s is discontinuous, with distinct but irregular contacts.

Stratum III.3-s varies between 0.3 and 0.5 foot (0.09 to 0.15 m) thick along the south wall of Units 23, 44, 45, and 66, increasing to a thickness of 0.8 to 1.0 foot (0.24 to 0.3 m) along the south wall of Units 21/2 and 21/24. In Units 24/21 and 21/24, Stratum III.3-s is separated by a discontinuous lens, about 0.1 to 0.2 foot (0.03 to 0.06 m) of reddish ash and wood fragments.

A pit-like intrusion, 1.2 feet (36 cm) wide and 0.7 foot (21 cm) deep, appears within Stratum III.3-s in Unit 23. The inverted triangular-shaped disturbance is composed of Stratum III.3-s sediments mixed with dark, sandy loam (Figure 19). As Stratum III.3-s continues east of this disturbance, into Units 23, 24/21, and 2/21, the appearance of the fine sand changes. The matrix in this area is more compact than that contained in the pit-like intrusion and, in addition, exhibits almost horizontal, smooth upper and lower contacts typical of a waterlaid deposit. This matrix is in contrast to the disturbed western portion of Stratum III.3-s, west of Unit 23. Although Stratum III.3-s was apparently deposited during the 1936 and 1937 Skagway River floods, the sand west of the disturbance in Unit 23 appears to be human-made fill whose sedimentary structure was destroyed by trampling and construction activities. Three large, flat, north-south aligned stones were found in the upper portion of this stratum in Unit 23. These may be stepping stones placed by Dr. Polley in 1937 or later. Stratum III.3-s extends beneath the stones, suggesting that at least part of the sand predates the stones. This stratum also contains several whole bricks, which may also be correlated to Dr. Polley's residency.

Stratum III.2-s is evident above, and partially within, Stratum III.1-s in Units 2/21, 21/24, and 23, where it occurs as several lenses of compact black sandy loam, approximately 0.1 foot (3.0 cm) thick. The deposit was possibly washed down from Stratum III.2-e (discussed under "East-Side Stratigraphy"). In Unit 21/24, the lens is discontinuous and downward-sloping toward the east. Unit 23 contains a lens of ash and cinders similar to Stratum V-w, which occurs above the sandy loam lens. Because Stratum III.2-e is situated stratigraphically above the stepping stones, which were probably set in place in 1937 or shortly thereafter, it must be of more recent age than the trash dump, which dates around 1915.

Stratum III.1-s is evident as 0.2 foot (6.0 cm) thick pockets of silty sand in Unit 23 and as a continuous stratum, approximately 0.1 to 0.3 foot (3.0 to 9.1 cm) thick, in Units 2/21 and 21/24. Stratum III.1-s may correlate to the floods in 1943 and 1944.

A pit-shaped disturbance, Feature 9, 1.5 feet (45 cm) wide by 0.8 foot (24 cm) deep, intersects the south wall of Unit 67 (Figure 19). The disturbance is stratified, with the layers more or less maintaining their original stratified position. Bottom layers alternate between the fine sand of the streambank (Stratum VIII-s) and the reddish ash and cinders
Figure 22A. View, looking northwest, of boardwalk that extended along east side of Building I, around 1900, drawing. Drawing of enlarged detail from photograph credited to Sheldon Museum and Cultural Center, Haines, Alaska. Copy on file at Klondike Gold Rush NHP, Skagway, Alaska (SO55-1019).
Figure 22B. View, looking northwest, of boardwalk that extended along east side of Building 1, around 1900, photo. Photo credits: enlarged detail from photograph credited to Sheldon Museum and Cultural Center, Haines, Alaska. Copy on file at Klondike Gold Rush NHP, Skagway, Alaska (SO55-1019).
Figure 23. Stratigraphy of feature 18 trench.
mixed with fine sand (Stratum V-s). These are overlain by a layer of dark, sandy loam (Stratum IV-s), and finally a layer of light brown, fine sand (Stratum III.1 or III.3-s). The pit is stratigraphically reminiscent of the stratigraphy west of the Peniel Mission. Stratum II-s. Stratum II-s, a 1.0-foot (20 cm) thick, disturbed deposit located in Units 45 and 66, consists of brown loam mixed with faint bands of fine sand (probably from the underlying Stratum III.1-s), and cultural refuse. Cultural material contained within the stratum includes charcoal, small brick fragments, and a wooden box. Part of Stratum II-s fills in a depression cut into the underlying Stratum III.1-s and Stratum V-s. The mean artifact date for Stratum II-s is 1920 with a TPQ of 1958, based on a 1958+ A.B.M. Crown-top bottle. The remainder of the bottles in Stratum II-s have manufacturing dates ranging from 1887 to 1932. The 1958+ bottle may have been mixed in from an intrusion that contained a Northwest Glass Co. beer bottle, also dated to 1958+; thus Stratum II-s should ultimately be younger in age.

Stratum II-s thins both eastward and westward from Units 45 and 66, to a thin, almost continuous, dark brown or black paleosol similar to II-w. Traces of a trench, backfilled with a mixture of sand from Stratum III.3-s and dark brown, sandy loam with some bands of light brown sand from Stratum II-s, are intrusive into both these strata in Unit 44. It appears that sometime after the formation of Stratum II-s, the trench was cut through Stratum II-s into Stratum III.3-s to lay a sewer pipe—still in use—after which the trench was then backfilled with material from the two overlying strata taken from the excavation. This admixture is overlain by Stratum I-s, consisting of 0.1 to 1.0 foot (3 cm to 30 cm) of fill dirt used to fill in the shallow depression that until recently had been visible above the sewer pipe. Generally dark, grayish brown, Stratum I-s ranges from fine to coarse sands with gravels and cobbles. A modern soil is developing in the fill.

EAST SIDE STRATIGRAPHY

The stratigraphy east of the Peniel Mission is taken from profiles of the East Trench and Unit 19/4 (Figure 20). The stratigraphy is similar to that in southern Units 2/21, 24/21, and 23 (Figure 21). Strata overlying the stream deposits in the East Trench follow the contour of the streambank. Strata III.1, IV.1, and VI-e are thickest where they fill in the stream channel in the southern end of the East Trench but are thin and discontinuous on the streambank. Stratum III.1-e is thickest at the base of the streambank.

Stratum VII.1-e, which directly overlies the stream deposits, is 0.6 foot (18 cm) thick and consists of a dark, sandy loam. A high percentage of decomposing organics suggests that the stratum was formed in a marshy, low energy environment. The only artifacts observed lie at the top of the boundary of the stratum. These artifacts include boards, large metal objects, glass, and brick fragments. The earliest limiting date for the stratum in Unit 19/4 is 1911. Stratum VII.1-e resembles, and is laterally continuous with, Stratum VII/II-s in Unit 2/21.

A clay sewer pipe intersects the east profile of East Trench in Stratum VII.1-e. No visible signs of intrusion are evident in Stratum VII.1-e, although the sandy sediments (Stratum III.3-e) above the pipe are disturbed. In the west profile, the pipe directly overlies Stratum VI-e, and is contained in Stratum III.3-e.

Stratum VII.1-e is overlain by Stratum IV-e, a deposit of whole and crushed brick. The brick dump is up to one foot (30 cm) thick in the east profile but thins westward to a discontinuous layer of single bricks in the west profile of East Trench. The bricks are machine made, but "primitive," with many inclusions (Gurcke 1988). Occasional bricks have attached mortar, indicating use, and are stained with soot. Unfortunately, no artifact dates are associated with the brick dump.

Stratum III.3-e is composed of a gray-to-light brown, fine sand or silt with humic banding. The deposit is approximately 0.5 foot (15 cm) thick, thickening to 1.2 feet (36 cm) at the base of the bank. Stratum III.3-e covers the brick dump, filling in between the top bricks of Stratum IV-e and connecting laterally with Stratum III.3-s sands. The bricks beneath Stratum III.3-e are unweathered, implying minimal exposure to the elements. This evidence suggests that Stratum III.3-e was laid down soon after the brick dump. The deposit may be related to high water in Mill Creek resulting from the Skagway floods in 1936 and 1937.

Stratum III.2-e, also highly organic and ranging between 0.2 to 0.6 foot (6.0 cm to 18 cm) thick, overlays the fine sand. This intervening deposit, which separates Strata III.1 and III.3 on the south and east walls, is not seen on the west wall. Cultural
Figure 24. Early features.
PENIEL MISSION

Late Features

Figure 26. Late features.
material associated with Stratum III.2-e includes small wood and brick fragments, glass, and nails. Stratum III.2-e runs laterally into Stratum III.2-s.

Stratum II.1-e, a paleosol with a dark brown, sandy loam matrix, contains only a few scattered artifacts, including porcelain, nails, and brick fragments. The paleosol is overlain by Stratum I-e, a 0.4 to 1.0 foot (12 cm to 30 cm) thick fill--with a matrix generally consisting of coarse sand and gravel. A modern soil is developing in the uppermost portion of the fill.

SHOVEL TESTS

Four shovel tests were dug 36 to 42 feet (11 m to 13 m) south, and 4 to 8 feet (1.2 m to 2.4 m) west of the site datum near the southeastern corner of the building. The shovel tests were placed to expose sediments not disturbed by construction and trash dumping. The test holes were intentionally located in the vicinity of the area shown in the historic photograph (Figures 14A & 14B), where the right bank of Mill Creek once curved southward toward the Moore house.

The stratigraphy in all four test holes is similar. Coarse sand and gravel, probably representing stream channel deposits, was encountered between 0.7 and 1.2 feet (20 cm to 36 cm) below the surface. The coarse sand is overlain by fine to medium sands, followed by silts, and finally sandy loam, high in organics at the present ground surface. This upward gradation in grain-size from coarse to fine is typical of meandering streams and indicates lateral shifting of the stream channel through time (Reineck and Singh 1980:309).

STRATIGRAPHIC DATING

The terminus post quem dates indicate that stratification of the dump deposits continued well into the mid-twentieth century. On the other hand, these recent dates may be more indicative of intrusion than deposition. The recent artifacts found in the lower strata tend to skew the age estimate, resulting in an artificially later date for the lower deposits than the overlying deposits. The fact that sherds from different strata mend together is probably the result of the mixing caused by later intrusions into the dump deposits. Excavations of the trench along the west wall, the well, the south wall sewer line, and the Stratum IV intrusion all contributed to the mixing of the lower dump deposits. In addition, there is a high probability of other as-yet undetected intrusions into the dump that would also have contributed to the intermingling of artifacts.

A midpoint for the dates of the various strata was computed by averaging the midpoint of the artifact dates. This mean artifact date, which follows South’s mean ceramic date, is dependent on the assumption that the life of an artifact type follows a unimodal curve with a peak distribution in the middle of its date range (South 1977:217). South has demonstrated that the average midpoint of the ceramic artifact date ranges was very useful in predicting the midpoint of occupation for several historic sites in South Carolina. This mean date was computed by using both the sherd count and the number of artifacts to assess the effect on the date by a single artifact represented by many sherds. It was expected that an average date would provide a more accurate estimate of the age of the strata because the age of the intrusive bottles would be averaged into the dates.

The mean dates (Table 1) for the strata indicate that the midpoint for the deposition of the dump occurred around 1908-1910 and not during the gold rush as postulated by Rhodes (1988). While it is recognized that the mixing of the artifacts may have resulted in an artificially later date, the large number of twentieth century artifacts in the dump would seem to verify the mean dates. Further, the dump strata show a clear separation between the red coal cinders of Stratum V and the yellow wood ash of Stratum VII. If the deposits were totally disturbed, this stratigraphy would no longer be distinct.

The dating of the west wall dump to the first decade of the twentieth century provides some interpretive problems. Rhodes (1988) has postulated that the NW-SE channel was diverted before 1898 or 1899 and filled in with dump materials before the construction of the Peniel Mission in 1900. Except for two twentieth century bottles considered to be intrusive, Rhodes thought the artifacts came solely from the Gold Rush Period. The 1987 excavation determined that the dump along the west wall lies above a fence that may have been the original fence to the Moore property. This fence had been torn down before the Peniel construction. It would seem
logical that the lower boards of the fence had been left in place because they were covered with dump materials when the fence was removed in 1899. If this is indeed the original boundary fence, then Rhodes' contention that the dump was in place before the construction of the Peniel in 1900 and perhaps before Building I in 1898 would be correct.

There are some indications, however, implying that the dump may not have been deposited solely in the nineteenth century. A small channel evident under Building I in an 1899 photograph (Figures 14A & 14B) indicates that the NW-SE channel was not entirely filled in before the construction of Building I. The dump may also have followed the diversion and filling of the channel west of the Peniel that occurred in 1900. Dump materials may also have been deposited into the old channel that extended along the east bluff of the valley to the east of the Army barracks (west of the Peniel). The gulch was then filled in with logs and gravel (Daily Alaskan, May 3, 1900).

The relationship of the dump with Building I is also problematical. The Stratum V dump is located west of the Peniel and out into the yard where Building I formerly stood from 1898 to around 1908. This accumulation of trash under the location of the building implies that the dump predates Building I. There is a possibility, however, that the building had been built up off the ground to avoid the swampy area beneath it, which would have allowed trash to be deposited under the building. In this case the dump could postdate Building I. There is also some tenuous stratigraphic evidence that the dump postdates Building I. Three large angular, granitic rocks found in Unit 25B were postulated by Rhodes (1988:140-142) to have been support bases for either the small shed, Building I, or the 1899 boardwalk. Only one of the three rocks, all covered by the Stratum V dump deposits, showed any signs of postdating the dump. It is thus possible that the dump accumulated around the foundation of Building I.

The composition of the dump also changes from an ash and cinder deposit along the west wall of the Peniel to a wood dump along the south wall, suggesting that at least one of these dump deposits postdates the construction of the Peniel. A small trash deposit was also found beneath the building, suggesting that materials may have washed in from outside. Water marks under the building provide ample evidence of flooding.

The west wall dump consists of a lower wood ash matrix overlaid by a coal cinder deposit. It is doubtful that the change in material deposition would be so distinct if the entire deposition had occurred in the year before the construction of Building I. The change from wood to coal as a source of heat most likely occurred in 1900 when the valley was denuded of trees, and it became possible for coal to compete with wood as the prime source of heat. This change may have been reflected in the matrix change along the west wall, thus dating at least Stratum V to the early twentieth century.

The ages of the south and east wall dumps are also problematical. The stratigraphic relationship between the two dumps has been obscured by the placement of the well and several other intrusions. The complete change in matrix from the west wall to the south wall and the lack of significant dump deposits under the building suggest that at least the south wall dump was deposited after the construction of the Peniel in 1900. The lowest dump is also contiguous with strata that overlay a fence along the east wall that was not evident in photographs taken before 1900. The heavy wood matrix may have resulted from the destruction of the back shed or the building that stood in the back yard in the early part of the twentieth century.

The east wall deposits are undated. However, the stratigraphic evidence indicates that the brick dump postdates the lowest dump level along the south wall.

**SUMMARY**

Archaeological remains at the Peniel Mission site span the settlement period of Skagway to the early mid-twentieth century (1880s to 1940s). The earliest deposits exposed through excavation are fluvial sediments laid down by Mill Creek, which flowed through the vicinity in the late 1800s. The site area became part of the Moore homestead in 1887. Archaeological features that may be attributed to Moore include a section of fence, remains of a well, and a series of wooden boards that may be the remains of a boardwalk.

Mill Creek was diverted eastward, possibly to
allow construction of the hip-roofed building in 1897. A temporary Peniel Mission building was moved to the vicinity in early 1900. The permanent Mission was built later that year. A new room, added onto the south end of the Peniel Mission in 1903, was torn down and remodeled into a larger addition sometime between 1906 and 1912.

Mill Creek became a focus for dumping in the late 1890s to early 1900s, perhaps as a deliberate effort to fill in the creek. Refuse from wood and coal stoves was dumped west of the Peniel Mission, while wood and other construction debris were dumped along the south wall of the building. Although there are some indications that both dumps may have formed simultaneously, the west wall dump appears to predate the removal of the west boundary fence in 1899, whereas the south wall dump postdates a fence erected in 1901. Artifact dates in both dumps range from the late 1800s to the 1930s. According to photographs, the stream channel appears to be only partially filled in with trash by the time the permanent Peniel Mission was constructed.

The trash dumps are overlain by several strata of light brown or gray, fine sands and silts that may be associated with floods from the Skagway River in 1936, 1937, 1943, and 1944. The fine sands alternate with strata of dark brown, sandy loam high in organics that probably formed as the creek filled in.

Dr. Clayton Polley bought the Peniel building in 1936. Numerous features found in the excavation, including foundation posts for a staircase and a series of stepping stones, date from his residency. Dr. Polley repaired the building foundation and rebuilt the south end addition. An extensive brick dump east of the Peniel Mission may also date from that time period, although no associated dated artifacts are available as proof.
ARTIFACTS

The artifact classifications followed Blee's (1983; 1988) and Rhodes' (1988) functional system in order to compare the 1987 excavation with previous work at the Peniel and also with other sites in Skagway. A major difference is seen in the manner of deposition between structural or construction-related artifacts and the remainder of the collection (Blee 1988:30). Structural materials are generally deposited after a construction event, unlike the other types of artifacts that accumulate gradually through time. This distinction may not be as useful in understanding the manner of deposition at the dump where materials were collected elsewhere and dumped into the stream. The distinction between the two major classifications (structural vs. non-structural) of artifacts is important when considering the sheet trash found in the upper levels.

It must be remembered that with any functional classification many items will fit into a number of categories, due to the multiple functions of an artifact. In such cases an attempt was made to classify an item according to its most probable use. Functional classifications can also be quite arbitrary. Kerosene lamp chimneys, for instance, could easily be included in the utility class of the structural group along with the mounted light fixtures, or it could be categorized as a household furnishing in the domestic class. Because they are movable items, they were placed in the furnishing class of the domestic group. The point need not be belabored, but it is necessary to be aware of the inherent bias built into any functional classification system.

Structural artifacts are divided into construction materials (lumber, linoleum, wallboard), utility items (plumbing, electrical, furnace parts), hardware (hinges, door knobs, fasteners), nails, and window glass. Nails and window glass were given a class level distinction because of their large numbers. Except for the window glass, these artifacts become incorporated into the archaeological record during isolated construction events.

Domestic items, or all those artifacts related to the running of a household, comprise the largest group of nonstructural remains. This group is predominately made up of items related to food storage, preparation, and service (i.e., cans, canning jars, condiment bottles, ceramic tableware, and pots and pans). Beverage bottles comprise an equally large domestic class. This group includes the beer and liquor containers--items that tend to be thrown away while they are relatively new, compared with other classes of items in the domestic group. Other domestic classes include household furnishings (movable items such as furniture), housekeeping items (sponges, mops), and medicinal artifacts (thermometers, bottles).

Other groups of nonstructural artifacts include personal and activity-related items. The group of personal artifacts is composed of those items owned and used by a single individual. This group includes clothing, clothing fasteners (buttons, clasps), clothing accessories (purses, handkerchiefs), ornamentation (jewelry), and grooming and hygiene items.

The miscellaneous activities group includes all those items not associated with the household. Classes under miscellaneous items include bulk storage items, toys, leisure related artifacts, office/school/store supplies, guns, tools, money, and transportation. The types and amount of representation of classes in this group vary considerably according to the function of the site under investigation.

Diagnostic and unidentified classes were used for those artifacts of unknown function. The diagnostic group includes those items that are presently unidentified but have the potential of identification, given further analysis. The unidentified items are so incomplete that it is unlikely that they will ever be identified. Classes within these two groups are based on material type.

As discussed in the stratigraphic section, a good deal of mixing of the strata is evidenced by bottles mended from sherds found in different strata and in some cases, even different units. These mended bottles appear to be most common along the south wall where Stratum IV intrudes into Stratum VI, incorporating sherds from bottles in the lower stratum. A similar situation exists on the southwest corner (Unit 67), where numerous broken and scattered bottles resulting from intrusions are found throughout the stratigraphic profile. The intrusive trench in Units 72 though 73 also contains sherds that mend with bottles from the lower strata. However, although there is a considerable amount of post-depositional disturbance, the numerous twentieth
century bottles found in the excavation indicate that dumping activity continued well into the twentieth century.

STRUCTURAL ARTIFACTS

The structural artifacts were subdivided into Construction, Utility, and Hardware items. A total of 2,816 structurally related artifacts (plus window pane sherds and nail counts) was inventoried.

CONSTRUCTION REMAINS

Construction-related artifacts from the excavation include: nails, window framing, masonry, lumber, interior construction materials, roofing and/or siding, flooring remains, and congealed paint.

Nails

Nails are more numerous than any other artifact type found in the excavation. A total of 10,763 nails were collected in the field, of which 97% are wire and 3% are square-cut. Those identified range in pennyweight from 2d to 60d, and include common, box, finishing nails, and spikes. About 23% of the nails recovered are unidentifiable fragments.

Common nails, which amount to 30% of the total nail inventory, are generally used for structural and rough-in carpentry. Box nails, which amount to 13% of the identifiable nails, are also used for structural construction and rough-in, but have a smaller diameter than common nails, and are generally assumed to be used for soft woods. Finishing nails, 7% of the identifiable nails, are used for finished carpentry, trim, and cabinets (Lewis n.d.).

According to Teague (1980:91) nail use is broken down as follows:

<table>
<thead>
<tr>
<th>Pennyweight</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>2d-5d</td>
<td>roofing, lathe work, finishing</td>
</tr>
<tr>
<td>6d-10d</td>
<td>siding, flooring, light framing,</td>
</tr>
<tr>
<td></td>
<td>interior fitting</td>
</tr>
<tr>
<td>12d-16d</td>
<td>light framing to stud walls</td>
</tr>
<tr>
<td>20d-spikes</td>
<td>heavy framing</td>
</tr>
</tbody>
</table>

Of the identified pennyweights, 73% are in the 6d to 10d range, 14% in the 2d to 5d range, 7% in the 20d to spike range, and 5% in the 12d to 16d range.

Before the 1890s, square-cut nails had been predominant. During the 1890s wire nails became the standard while square-cut nails, having 72% more holding power, were used more for projects requiring extra durability (Fontana and Greenleaf 1962:54-55).

Window Materials

A total of 3,632 sherds of flat glass larger than nickel size (0.85 in. or 2.3 cm diameter) were collected from the field excavation screens. These glass fragments are of varying thickness, ranging from 0.10 cm to 0.375 cm. Sherds 0.40 cm and thicker were classified as sheet glass. The sheet glass was assumed to have a different function from thinner windowpane glass. The thicker glass may be fragments of car windshields or from plate glass store windows. Thirteen sherds were identified as sheet glass. In addition, 18 special-use sherds were identified as silver-backed mirror glass.

Windowpane glass from the Peniel Mission excavation was manufactured of a clear, lime-soda glass. This lime-soda method of producing a clear glass with a greenish tone has been in use since William Leighton of the Hobbs-Brockunier Glass Company (Wheeling, West Virginia 1861-1891) developed this formula in 1864. The new formula replaced the formerly-used compound of potash (soda ash) with bicarbonate of soda (Scoville 1948:22).

In addition to windowpane glass, three glazier points, and 15 pieces of window putty remains were found. Four of the window putty remains, with red enamel adhering, mended together with remains from Units 68 II and 86 IV.

Masonry

Common brick accounted for 675 artifact fragments found in the excavation. Fourteen fragments each of fire brick and concrete and 128 mortar samples were collected. These fragments represent a sample of total brick and mortar fragments at the site.

All the common bricks were manufactured by the soft-mud method and are red. There appear to be two types of fire brick: one a yellow, hard-fired firebrick indented with the letters SCOT (design is depressed below the surrounding surface). This
brick was possibly made by the Scottia Brickworks of Scottia, Scotland, whose dates of operation are unknown (Gurcke 1988). Remaining fragments of firebrick consist of a dark red/brown, hard-fired body.

Analysis of the common bricks suggested that they were made before the 1930s. Soft mud bricks possibly were imported from Haines, Alaska, or Whitehorse, Yukon Territory (Daily Alaskan May 27, 1899; July 27, 1900). Mention was made of a bed of quality clay suitable for making firebrick at Smugglers Cove in the Skagway area (Skagway News January 6, 1899); however, no local brick-making factory was ever established. Brick became more commonly used after 1900, when the Skagway City Council enacted a requirement that all new chimney installation be made of brick instead of tin, sheet, or galvanized iron (Daily Alaskan March 27, 1900).

Brick, concrete fragments, and cement samples were collected from clusters in Units 19, 45, and 67; however, bricks from a large pile along the east wall of the house (Figure 15) were not collected. This feature appears to be the remains of a demolished chimney. Early photographs of the Peniel Mission show that the building had three chimneys: a central chimney on the gabled roof, flanked by a chimney at each end. The chimney remains now apparent may have resulted from extensive remodeling of the Peniel when purchased by Dr. Clayton Polley in 1937.

Lumber

Milled, planed, and sawn end pieces of lumber, as well as sawdust samples, were inventoried separately from interior construction materials and roofing and/or siding remains. Milled lumber is specified as "saw-sized lumber uniformly sawn ... for uses requiring a rough texture" (West Coast Lumber Inspection Bureau 1983:218), such as sized framing. Planed lumber is described as: "wrought to a smooth surface by hand or machine" (Corkhill 1982:411).

Laboratory separation of rough-textured "milled" lumber from smooth-surfaced "planed" lumber was specifically recorded for analysis of the striations on the lumber remains excavated. Lumber from Moore's Sawmill has been tentatively identified in the structural parts of the Peniel Mission building, based on specific identifying saw mark striations (Cloyd 1988). This analysis, as well as the identification of the standard grades of lumber used in the structure, has not been addressed in this report.

A total of 577 lumber pieces was inventoried. The inventory, which includes the number of items sampled in each basic lumber category, is shown in Table 3 below.

Table 3. Inventory of lumber samples from the excavation.

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milled</td>
<td>67</td>
</tr>
<tr>
<td>Planed</td>
<td>18</td>
</tr>
<tr>
<td>Sawn</td>
<td>80</td>
</tr>
<tr>
<td>Tongue &amp; Groove</td>
<td>13</td>
</tr>
<tr>
<td>Molding</td>
<td>49</td>
</tr>
<tr>
<td>Painted</td>
<td>19</td>
</tr>
<tr>
<td>Sawn end pieces</td>
<td>189</td>
</tr>
<tr>
<td>Shims</td>
<td>2</td>
</tr>
<tr>
<td>Plank</td>
<td>1</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>10</td>
</tr>
<tr>
<td>Unidentified</td>
<td>129</td>
</tr>
<tr>
<td>Total</td>
<td>577</td>
</tr>
</tbody>
</table>

Lumber remains along the walls of the Peniel Mission appeared to be clustered in various areas. A sample was taken from the south wall dump, which contained a large quantity of jumbled lumber (Figure 15). This sample contained planks and boards, framing and trim, siding and/or roofing materials, and congealed paint. The specific lumber types include: 2-by-4-inch lumber, molding, tongue and groove/lap siding (or perhaps paneling), cedar shingle/shakes, tar, tar paper, and remnants of cream colored and dark brown, enamel paint. Planks and boards ranged from one-half to two inches thick, one to six inches wide, and two to three feet long. Three sections of unpainted lap siding with an unusual grooved surface was removed from this feature. A portion of this feature contained small rounded logs, six inches in diameter, some with cut ends.

Areas containing considerable amounts of sawdust were sampled from Strata II and VI in Unit 73. The sawdust is associated with 95 end-cut pieces of all grades of lumber and planed shavings recorded in Unit 74. Artifacts from these areas, found both in and below the sawdust, date earlier than 1918. It appears, however, that the sawdust and construction
debris had been lying in an intrusive trench excavated around 1937.

Colors of paint recovered in congealed masses were limited to buff, merging to a dark brown in Units 2/21 and 24/21. White enamel was present in Units 23, 44, 45, 79, and 70, and a dark green was recorded in Units 44 and 73. Structural paint analysis for restoration of the Peniel Mission building has not been completed, and possible dates for use of these colors have not been assigned.

Interior Construction Materials

A total of 104 fragments of fiberboard was collected from the excavation. Some remnants of fiberboard appear to be associated with Feature 11, the thick mat of lumber in Stratum VII along the south wall of the Peniel Mission (Figure 24). The fiberboard, made of bonded plant (wood) fibers and compressed into rigid sheets, was badly deteriorated in the excavation, causing it to disintegrate to some extent through the screens.

Masonite ("chipboard"), another form of fiberboard, also found in association with Feature 11, was not sampled because the remnants disintegrated upon contact. Masonite is generally used in making furniture, kitchen cupboard doors, and occasionally for flooring materials rather than for construction because of its low strength and stiffness. Since chipboard is associated with lumber and fiberboard from this dump, the chipboard is categorized as structural; however, its function was not determined.

Nine very small pieces of wallpaper were collected. These nine fragments appeared to be textured paper with an undeterminable print because of the small size of the samples represented.

Siding and Roofing

The siding and roofing category included wood shingles, tar, tarpaper, corrugated tin, and asphalt shingles. All tarpaper fragments from the 1987 excavation were collected, and the congealed tar was sampled. A total of 373 artifact fragments relating to this category was collected.

A section of yellow painted boards similar to the original siding of the house was found in Unit 47 beneath the rear of the Peniel. The section of boards was covered with roofing paper and a layer of tar. These materials appear to have been parts of a former roof that had been removed from the house.

Samples of tar were also recovered from along the west wall of the Peniel, from Units 67 through 71. A total of 116 asphalt fragments with white and red, white and black, and plain black, granular surfaces was inventoried. A cluster of 98 of these fragments was found in the upper levels of Unit 71 (the 1962 Builder's Trench). Installation dates for the asphalt roofing on the Peniel Mission are unknown (Cloyd 1988).

Cedar shingle/shake fragments were distributed on all sides of the Peniel Mission. Of the total number of 65 fragments, 29 pieces of these were clustered in Units 85 and 86 of Stratum VII dump.

Tar paper fragments (115 pieces in all) were also distributed on all sides of the Peniel Mission. Seventy-four of these fragments were clustered in Unit 66 Strata VII dump.

Eleven fragments of corrugated tin, each less than 12.1 cm in diameter, were associated with the fence remains, Feature 15, in Unit 69 (Figure 24).

Flooring

The flooring artifact category includes linoleum and floor underlayment (or felt paper). Totals of 203 linoleum fragments and 53 floor underlayment fragments were collected.

Although purposely designed for use as a flooring cover, linoleum is also used for counter tops and as wall decoration and protection. The majority of the linoleum from the Peniel has a red, white and black cobble pattern and is corrugated on the back. The 1897 Sears Catalogue (Sears, Roebuck and Company 1970:300) describes linoleum as: "very like oil cloth except that there is ground cork in its composition, which makes it much heavier, more durable; also very much softer to walk on." Linoleum was invented in 1863 and was manufactured from a combination of linseed oil, ground cork, waterproof resins, pigments, and burlap (Faubel 1941:111-114).

UTILITIES

A total of 226 utility artifacts was recovered from the Peniel Mission 1987 excavations. The utility artifact category includes plumbing pipes and parts, electrical fixtures, and wood (or coal) stove parts.
Kerosene lamps and lanterns are omitted because they require no attachment to structures and are thus analyzed in the furnishing section.

Plumbing

This category of artifacts includes a total of 42 plumbing pipe remains, itemized in Table 4.

Table 4. Inventory of plumbing remains from the excavation.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Hangers</td>
<td>4</td>
</tr>
<tr>
<td>Flanges</td>
<td>2</td>
</tr>
<tr>
<td>Gate Valve</td>
<td>1</td>
</tr>
<tr>
<td>Gaskets</td>
<td>2</td>
</tr>
<tr>
<td>Water Service Pipe</td>
<td>10</td>
</tr>
<tr>
<td>Sewer Pipe</td>
<td>14 fragments</td>
</tr>
<tr>
<td>Solder</td>
<td>7 fragments</td>
</tr>
<tr>
<td>Hose Clamps</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>

Metal water service pipe was found distributed around the Peniel Mission building. The other fittings, with the exception of one flange, were distributed along the west wall of the Peniel. The two hose clamps are included in this inventory for want of a better category, although there is a possibility that they are not plumbing related.

Feature 11 in Unit 67 is identified as the remains of a water well (Figure 24). The feature consists of a north-south aligned 1-1/4 inch metal pipe, laid horizontally, and resting on two parallel boards (east-west orientation), with the elbow resting, but not connected to the well shaft. The pipe had been disconnected from a vertical pipe shaft extending 11.2 feet into the ground. This horizontal pipe is 21 inches long and threaded at both ends, one end fitted with a 90-degree elbow. Feature 11 was found in Unit 67 at the southwest corner of the Peniel Mission foundation. Fragments of a Johnson Brothers ceramic saucer was the only datable artifact found within Feature 11. This signed saucer was manufactured after 1913.

Feature 10, a later intrusion into Feature 11, overlies the well shaft and boards (Figure 24). Although Feature 10 is more recent than Feature 11, artifact dating from both features appears to be contemporary. Remnants of a machine-made Whittemore's (shoe) Polish selenium glass bottle from the east wall of Feature 10 have a general date range of 1911 to 1930, based on manufacturing technology and glass composition. It appears that the well was put in during construction of the Peniel Mission and was disconnected some time later, as indicated by the disconnected horizontal pipe and the second intrusion seen in the profiles. Presumably, the owners hooked up to city water at that time.

During the gold rush, Skagway Light and Water Company accepted bids (Daily Alaskan July 12, 1898) for construction of the public water service system. This water service was apparently functioning by the fall of 1898 (Daily Alaskan April 30, 1899). The source of Skagway's water supply was an artificial lake created by a masonry dam up on the hill east of town. Water was channeled into a holding tank from the dam and from the tank via wooden water mains into town (Clinton 1899).

The south wall ceramic sewer pipe (Feature 3, Figure 26), still in situ, appears to have been installed by Dr. Clayton Polley in 1937 when he purchased the building and began major remodeling (Blee et al. 1984:432). The pipe, which lies in and under a sod stratum (Stratum II), is connected to the Peniel Mission but no longer in service. Being surrounded by a gravel fill, it appears that this pipe may be connected to a private septic tank, although the archaeological excavations did not explore this possibility. According to Oscar Selmer (1988), a lifelong Skagway resident, septic tanks were in use until the U.S. Army installed sewer lines in about 1943 or 1944.

Electrical Hardware

Electrical hardware found in the excavation consists of 137 related artifacts. Electrical service was installed in Skagway during the early part of the gold rush in 1897. The Peniel Mission was electrified after its completion in 1900 (Blee et al. 1984:430).

One porcelain electrical circuit wall switch, embossed with the name Perkins on the surface, was found in Unit 66, Stratum VII. "Perkins" is a trade name adopted by the Perkins Switch Manufacturing Company of Hartford Connecticut on June 14, 1895 (TM 27,363 Registered November 26, 1895). This trade name was registered "for incandescent lamps,
sockets and bases, wall sockets, rosettes, switches and cut outs" (U.S. Patent Office 73:1410).

Another porcelain electrical switch base from Unit 24/21, Stratum VII is embossed: PATENTED/JULY 18, 1889, on the inside of the surface (Figure 27) and BRYANT/5001 on the base. This switch base was manufactured by the Bryant Electric Company of Bridgeport, Connecticut. The date of July 18, 1889, is not a U. S. patent date because the U. S. Patent Office only registers patents once a week on Tuesdays, which, for that period of time in 1889 fell on July 16 or July 23. A search through the patents, designs, and trademarks issued that year did not produce a patent for Bryant Electric Company. This patent, however, appears to have been issued for an "electrical indicator," patented by Edward R. Knowles of Brooklyn, New York. E. R. Knowles filed for this patent on March 5, 1889, but the patent was not issued until July 30, 1889 (Patent No. 408,108). The patent was probably later assigned to the Bryant Electric Company.

Figure 27. Electrical wall switch base.

Other unembossed wall switches were collected from

Unit 19/4 Stratum IV
Unit 23 Stratum III
Unit 23 Stratum IV

One contact button was recovered from Unit 69, Stratum VI, and two circuit breaker points were taken from Units 67, Stratum II and 71, Stratum V.

Twenty of the insulators were "knob and tube" (Figure 28) unglazed porcelain wire guides. Three of these were indented with the name Brunt, and one with an "H.F." All four items were made by G. F. Brunt of East Liverpool, Ohio. Two white porcelain, rectangular wire guides were also embossed with the Brunt name. The Brunt Porcelain Works began manufacturing pottery in 1848, switching to porcelain door and furniture knobs exclusively in 1850. Electrical porcelain insulators were added to their line in either 1884 (Gates and Omerod 1982:18-19) or 1898 (Lehner 1978:43). The G. F. Brunt Porcelain Works was sold in 1910 (Gates and Omerod 1982:19).

One unglazed knob and tube insulator (Unit 24/21, Stratum III) is indented with the unidentified initials, E. P. Co. (Figure 28). Complete and fragmentary knob and tube insulators with no identifying marks were provenienced in Units 21 Stratum IV, 24/21 Stratum III, 71 Stratum II, and 72 Stratum II. Two unidentified rectangular porcelain wire guides, indented with the name Peru (Figure 29), were also excavated from Unit 24/21, Strata III and IV.

Figure 28. Knob and tube insulator.

Figure 29. Electrical wire guide.
Pieces of one aqua glass insulator, unembossed, were found in Units 67.11 and 68.V. The insulator is a "Signal" variety, used for telegraph wires.

Ten of the knob and tube insulators, eight unembossed or unmarked rectangular wire guides, the 1889 switch, and an intact light bulb (described below) were found clustered in adjacent Unit 24/21, Unit 44 Stratum VI, and Unit 45 Stratum VI. These artifacts, all of which are in fairly good condition, appear to have been unused when discarded.

Twenty-nine fragments of electrical wire insulation and 32 small pieces of copper wiring remains were found scattered throughout the Peniel Mission excavation units. With the exception of one fragment of electrical wire covered with a braided black fiber, all coated wire or casing fragments found in the excavations are made of rubber and color coded black, white, and red. The wire is of a small gauge, the size used for interior wiring.

One intact light bulb was found in Unit 44 Stratum IV. The bulb appears to have a tungsten filament, although the filament is corroded. Incandescent lamps (light bulbs) were first blown for the (Thomas) Edison Electric Light Company by Corning Glass Works in 1880 (Zerwick 1968:69). Improved tungsten filaments were introduced in the early 1900s and were in general use by 1920 (Encyclopaedia Britannica 1970(10):953, 958).

Miscellaneous electrical hardware having no identifying marks are itemized in Table 5.

| Light bulb fragments (glass, elements, screw bases, one complete bulb) | 38 |
| Light bulb socket | 1 |
| Fuse | 1 |
| Metal wire hangers | 3 |
| Wire guide fragments | 2 |
| Rectangular wire guides | 6 |
| Circular wire guides | 3 |
| Electrical terminal | 1 |
| Meter tag (2 fragments) | 1 (surface) |
| Two prong plug-in | 1 (surface) |

Harvey Hubbell had invented the two prong plug-in for appliances in 1904 (Schroeder 1986:532); however, the device was not standardized nor in general public use until 1925 (Schroeder 1986: 539).

**Stove Parts**

Thirty-seven wood or coal stove parts were recovered, including 29 firebox pieces, five damper remains, two stove legs, and one pipe flashing. Except for the flashing, these stove remains are manufactured out of cast iron. The form of the stove remnants suggests that the stoves had been rectangular or pot bellied.

Along the East Wall Trench, portions of two rectangular cast iron stoves were recovered from Unit 19/4, Stratum IV. The base of one stove, measuring 18.1 inches (46.5 cm) long and 19.3 inches (49.5 cm) in wide, is embossed with PAT'D 1884. The base bears a Greek key design around the rim edge. The recovered firebox, measuring 21 inches (54.0 cm) long and 12 inches (30.4 cm) wide with a thickness of 1 inch (2.4 cm), appears to be a part of a second stove. A large X is inscribed across the sidewall of the firebox. A large fragment of a domed stove top/lid, vertically ribbed and ornamented, was also recovered from the same stratigraphic unit. The lid, 17 inches (44.0 cm) in diameter, could be associated with either stove. A heavily corroded stove pipe damper 5.6 inches (14.3 cm diameter) from the disturbed portion of this stratigraphic unit and asbestos fiber found in Unit 19/4 Stratum VI are also associated with these stove parts.

Five small pieces of a pot-bellied stove were found in Units 2/21 Stratum VI and 23 Stratum II. These pieces may be associated with a circular stove lid and portion of the lid-lifter handle recovered from Unit 23 Stratum VI.

Other cast iron stove sidewall parts with an embossed 80B were also excavated from Units 69 Stratum VI, in association with stove slag.

**HARDWARE**

**Door Fixtures**

A total of 39 door and gate accessories were recovered from the Peniel. A possible single door assembly was noted in Unit 2/21, including a door lock plate, a floral designed metal door knob, two
door hinges, and a lock striker plate.

Minimum count of door hinges present at the excavation includes 18 house door hinges (20 fragments), three gate or shed door hinges (three fragments), one handmade cut hinge, two small cabinet door hinges, and a hinge pin. One of the smaller cabinet-type door hinges was embossed with the letters, PAT APLD FOR (Unit 35 Stratum I).

Table 6. Other door hardware inventory.

<table>
<thead>
<tr>
<th>Item</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen door hook eye</td>
<td>1</td>
</tr>
<tr>
<td>Keyhole escutions</td>
<td>3</td>
</tr>
<tr>
<td>Lock</td>
<td>1</td>
</tr>
<tr>
<td>Striker plates</td>
<td>3</td>
</tr>
<tr>
<td>Sliding bolt lock plate</td>
<td>1</td>
</tr>
</tbody>
</table>

Fasteners

A total of 229 fasteners was found in the excavations. This category includes the following: angle irons, nuts and bolts, brackets, hooks and eyes, rivets, screws, staples, tacks, and washers. Some of these artifacts, such as wood screws, may have been used in furniture assembly, as well as the installation of door hinges, whereas metal screws are not assumed to be structural. A basic description and count of these hardware fasteners, excluding clothing rivets, thumb tacks, and office type staples, is shown in Table 7. No particular distribution pattern or clustering of these artifact remains was noted.

Table 7. Inventory of fastener types.

<table>
<thead>
<tr>
<th>Item</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle Irons</td>
<td>2</td>
</tr>
<tr>
<td>Nuts and bolts</td>
<td>27</td>
</tr>
<tr>
<td>Lock nut</td>
<td>1</td>
</tr>
<tr>
<td>Brackets</td>
<td>5</td>
</tr>
<tr>
<td>Hooks</td>
<td>13</td>
</tr>
<tr>
<td>Hook eyes</td>
<td>2</td>
</tr>
<tr>
<td>Rivets</td>
<td>26</td>
</tr>
<tr>
<td>Screws</td>
<td>87</td>
</tr>
<tr>
<td>Staples</td>
<td>26</td>
</tr>
<tr>
<td>Tacks</td>
<td>23</td>
</tr>
<tr>
<td>Washers</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>229</strong></td>
</tr>
</tbody>
</table>
DOMESTIC ARTIFACTS

Seven classes of artifacts within the domestic group were documented from the Peniel Mission. These artifacts consist of food remains, food storage items, food preparation and food service items, and beverage containers along with housekeeping, furnishings, and medicinal artifacts. A total of 20,463 artifacts was recovered in this group.

BEVERAGE BOTTLES

Beverage bottles, predominantly alcohol containers, comprise 31.04% of the 365 identified bottles and 9.35% of the bottle sherds. The west wall dump, which contained 25.42% of the bottles, produced a lower percentage of beverage containers than the south wall, with 30.00%, or the east wall with 37.50%. The post-1900 deposits along the west wall contained 47% alcohol containers. This apparent increase may be due to the stratigraphic mixing noted earlier since a number of the bottles date to the turn-of-the-century. The percentage of alcohol containers in the post-1900 deposit along the east wall is more the result of a small sample size (6 bottles) than an actual increase in liquor consumption.

Beer Bottles

Beer bottles comprise 10.17% of the west wall and 12.00% of the south wall dump. Although there were three breweries in Skagway during the gold rush—the Skagway Brewing Company, the City Brewery, and the Gambrinus Brewery—the identified bottles from the site are all containers for imported beers. Rainier Beer ran its own intermittent ads in the Skagway News and Daily Alaskan newspapers between 1897 and Prohibition. The Board of Trade Saloon offered Olympia Beer, both on tap and bottled; the Monogram Saloon served Rainier and Budweiser beers, in addition to Olympia; the Mascot Saloon stocked Budweiser, Val Blatz, Olympia, and Blue Ribbon beers at various times, in addition to the standard Pale Rainier Beer that was always available.

Identification of "export" beer bottle sherds excavated from the Peniel Mission are based on lip finish, neck styles, shoulder shapes, size contents, and base embossing. Amber beer bottles have a blob top, short tapered collar lip, or crown finish, and embossed glasshouse initials on the base. Firebaugh describes a blob top as a “blob of glass added to the severed neck, forming a pliable ring to which the lipping tool was applied. This type, called an 'applied top' or 'blob top' (as opposed to a blob type finish), can often be recognized by the presence of an uneven attachment between neck and finish.” Amber beer bottles display all of these attributes, while amber liquor containers do not. In addition, amber liquor bottles do not come in pint sizes, such as the bottles at the excavations. As with amber beer containers, aqua and pale green pint beer bottles have higher, more rounded shoulders, and a slight bulge at the neck that separates them from crown top, straight-sided soda pop bottles, as well as liquor bottles. Aqua and pale green glass bulbgy necks are also found on quart sized turn-mold cognac bottles, three-section mold brandy bottles, and two-piece mold beer bottles.

No rare apple green shades of liquor bottles, or other bottle container finishes were recovered, other than blob-top ale and stout bottles; therefore, all apple green glass sherds were classified as ales and stouts because olive green turn-molds are attributes of both ale/stout and champagne bottles. None of the olive green sherds could be identified as either ale/stout or champagne bottles without the presence of lip finish (blob top or applied band), or distinctive base (slightly convex or high kick-up).

The most common beer container found at the Peniel is a cylindrical bottle having a short tapered collared lip and the initials "A.B.G.M. CO." embossed on its base. This type of bottle was used by the Aldophus Busch Glass Manufacturing Company from 1886 to 1928 for the Anheuser-Busch Brewing Association's ORIGINAL BUDWEISER (Anheuser-Busch 1983:1). The bottle model was also sold to other producers who supplied their own labels.

Two cylindrical bottles used for ale or stout were found in the excavations. These bottles had been made in a turn mold with blob top finishes applied. Ale is a heavily bodied, hop-flavored liquor that ferments quickly under warm temperatures and contains a higher alcohol content than beer. Porter, similarly heavy bodied, is a malt liquor similar to ale (Anderson 1973:5). Apparently, during the pre-Prohibition era: "porter was bottled in England and imported, or prepared for bottling upon arrival"
(Baron 1962:59). As no business advertisements placed by local Skagway establishments promoted ale, porter, or stout, it is assumed that those bottles recovered came from Canadian sources.

A turn mold for producing these seamless bottles was patented by William Modes in 1887. "Turn mold" is the term applied by glasshouses to bottles (and later, to lamp chimneys) that are blown by the process of lining a metal mold with a slurry of carbon and water. Once paste lined, the bottle can be turned in the mold, eliminating all mold seams and leaving horizontal striations on the finished bottle. This technology was patented by William F. Modes in 1887 (U.S. Patent Office 39:1268). The applied blob lips found on these bottles are usually found associated with older bottles of the 1880s and 1890s, and it is unlikely that they were made past 1910. The bottles were found in the upper and lower strata along the south and west walls.

A minimum of two cylindrical amber bottles, having tooled crown tops and embossed with the initials "S.B.& G. CO./12," on the base, were recovered from the south and west wall dumps. This type of bottle was blown by the Streator Bottle and Glass Company between 1898 and 1907. Three amber and two pale green/aqua bottles, dating from 1890 to 1930 and having tooled lips or air vents around the shoulders, were recovered primarily from the earlier deposits around the building. Later bottles found at the site include one aqua automatic machine-made (ABM) crown top bottle with I.G. CO. on the base. This bottle, which was blown by the Illinois Glass Company between 1914 and 1929, was found under the builder's trench along the south wall.

Another automatic machine-made crown top bottle found at the site is embossed with an O around an 1 inside of a diamond-shaped symbol. Numbers embossed on the base indicate that this bottle was blown by the Owens-Illinois Glass Company in November 1936. The bottle was found above the brick dump along the east wall. One stubby beer bottle embossed with NO DEPOSIT NO RETURN on the shoulder and NW/652/58/12 was recovered from the upper strata along the south wall. This bottle was made by the Northwestern Glass Company in December 1958. There were also 22 sherds with Duraglas stippling, seven of which had NO DEPOSIT/ NO RETURN embossing, found along the south and west walls. Duraglas was adopted by the Owens-Illinois Glass Company in 1940. Two such sherds found in the south wall dump appear to be evidence of an undetected intrusion.

Liquor Bottles

In April 1898, there were 47 saloons and other establishments serving liquor in the gold rush town of Skagway. During that month, U.S. Customs agents "busted" 29 of these establishments for possession of smuggled liquor. Customs Inspector, L. C. Hartman, filed warrants for the illegal liquor, which was seized in bottles, jugs, and kegs. The liquor was then transported to the Customs seizure room in Dyea. In addition, one gallon of gin and one bottle of whiskey were seized on the Skagway Trail; and five kegs of whiskey were destroyed by Customs agents on the Dyea Trail (U.S. Customs Office 1898).

Liquor bottles excavated from various strata of the Peniel Mission dump reflect the drinking activities in Skagway from the gold rush era through Alaska Prohibition and its repeal. Prohibition was instituted in Skagway in 1916 and did not affect Canada, who did not participate in the prohibition. Most of the goods, including liquor, going into the Canadian Yukon at that time entered through Skagway. Almost certainly a part of the liquor was dropped off to be used for Skagway consumption. Hudson's Bay Company was the probable source for the liquor bottles excavated at the Peniel, with the exception of the whiskeys that came from San Francisco. Fifty-one liquor bottles and flasks, or 17.96% of the total bottles excavated are liquor containers.

Liquor bottles comprise 15.25% of the identified bottles in the west wall and 17.00% of the identified bottles in the south wall dump. The percentage of liquor bottles increases in the post-1900 deposits along the west wall (31.58%) but decreases in the later deposits along the south wall (10.53%). The high percentage of bottles along the west wall may be partially due to the mixing of the lower deposits, for many of the bottles from the upper strata date from the turn-of-the-century. A wide variety of liquor bottles was recovered from the site, including cognac, rye, and bourbon whiskey, gin, rum, and creme-de-menthe. Sherds of two citron-colored cylindrical cognac bottles, made in a turn mold with a basal kick-up, were found in Strata IV-w, IV-s, and VI-s.

Several varieties of whiskey containers were
found in the excavations. The most numerous of these types include three red amber bottles with tooled, tapered, collared lips. These bottles most likely were produced for Hiram Walker in the 1890s. Also found was a single bottle representing another type of red amber bottle, made between 1887 and 1910, with an applied brandy finish and 126/C embossed on the base. Two Dallemand and Co. rye whiskey bottles with tooled, double-collared lips, blown sometime between 1892 and 1920, were also present at the Peniel excavations. Sherds from these bottles were found in the upper and lower strata along the east and west walls. Another common type of whiskey container found at the excavations is a cylindrical amber bottle, embossed with Jesse Moore & Co. on the outside and having a tooled, tapered, collared lip. This company existed from 1896 to 1918. A tooled bottle with a tapered, collared lip, and Pacific Club / Cincinnati, O. embossing was also identified as a bourbon whiskey container. This bottle, which dates between 1889 and 1917, was found in the dump along the west wall. The upper strata along the east and west walls produced glass sherds embossed with FEDERAL [LAW] / [FOR]BID[S] [SALE] or RE[USE] [OF] THIS B[OTTLE]. After January 1, 1935, federal law required this embossing on all liquor bottles. A probable rum container is represented by a black glass cylindrical bottle made in a turn mold. The bottle also has an applied blob top. This bottle was manufactured between 1887 and 1900, although it was found in the upper strata of the dump. Seven sherds from an olive green case gin bottle were found in the upper and lower strata along the west wall and in the corner of the Peniel. This bottle, which is distinctive for the presence of shingle mold striations, dates from the 1890s. A brandy or gin bottle, recovered from under the house, has an applied tapered lip, a basal kick-up, and TBM33 embossed on the base. This bottle had been made in a three section mold sometime between 1870 and 1910. The bottle was found in Unit 35, level 4, possibly indicating that the lower deposits under the house are equivalent to the dump. Perhaps the most unusual liquor bottle found at the Peniel is an emerald green creme de menthe bottle with an applied single band, collared lip. The liqueur was made by E. Cusenier Fils Aine and Compagnie based in France, Germany, and Belgium.

Eight liquor flasks were recovered, three of which are pumpkin seed flasks with tooled, tapered, collared lips that date from 1888 to 1916, and two of which are coffin (shoo-fly) flasks, also with tooled, tapered, collared lips, but dating as early as 1888 and presuming to end between 1916 and 1920 with the beginning of Prohibition. This bottle type may have continued to be used for extract containers until as late as 1930. Three rectangular eagle flasks with straight-sided bodies were also found. Two of these flasks, one with a tooled, tapered collared lip and the other with screw-threaded lip, date from 1890 to 1917. The third eagle flask has a tapered collared lip and is embossed with an M inside of a circle. This symbol was the trademark of the Maryland Glass Company of Baltimore, which remained in business until 1971. This type of bottle, which was blown between 1907 and 1917, was used for whiskey, extracts, and Jamaica ginger. Adams (1977:48^-49) reports that fruit pickers working at Silcott, Washington, drank Jamaica ginger as a liquor substitute during Prohibition. It is quite likely that this flask also functioned as an alcohol container. This bottle was found in Feature 12 just above the streambed, possibly indicating that the dump was still being used well into the twentieth century.

Three pale green cylindrical bottles with applied brandy finishes, basal kick-ups, and C.S. & CO. LD./3738 embossed on the base are either wine or liquor containers. The bottles, which date from 1875 to 1918, were found in the south wall dump, the intrusive Stratum IV-s, and the upper layers along the west wall. Eighty sherds, representing a minimum of seven champagne or wine bottles, were found scattered through almost all the strata around the house. These olive green containers with basal kick-ups had been made in a turn mold. Turn mold bottles were most popular between 1880 and 1919 (Munsey 1970:40), but the mold may have been used longer on champagne bottles. Champagne shapes have remained the same since the mid-nineteenth century, although the lip finish has changed from being applied to machine made. The interior residue coating of laundry blue (or blue ink) on one pint champagne bottle recovered from Stratum VI-s suggests either reuse of the bottle, or this type of bottle was used to hold other products, in addition to champagne. Lip finishes on the champagne bottles recovered indicate that all of them had been made with tooled lips. A C. H. Mumm lead seal excavated in Unit 67 is probably associated with one of these
champagne bottles. A more recent wine bottle found at the site is embossed with the letters, Gla_. The bottle, which is emerald green with an automatic bottling machine ghost seam, was blown by the Owens-Illinois Glass Company in 1936.

Soda Pop Bottles

Only three soda pop bottles were identified in the collection, including: (1) a Hires Root Beer bottle with a tooled crown top found in the south wall dump; (2) a Nesbitt's Orange soda pop bottle found in Unit 150, and (3) an unidentified amber bottle embossed with the letters, NON-A_, in a circle around the letter T_, recovered from Stratum IV-w. The HIRES IMPROVED ROOT BEER brand name was first used in 1878 for packaged roots and herbs (U.S. Patent Office 15:446). Household extracts in small, square aqua bottles were first produced for Hires in the early 1880s. The Hires Root Beer beverage was first bottled in soda pop bottles in 1893 by the Crystal Bottling Company (Riley 1958:117&126). In 1894, Hires Improved Root Beer was marketed in bottles bearing a blob top, pictured in Munsey (1977:14). Between 1894 and 1897, Hires adopted the crown top, as shown in a full page ad reproduced in Munsey (1977:15). West coast franchises were issued to Cammarano Bottling Works, which embossed their Hires bottles with the name "Paradise Club" on the shoulder, and the Shasta Water Company, Incorporated, of Seattle (Fowler 1988b). Machine-made bottles were made for both franchises in the late 1920s through the early 1930s. Charles E. Hires Company's primary business in the 1890s was the production of condensed milk, eight brands of which were trademarked by the U. S. Patent Office. A century later, in 1980, Proctor and Gamble of Cincinnati purchased the Hires Company (Rider 1988).

Nesbitt's Orange Crush was introduced in 1924 (Riley 1958:264). It was first bottled on the Northwest Coast during the 1950s in Tacoma, Washington (Fowler 1986:181). This dark amber, stippled bottle is a type manufactured specifically for Nesbitt's Orange Company during the 1950s.

FOOD REMAINS

Food remains from the excavations include fruit pits and nut shells and faunal remains of bone, shellfish, and eggshells. Fruit tree pits from the genus Prunus--species plum, cherry, and peach--are represented. Two types of walnut shells belonging to the genus Juglans--California walnut and English or black walnut--were recovered. Pecan (Carya illinoensis), a native of the southern United States; Filbert or Hazelnut (Carylus maxima), of Eurasian origin; and Brazil Nut (Bertholletia excelsa), a native of tropical South America, were also recovered from the mission. Fragments of one peanut, descended from a tropical vine fruit (Arachis hypogaea), completes the vegetal artifact assemblage. A total of 178 seeds and seed fragments combined to make up a minimum number of 100 seeds, adjusting for halves of shells and fragments found in the same layer. The inventory of seeds and seed fragments found in the dump deposits and upper strata is shown in Table 8.

Table 8. Inventory of seeds and seed fragments collected from the dump deposits and upper strata of the site (W = whole seed, H = half seed, F = fragment, MNI = minimum number of individual seeds).

<table>
<thead>
<tr>
<th></th>
<th>W</th>
<th>H</th>
<th>F</th>
<th>MNI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plum</td>
<td>17</td>
<td>4</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>Peach</td>
<td>23</td>
<td>25</td>
<td>24</td>
<td>50</td>
</tr>
<tr>
<td>Cherry</td>
<td>5</td>
<td>-</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Cal. Walnut</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Eng. Walnut</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Pecan</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Filbert</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Brazil Nut</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Peanut</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unidentified</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Clustering of fruit seeds and nut shells was evident in Unit 23, Strata II through VI, with a majority of peach pits in Stratum II. An assemblage of three plum pits, three peanut shell fragments, one cherry pit, one pecan shell fragment, and three fragments of an English walnut was found in Unit 35, Level 5.

Eighteen fragments of unidentified bivalves were recovered, probably clam fragments of Saxidomus giganteus or Prothochara staminea. Twelve fragments of Saxidomus g., one fragment of a Prothochara s., and one abalone (species not identified) were present. All of these species are native to Alaska waters and were formerly available in Skagway Bay.

A total of 2,348 bone and tooth remains was recovered from the site. The basic identifications of the remains are categorized in Table 9.
Table 9. Inventory of faunal remains.

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land mammal, butchered</td>
<td>337</td>
</tr>
<tr>
<td>Land mammal, fractured</td>
<td>1584</td>
</tr>
<tr>
<td>Bird</td>
<td>197</td>
</tr>
<tr>
<td>Fish vertebrae</td>
<td>22</td>
</tr>
<tr>
<td>Rodent tooth</td>
<td></td>
</tr>
<tr>
<td>Unidentified</td>
<td></td>
</tr>
<tr>
<td>Unidentified tooth</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2,348</td>
</tr>
</tbody>
</table>

In addition, nine eggshell fragments were present at the site. A bone layer, Feature 12, was recorded in Units 69.VI, 70.VI, 71.VI, and 86.V, in which a total of 1,107 of the bones, two of the eggshell fragments, and eight of the clamshell fragments were clustered.

FOOD STORAGE

Food storage remains comprise 38.13% of the total domestic artifacts collected from the site. The south wall dump contained 30.31%, whereas food storage remains comprised 58.14% of the domestic artifacts found in the west wall. The percentage of this class dropped in the upper strata along both walls. This class is predominately composed of cans, particularly those items found along the west wall where there was a concentration of 4,637 can fragments. When these are removed, the food storage class comprises only 14.31% of the south wall and 3.15% of the west wall domestic artifacts in the dump. Food storage containers documented from the Peniel Mission include canning jars, culinary bottles, tin can fragments and parts, jar lids and rings, and candy wrappers of aluminum foil and plastic wrap.

Canning Jars

No whole canning jars were recovered from the Peniel Mission 1987 excavations. Based on the mended embossed jars, lip, and base counts, a minimum of 17 jars had been discarded. All three glass manufacturing technologies developed during the 1880-1930 period (off-hand blown, machine-made-with-a-tooled-finish, automatic machine made) were represented; thus some beginning dates of the later machine-made jars could be determined. Except for the mold-blown PUTNAM'S LIGHTNING jar, which took an entirely different closure of metal bail and glass lid, all lids for the off-hand blown and machine-made-with-a-tooled-finish jars were represented, though not articulated. Automatic machine-made BALL PERFECT MASON jar metal lids or bands were not recovered.

In isolated areas, canning jars are dear commodities seldom disposed of until broken, their lips chipped so that they would no longer seal, or their closures obsolete and no longer available. It appears that in case the off-hand blown and machine made with a tooled-finish jars had accidentally broken, or had exploded during the canning process, their closures were retrieved, rather than discarded. In contrast, the machine-made BALL PERFECT MASON jars, which had no closures represented, were probably discarded because of breakage; and their lid bands were most likely recycled into use.

Shattered jar fragments clustered in two areas of the Peniel site (Units 68/69 and 23/24), along with associated closures, suggesting several types of activity and dating information. The stratigraphic mixing of both the fragmented, early blown and machine-made-with-a-tooled-finish jars with the machine-made jars (minus lids) suggests that they were dumped out together in one single "spring house cleaning" event, likely in the 1930s or 1940s. (Some types of lids and sealers became scarce during WWII [ca. 1941 to 1946].) The deposition suggests also that these areas of the Peniel were intruded upon after the canning jars had been dumped, and that some of the soil/dump from Units 68 and 69 had been removed to an area some 15 to 20 meters away (Units 23 and 24), probably sometime after 1930.

Skagway's local grocer, Ganty and Frandson, advertised as the distributor of: "Fruit jars, jelly glasses, jar caps, rubbers and paraffine" during the early 1900s (The Daily Alaskan, August 16, 1909).

At least two canning jars recovered from the site are embossed with BALL in script positioned diagonally over MASON. One of the jars, a pale green quart jar with semi-automatic screw threads, smooth lip, and a shoulder seal, was blown between 1897 and 1909. The second jar, a deep aqua pint jar having screw threads, smooth lip, and a shoulder seal, was made in an automatic bottling machine between 1909 and 1917. Both these jars were found in Strata VI-s and VI-w, indicating that the early dump was later than previously thought. Frank C. Ball, founder and president of the Ball Brothers Glass
Manufacturing Company, patented the semi-automatic fruit jar blowing machine in 1898 (Ball 1960:23). This patent was assigned by Frank C. Ball to the Ball Brothers Glass Manufacturing Company. In 1909, Ball Brothers obtained a license to manufacture Owen's automatic machine-made jars (Scoville 1948:105). The embossing Ball Mason, changed to Ball Perfect Mason in 1915 (Peterson 1985:39). At least one quart jar embossed with the BALL PERFECT MASON name is represented by 103 sherds found scattered in the dump and upper strata along both walls of the excavation.

Two GEM jars, one quart and one pint size, each with a ground lip, screw threads, and a top seal, were found in the dump deposits along the south and west wall and the upper deposits along the west wall. These jars were blown between 1875 and 1909 in the Burlington Glassworks of Hamilton Canada, who purchased the rights to produce jars from the Hero Fruit Jar Company. One LIGHTNING pint jar was recovered from the west wall dump. The jar, which has a metal bail, was produced by the Clayton Glassworks of Clayton, New Jersey between 1882 and 1905.

At least one quart and one pint jar, each embossed with the name, MASON'S/ PATENT/ NOV.30th/1858, were recovered from the upper and lower deposits along the west wall. The production of these jars, under the original patent of John L. Mason, has a complicated history involving at least seven glass companies. When the patent expired in 1879 (U.S. Patent Office 14:269), most fruit jar manufacturers in business at that time not only appropriated the November 30, 1858, date, but also the Mason name, which had become generic (U.S. Patent Office 16:679). These jars were made with a ground lip until about 1910. One recovered jar with the 1858 patent date is embossed with C.F.J. CO. marking, the trademark of the Consolidated Fruit Jar Company. This company was apparently owned by John L. Mason, who produced these jars between 1877 and 1909.

In addition to the MASON'S/PATENT NOV.30th 1858 embossing, three jars also bear the mark, C.F.J. CO. inside a Hero Cross, the trademark of the Hero Fruit Jar Company, which produced these jars from 1892 to 1918. Two additional Mason's 1858 Patent jars found in the dump, produced by the Mason Fruit Jar Company between 1885 and 1900, are embossed with a keystone (Creswick 1987:143, 144). Sherds of a Boyd's Porcelain Lining/Mason Fruit Jar Company milk glass liner were retrieved from Unit 44. Such liners, made to accommodate metal screw caps, were also produced by the Mason Fruit Jar Company for the keystone jars (Creswick 1987:143). Three other liners made under Lewis R. Boyd's 1869 patent were also recovered, two of which were made by the Hero Glass Works between 1883 and 1918.

The dates of the canning jars found in the lower strata of the dump indicate that dumping activities continued at the Mill Creek into the twentieth century. The majority of the bottles were found in the upper strata, however, suggesting that the later bottles may have been mixed into the lower deposits. It is unlikely that the miners would have been carrying the jars across the pass. Thus, it seems possible that these jars were deposited sometime after the initial stampede. On the other hand, the canning jars could well have been deposited during the gold rush by the commercial section of Skagway. The contributors included not only the families of merchants, but also the restaurants and other food-serving businesses in town.

Nine jelly jars were recovered from various strata along both the south and east walls. Eight of the jars, representing seven jar types, display the Sure Seal lip that was first produced in 1908. Four of the jars were made for food packers who sold them for reuse as tumblers. Companies associated with these jars are: (1) the Kerr Glass Manufacturing Corporation and Ball Brothers Glass Company, both of which have produced a ribbed jelly jar from 1930 to present; (2) the Squire Dingee Company, who marketed Banner Jelly in a plain jar; and (3) Ripley and Company, who distributed its goods in a glass jam jar/bucket. The remaining jar is a Giles Jelly jar, bearing a lead seal lip that would hold a rubber gasket. This item was made by the Dominion Glass Company LTD. of Montreal between 1913 and 1925. All of these jars were produced after 1908, and all were found in the early dump levels, suggesting that the dump was used well into the 1900s.

Culinary Packer's Bottles

A total of 56 bottles used for food products was recovered from the dumps. The bottles represent 21 products including extracts, ketchup, salad dressing,
mustard, onions, pickles, and malted milk, among others.

Five olive oil bottles and two olive jars were found at the site. These containers include two cylindrical bottles with tooled, single-band-collared lips and leg-shaped necks. The bottles, which are embossed with the BRANDENBURG FRERES/BORDEAUS trademark, were blown for William Randolph of San Francisco and Brandenburg Freres of Bordeaux, France, between 1880 and 1930. The bottles, which are somewhat crude, due to the lack of air venting, were most likely made in France and imported to the United States for filling and labeling near the California olive orchards. Two cylindrical CASTLE'S CREAM OLIVE OIL bottles with applied tapered lips and one vertically-ribbed cylindrical EPICUREAN olive oil bottle with a tooled, tapered lip were also found in the excavation. The latter was distributed by Crosse & Blackwell of England between 1886 and 1924. The Castle's Cream bottles were found in Strata II and V in the southeast corner and in Stratum VI-w, whereas the Epicurean bottle was recovered from Stratum VI-5. In addition, an unidentified olive container with a tooled, slightly flared lip was found in the dump deposits. The upper strata produced a wide-mouthed cylinder that used to contain SUFFOLK BRAND olives packed by S.S. Pierce Company of Boston, and an H.J. Heinz Co. olive bottle that had been made in an automatic bottling machine between 1909 and 1910.

Condiment containers found in the dump levels consist of mustard, ketchup, relish, and Worcestershire sauce bottles. Three mustard containers found in the dump deposits include a squat wide mouth cylindrical jar, made by the pre-machine-made Arborgast process for the Charles Gulden Company between 1893 and 1909, and two Charles Gulden mustard barrels with tooled, single-band collared lips that were manufactured between 1884 and 1909. Barrel-shaped containers for mustard were in the public domain by the 1850s and continued in popularity until the automatic bottle machines standardized a plain container. Charles Gulden patented a metal-hinged cap for this variety of mustard barrel on May 1, 1884 (U.S. Patent Office 23:1657). Hazel Atlas Glass Company, who produced machine-made mustard barrels for Gulden, installed automatic bottle machinery in 1909 (Scoville 1948:105). Another possible mustard container found in the dump consists of a wide-mouthed jar with a tooled single band collared lip and DODSON-HILS MFG. CO. embossing, manufactured between 1890 and 1898 (Zumwalt 1980:121).

Three ketchup containers were recovered from the dump deposits at the site. A cylindrical bottle with tooled screw threads and ribbed shoulders and heel found in the dump once contained BLUE LABEL ketchup, bottled by Curtice Brothers Company from 1888 to around 1929 (Zumwalt 1980:101). Another cylindrical ketchup bottle with tooled screw threads contained SUNNYSIDE ketchup, produced by T. A. Snider Preserve Company from 1900 to 1923. The T. A. Snider Company was established in 1879 in Cincinnati, Ohio, and Milldale, Kentucky (Zumwalt 1980:388). After its incorporation June 1884, the company maintained offices in Cincinnati and Chicago through 1923, when it changed its name to the New York Canners of Albion, New York. In 1928, the name was changed back to the Snider Packing Company, which remained its name until 1943 (Creswick 1987:196). Eventually the company became a part of Hunt-Foods, Incorporated, in 1952. The third ketchup bottle found in the dump has a tooled, tapered collared lip that was blown by the Dominion Glass Company of Montreal but bears no markings to identify the ketchup producer.

A total of five relish bottles were found in the dump, including an emerald green, wide mouth jar with a tooled, rolled lip and a vertically ribbed neck and heel that was manufactured to hold OLIVETTE olive and pepper relish, bottled by the Seville Packing Company from 1897 to around 1906 (Zumwalt 1980:371). Three salad dressing bottles with tooled screw threads and E. R. DURKEE & CO. embossing were also recovered. These bottles have an Arborgast mold seam around the shoulders of the bottles, indicating that they were manufactured after 1893. Marketing of E. R. Durkee salad dressing began in 1857. The company was purchased by Glidden Paint Company in 1929 (Federation of Historical Bottle Clubs 1988:15). One unembossed and unidentified relish jar was also found in the dump levels.

A minimum of two LEA AND PERRINS WORCESTERSHIRE sauce bottles, and two glass stoppers were recovered from the south and west
wall dumps and Stratum IV-w. This variety of bottle, with tooled club sauce finish lips and air vents, was blown between 1881 and 1921. Lea and Perrins was imported by John Duncan and Sons of New York and bottled in containers blown by the Salem Glass Works (Switzer 1974:79; Zumwalt 1980:269). The neatly finished bottles found in the dump may have been made as early as 1881, when Salem Glass Works first obtained the process for air venting bottles (Tyson 1971:29). In either 1920 or 1921, embossing of Worcestershire sauce bottles was discontinued (Zumwalt 1980:269).

At least seven extract containers were found in the dump levels along both the south and west walls. The most common kind found includes three squat cylindrical pots with wide mouths and slightly rolled lips, found in the dump levels. These pots were manufactured for the REX extract of beef, bottled by Cudahy Packing Company. A fourth Cudahy extract pot was found in a disturbed area along the south wall of the building (Figure 30*ad).

Originally a partnership of Armour-Cudahy Packing Company of Omaha, formed in 1887, the Cudahy Packing Company began independent operations in 1889-1890 (Zumwalt 1980:100). Cudahy produced powdered soap and glue as well as meat products during the late 1890s. A full line of Cudahy meats was available from Lily Brothers distributors, including "wholesale dealers in flour, raisins, figs, dried fruits, cereals, salt, etc." on Bond Street (later 4th Avenue) in Skagway during the Klondike Gold Rush (Daily Alaskan, July 2, 1898).

A rectangular bottle with indented front and side panels and a tooled, single-band collared lip found in the dump once contained GILLETT’S HIGH GRADE EXTRACT, a product bottled by Egbert W. Gillett from 1880 to around 1902 (Zumwalt 1980:172). Another rectangular bottle with an indented panel and a tooled, flared lip that once contained CRESCENT...FLAVORING EXTRACTS, bottled by Crescent Manufacturing Company of Seattle sometime between 1899 and 1901 (Figure 31).

Eleven jars and one lid recovered from the dumps along both the south and west walls had been used to contain whole foods. The most common jar type found in this location is an unembossed octagonal container with a tooled flared lip, a sealing ledge, and a ring around the neck for a wire clamp (Figure 32). Jars and lids in this category were made by the Pennsylvania Glass Company between 1897 and 1922 (Creswick 1987:192). John Schies registered the wire clamp on December 14, 1897, Design No. 28,026 (U.S. Patent Office 81:1922). A knobbed lid for this jar was also recovered.
Another Schies jar with vertically ribbed heel and shoulders and an internal seal ledge was found in Stratum VI-s. This bottle, which had once contained pickled pearl onions, was blown by Kearns-Gorsuch Bottle Company between 1901 and 1929. A pickle jar blown by H.J. HEINZ COMPANY was found in the west wall dump. This wide mouth jar, which was blown between 1891 and 1909, is twelve-sided with H.J. HEINZ CO./PATD JUNE 9, 1891, embossed on its base. Heinz, Noble and Company began in 1869 and lasted until bankruptcy forced closure in 1873. The company was then reopened as F. & J. Heinz (1873-1888) by Frederick, John, and Henry Heinz, becoming H. & J. Heinz Company in 1888 (Zumwalt 1980:203). The design of the pre-machine made bottle was registered in 1891. On 19 July 1909, Henry J. Heinz was issued a license to produce his own food product bottles and jars on Owens' automatic bottle machines (Scoville 1948:105).

Another possible pickle or relish jar was found in the west wall dump. This jar, which has a wide mouth and a tooled, single-band collared lip, was blown between 1890 and 1930. Two maraschino cherry containers, blown by AUSTIN NICHOLS AND COMPANY, were also found. One of the bottles, collected from Stratum VI-s, is a tapered cylindrical bottle with a tooled, flared lip, made between 1896 and 1930. The other container, recovered from VI-w, is a clear selenium bottle with a rolled lip, blown between 1911 and 1930. Three unembossed widemouthed packer's jars, two of which are products of the Arborgast machine and the third jar displaying a tooled, rolled lip, were also recovered.

Two milk bottles—a manganese wide mouth bottle with a tooled, rolled lip and an internal ledge and a selenium glass, wide mouth bottle made in an automatic bottling machine—were also recovered. These bottles were patented by John D. Miller in March 1899. His bottle design became the popular cylinder container for milk bottles through the 1950s. Bottles decolorized with manganese were replaced by selenium glass between 1911 and 1930 and were generally discontinued after 1917.

Two HORLICK'S MALTED MILK bottles, produced by James and William Horlick of Wisconsin, were also found. One of these, an aqua 1 ½ pint bottle, has a ground lip, and screw threads. The other bottle had been produced in an automatic bottling machine. James and William Horlick patented the formula for malted milk in 1873 (U.S. Patent Office 7:828-829). The base of the ground-lip Horlick jar from the Peniel bears the W. T. CO. trademark of Whitall, Tatum Glass Company of Millville, New Jersey, first used in 1901. Before 1901, the firm was registered under the Whitall, Tatum and Company name with the trademark, W. T. & CO (James 1967). The base of the machine-made aqua Horlick jar is plain. The machine-made jar type was apparently still manufactured by Whitall, Tatum and Company in 1912, when they began to produce machine-made packer's ware (Davis 1949:129). Aqua Horlick jars were replaced by clear, selenium glass jars having an H/A trademark on the base. This trademark was registered as TM No. 185,619 by Hazel-Atlas Glass Company of Wheeling, West Virginia in 1924, although it was already in use by 1923. In 1901, a pint jar of Horlicks cost 45 cents, and a 1 ½ pint jar cost 85 cents (T. Eaton Co. 1970:117).

The remaining identified food bottles from the site include four Pacific Coast Syrup Company bottles, found in the dump levels along the south and
west walls, in Stratum IV-s and in the upper strata along the west wall. These cylindrical wide mouth jars, made to contain TOBOGGAN syrup, have tooled, rolled lips, an interior seal ledge, and air vents. A wide mouth packer's jar, embossed with LOT(G'S)/CALIFORNIA/P(RESERVES) on its base, was manufactured by H. C. Long Syrup Refining Company between 1896 and 1917.

Cans
Can fragments were found clustered together with a heavy concentration of bone fragments, scattered over a four-square-meter area at the south end of the west wall. Both the bone and can remains are in an extremely deteriorated state. Some of the cans along the west wall may have contained goods other than food products. These can fragments were highly corroded and mostly unidentifiable, with only one label fragment preserved from the lot. Substances adhering to the cans were noted, such as paint, making it possible to classify all the can fragments in this area with domestic artifacts, except for paint containers and oval can fragments that appear to be tobacco cans. Some 3,957 fragments could be classified by shape as components of cylindrical cans, and 2,483 shapeless pieces are unidentifiable. A total of 216 can fragments represents at least seven rectangular cans having teakettle spouts and oval handles. Complete specimens of this can type found on the Chilkoot Trail were previously identified as gallon-sized syrup cans (Gurcke 1988).

All cylindrical can seams in the Peniel collection are crimped, and the can tops have hole-in-the-top seals. Can seam crimping, a machine technology invented by John West of Westport, Oregon, for the purpose of filling cans with salmon, was in use as early as 1882 (Hittell 1882:433). One labeled coffee can found can in Unit 84, adjacent to Feature 16 (Figure 26), is associated with two fragments recovered from Unit 69, Stratum VI. The rectangular can(s), with threaded caps, probably represent container(s) for kerosene, or other utilitarian contents rather than syrup. The can key design, by Tunis L. Collins of Berwyn, Illinois, was registered with the U. S. Government Patent Office on April 24, 1900, as Design 32,579 (U.S. Patent Office 91:808). This invention was assigned then to the Anglo-American Key Company, Ltd., of Chicago, Illinois.

Among the other can and jar closures, a metal screw-threaded can lid was recovered from Unit 67.VII. Four fragments of a jar lid rubber and two fragments of a jar lid ring were found in Units 66.V and 21.IV respectively, not associated with each other, nor with glass canning jar sherds. Two fragments of a one piece metal screw-threaded jar lid were found in Unit 45.IV, probably associated with remains of a Mason's/Keystone/Patent Nov. 30, 1858, canning jar also found in this area.

Aluminum foil was deposited only in the upper levels of the excavation. Aluminum foil was first produced commercially for wrapping tea, candy, gum, and cigarettes in the 1920s (Sacharow 1978). Approximately 50 badly crumpled fragments of a thin, food or product type wrapper were recorded. Candy wrappers of recent manufacture were also registered with the U. S. Patent Office on June 27, 1899, as TM 33,132 (U.S. Patent Office 87:2318). Portland Packing Company claimed use of this specific trademark beginning in 1897. Wholesale grocers and coffee roasters, Schwabacher Brothers & Company, Incorporated, of Seattle, advertised Gold Shield Coffee in the Skagway city directories for the years of 1903 and 1905-1906. The Skagway R. L. Polk directory for 1905-1906 advertises: "Gold Shield Coffee—the Coffee that's ALWAYS good, Guaranteed by Schwabacher Bros. & Co., Inc. (Polk 1903-1915). Apparently, Schwabacher Brothers were distributors of Gold Shield Coffee for the Portland Packing Company. (When the ship, Portland, carrying a ton of gold arrived in Seattle to set off the gold rush on July 17, 1897, it docked at Schwabacher's Wharf.)

Closures
Fifteen can keys and two can caps with rubber gaskets were found associated with can fragments in the excavation. The can caps, along with 28 rectangular can fragments, were retrieved from Unit 69, Stratum VI. The rectangular can(s), with threaded caps, probably represent container(s) for kerosene, or other utilitarian contents rather than syrup. The can key design, by Tunis L. Collins of Berwyn, Illinois, was registered with the U. S. Government Patent Office on April 24, 1900, as Design 32,579 (U.S. Patent Office 91:808). This invention was assigned then to the Anglo-American Key Company, Ltd., of Chicago, Illinois.

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found in the upper levels. The VANILLA/FUDGIES name is printed in red on an aluminum foil wrapper obtained from Unit 67.11. The name, BRACH'S, appears printed in orange on a clear plastic wrapper found in Shovel Test 3. These wrappers are both recent discards.

Bottle caps and stoppers, liners, and seals (other than glass) accounted for 48 of the artifacts recovered from the 1987 Peniel excavations. The remains of nine crown cap closures scattered throughout the excavated areas were identified. The crown cap was invented by William Painter of Baltimore, Maryland, in 1889 under Patent No. 468,258, filed June 16, 1890, and registered February 2, 1892 (U.S. Patent Office 58:535; Riley 1958:258). One "spot crown"—a circle or dot of aluminum that formed a barrier between the cork seal and the contents of the bottle—was found in Stratum II of Unit 68. The spot crown was first used in 1916 (Lief 1965:25-26).

Five complete cork stoppers were found at the Peniel, ranging from a large, knobbed-top stopper from Unit 23.VI to a very small medicinal cork associated with a ½ pint stopper and a one quart cork stopper in Unit 85.VI. Five cork stopper fragments and one other quart stopper were excavated from Unit 45.VI.

Three conventional screw-threaded caps and one screw thread cap cast were present in the excavation. The conventional screw thread first was produced in the United States in 1924 (Lief 1965:27). The screw thread cast, from which the original ferrous metal cap had deteriorated away, was recovered from Unit 45.VI. A quart-sized metal cap was recovered from 67.VI, and a ferrous metal cap with lead and cork liner from a pint or larger size bottle was found in the Unit 68 builder's trench. A small orange plastic cap of recent origin was found on the surface of Unit 67.1.

Two fragments of a brilliantine-plated lead cap with screw threads came from Unit 86.V. The fragments, which may be part of a liquor flask cap, predate the conventional screw-threaded closures. A small brass cap, also fitting a pre-machine-made bottle, was found in Unit 86.V. A complete thimble-shaped cap apparently fit a flask type bottle found in Unit 73.IV. This cap, which has no threads, probably once had a cork liner.

Fragments of other unidentified stoppers came from Unit 23.II, including a metal cap with a paper and cork liner. One fragment from 68.VI has a paper lining. Fragments of two other caps were noted in Units 70.VI and 74.VII.

Liners found at the site but not associated with bottle cap remains were manufactured of rubber, paper, cork, and paper-cork. A wax paper liner from Unit 19.VI may be associated with a fairly modern wine bottle screw cap from the same provenience. This cap is brilliantine plated, with printed leaves and fruit inside a circle on the top.

Lead seals, five of which are embossed liquor bottle wrappers, were associated with glass containers and are described below. Two of the liquor bottle seals, found in Units 47 and 68.VI, are embossed in black on yellow with the words, HIRAM WALKER &/SONS/LIMITED, in a circle. This seal is associated with a Crown/W inside a Shield brand, trademarked by Hiram Walker & Sons, Limited, of Walkerville, Canada.

A champagne wine lead seal also found at the site is embossed with the name G. H. MUMM. This brand was trademarked in 1882 by the G. H. Mumm Company of Rheims, France. The brand, CROWN MFG ___/SAN___ around a Crown, appears on a gold tone, lead seal fragment from Unit 67.VI. This seal belongs to a cocktail liquor bottle distributed by the Crown Distilleries of San Francisco, New York, and Cincinnati. The company was owned by Ernest R. Lilienthal of the Bernheim Distillery of Kentucky. The Crown brand, registered on July 24, 1900, as TM 34,940, had been in use since August 1893 (U.S. Patent Office 92:781). The Old San Francisco Directory of Liquors: Wholesale & Importers 1865-1919 lists the Crown Distilleries in various locations within the city from 1893 through Prohibition (McGuire 1967:8).

The monogram of a Crown above a Shield/DC Co inside a shield appears on a lead bottle seal fragment from Unit 67, Feature 12. This design is a brand of the Dallemann Company, Incorporated of Chicago. Dallemann whiskey bottles are amber, cylindrical or rectangular, with ribbing around the shoulder and heel. This bottle type was designed by Max Oberfelder of Chicago and was registered on April 26, 1892 (U.S. Patent Office 59:625). The brand name appearing on the seal was registered as TM 21,237 on May 31, 1892 (U.S. Patent Office 59:1430). Fragments of a miniature, sample-sized
Dallemand whiskey bottle were also recovered, but no accompanying seal was found.

Two gold-tone, flashed lead bottle seal fragments were excavated from Unit 68, Stratum VI, and three rather large unembossed lead seals, probably from wide mouth packersware jars, were found in Units 66.V, 67.II, and 68.VI. The lead seal from Unit 66.V is attached to a large cork stopper.

Pull tabs from beer cans were found in Unit 84.III and Shovel Test 4. These metal tabs, developed by Alco Aluminum in 1962, were first used by the Pittsburgh Brewing Company of Pennsylvania (Anderson 1973:58). Pull tabs were not commercially produced until 1963, but by 1965, 65% of all aluminum beer cans had pull tabs (Beer Can Collectors News 1985:22). No pull tab aluminum beer cans were excavated from this site.

FOOD PREPARATION

Fourteen food preparation items in various stages of preservation were identified from the excavation. These items include kitchen utensils not generally discarded unless damaged or unusable. None of the items are electrical appliances.

Three of the items found are manual food grinder parts. Two blades, one each from Units 19/4.VI and 68.III, appear to be unrelated, having been found on opposite east and west sides of the Mission building in different strata. A food grinder core found in 66.VI also appears to be unrelated to the blades.

A blue graniteware coffee pot, 5 inches (12.4 cm) high and 4 inches (10.0 cm) in diameter, was found associated with parts found in Units 66.VI and 67.VI. A hollow, rectangular-shaped handle, manufactured with crimped seams, is riveted onto the sides. Another blue graniteware item, found in Unit 23.VI, consists of a circular cake or milk pan, 8 inches (20.0 cm) in diameter, with a rolled rim. One pot lid of grey graniteware was recovered from Unit 70.VI. The pot lid measures 8.3 inches (21.0 cm) in diameter and has a center hole for a separately attached, knob-type handle, which is missing. This lid may be associated with a pot handle found in Unit 69.VI. The handle is 9.5 inches (24.0 cm) in length and has an opening at the end for hanging. A large, curvilinear fragment, 43.0 cm long, of a ferrous metal pot was found in Unit 45.VII. This incomplete pot is approximately 9.8 inches (25.0 cm) in height and has a rolled rim and crimped seams.

One butcher knife, in a highly deteriorated condition, was excavated from Unit 66.VI in possible association with the food grinder core. This steel knife is 9.4 inches (23.8 cm) in length, without the tip, which is broken off. The handle is partially covered with remnants of wood that are riveted in place.

A cup-sized aluminum Jell-O mold, with the JELL-O emblem embossed on the base was retrieved from the post hole in Unit 71.IV. This mold is circular in design with six horizontal rings and tapers in size from the top, which measures 8.0 cm in diameter, to the 0.8 inches (2.3 cm) bottom. One chrome-plated punch-type can opener was found in Unit 68.III. This can opener is not the "Church Key" style, first produced in 1935 by the American Can Company, but the style that has a lever blade beneath the punch blade. This type of opener was more generally used for opening condensed milk cans.

Sherds of three stoneware crocks or possible butter churns were recovered from Units 23, 44, 45, 66, and 67 along the south wall of the Builders Trench. Twelve associated sherds of a grey exterior, salt-glazed crock with a brown interior glaze were recovered. The sherds were identified as the remains of a wheel-thrown pot, 3.2 inches (8.2 cm) in diameter at the mouth, with a band around the lip. The height of the crock is undetermined. One sherd of a cream-glazed, stoneware crock from Unit 67, Feature 12, may mend with 95 sherds from Unit 23.VI. However, the large number of these sherds made it impractical to mend, given the time constraints. Sherds of a crock having a brown exterior glaze and a metallic green interior glaze were located in Units 23.VI, 44.IV, 44.VI, and 45.IV. The crock may have been deposited in the Stratum VI dump and had been mixed into the Stratum IV intrusion. Although none of these sherds mended, they may be from the same item.

A biscuit bird figurine (Figure 33), known as a "pie bird," was recovered from Unit 21/2.III. The bird is slip-cast molded of white biscuit with remnants of pink colored hand painting. The figure measures 2.5 inches (6.4 cm) long (missing part of the tail) and 1.3" (3.3 cm) tall (missing the stem). These bird figures, used to let off steam from the pie during baking, were inserted into the middle of the
The hot steam caused the bird to whistle.

Figure 33. Biscuit bird figurine.

**FOOD SERVICE**

Food service housewares found at the Peniel include pressed glass tableware, flatware, sugar tongs, ceramic tableware, a folding cup, and plastic cup fragment, and drinking straws. Table 10 shows that drinking glasses make up the largest category of glass tableware, followed by bowls. Tumblers comprise the largest group of drinking glasses found at the site, with a total of eight of these tumblers found in the dump.

Table 10. Inventory of glass tableware.

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<th>ITEM</th>
<th>MINIMUM NUMBER</th>
<th>SHERDS</th>
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<tr>
<td>Mug</td>
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<td>2</td>
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<tr>
<td>Tumbler</td>
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<td>59</td>
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<tr>
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<td>Total Other</td>
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The types of tumblers found include one selenium pressed glass with a quilted pattern of a convex circle inside of a diamond; two lead and one manganese "Plain Punch" bar tumblers; one lead and one manganese plain tumbler, and two tumblers with fluted heels. The manganese tumblers are dated before 1917. The selenium glass was blown sometime between 1911 and 1930. The other glasses include a plain selenium mug, a clear juice glass, and a manganese, stemmed goblet with a fluted bowl and stem. The "Plain Punch" and the plain tumbler were found in the dump levels exclusively, whereas the juice glass, the goblet, and the tumbler with the quilted pattern were located in the upper levels. The remainder of the glasses were scattered throughout the various strata.

Eight pressed glass bowls were recovered from the site. Pressed glass denotes the process whereby the molten glass is cast in a mold and shaped with a plunger. One early bowl found in the dump and upper levels along the west wall has a Double Arch pattern with a scalloped rim. Revi (1964:275) notes that the Double Arch design, also known as Interlocking Crescents, was a goblet pattern originally manufactured by the O'Hara Glass Company of Pittsburgh, Pennsylvania (1871-1891), around 1885. The pattern was reissued after O'Hara's merger with the U.S. Glass Company in 1891. The Double Arch design is found in the U.S. Glass Company catalogues as pattern No. 15,024. The pattern was produced by their Factory K, the King Glass Company, that operated until 1930-1931 (Revi 1964:276,308).

Two pressed glass berry bowls—one found under the house and the other in the west wall dump—have rather plain sides with pressed ornamentation on the heel and base. Wood and Kamm (1961:413) name this glassware design the noonday sun pattern. The identity of the glasshouse that manufactured water and table sets in this pattern is unknown. Presence of manganese in the glass, as evidenced by its pale lavender color, indicates that these berry bowls were manufactured before 1917.

Two manganese snowflake berry bowls, dating between 1898 and 1917, were found in the lower deposits along the east wall and in the upper and lower deposits in the southeast corner of the house. Two sunburst octagons and two diamond-quilted diamonds inside an oval panel alternate with panels...
of a snowflake inside a circle around this bowl. The rim also alternates with panels of a sawtooth and plain arched rim. The rayed base is typical of glass patterns manufactured by the Imperial Glass Company of Bellaire, Ohio, which originated in 1901 and first produced glass in 1904 (Revi 1964:196). This specific pattern was patented in the U. S. Patent Office on May 8, 1894, as Design No. 23,253, by Benjamin Davies and assigned to Levi Strauss and Son of New York City (U.S. Patent Office 67:805).

A white milk glass bowl with WAVECREST/ THE C.F.M. CO. printed on the base was found in the west wall dump and the disturbed strata in the southeast corner of the house. C. F. Monroe Company—not a glasshouse—imported milk glass bowls, vases, and inkwell blanks from France and decorated them for retail sales in the U. S. (Darr 1960:87). Wavecrest was trademarked in 1898, claiming use since 1892. In 1904 the C. F. Monroe Company adopted the name, Kelva, for opal glassware (Peterson 1985:18), presumably replacing the Wavecrest trademark.

A triple thumbprint bowl, displaying a row of three amber-stained thumbprints, was also recovered from the west wall dump. Attributed to the 1890s by Wood and Kamm (1961:581), the bowl was produced by an unknown glasshouse.

A selenium glass star/dot bowl, dating from 1911 to 1930, was found in the well trench excavation in the southeast corner of the house. The base of this small bowl has a five-pointed star in the center with the spaces in between the star points filled in with small, depressed dots. The depressed dot pattern is repeated in six ellipses around the sides of the bowl. The pressed glass pattern was not identified.

Pieces of an American sweetheart berry bowl were found scattered around the entire house, primarily in the upper deposits. One sherd of the bowl was found in an intrusive position among the early deposits along the east wall. The milk glass bowl, which has a scalloped rim, represents a late pattern cast between 1930 and 1936. The American sweetheart design is a fairly common, well known Depression Era glass pattern. Conway (1972:8) states that this type of opalescent tableware was produced by the MACBETH-EVANS GLASS COMPANY of Elmwood, Indiana, between 1930 and 1936. Macbeth-Evans Glass Company became part of Owens Bottle Company in 1919 (Macbeth-Evans Glass Company 1920:35-36), which was further absorbed into OWENS-ILLINOIS GLASS in 1929 (Conway 1972:8). Because there is no record of Macbeth-Evans retaining their name as a subsidiary, it is likely that this depression glass pattern was made by Owens-Illinois, or by another glasshouse.

A pressed glass butter dish cover, dating between 1879 and 1920, was found in the west wall dump and the upper deposits in the southeast corner of the house. Identified as fine cut and feather by Wood and Kamm (1961:242), this pattern originally appears in a patent by John Story on March 25, 1879 (U.S. Patent Office 15:443) and was assigned to Adams and Company of Pittsburgh. Adams and Company became George Macbeth and Company in 1886 and operated under this glasshouse name until 1920 (Macbeth-Evans Glass Company 1920:34).

A thumbprint candy jar lid, dating from 1880 to 1925, was also found in the south wall dump. Stevens (1961:156) calls this candy jar stopper the thumbprint motif, manufactured by the Burlington Glass Works of Hamilton, Ontario, from 1875 to 1909. The Toronto Glass Company of Ontario (1897 to 1900) and successors, Parkdale (1900 to 1913), and Dominion Glass Company (1913 to 1925) also manufactured these jars in square and cylindrical shapes (Stevens 1967:13, 20, 213).

A late block salt shaker, in production from 1893 to the 1940s, was recovered from the dump. The shaker has screw threads and an Arbogast mold seam around the shoulder. Known currently by the late block name, this design was formerly produced by the Fostoria Glass Company as the Virginia and the Foster pattern. This pressed glass pattern was also produced by Richards and Hartley of Pittsburgh in 1888 and Pioneer Glass Company of Pittsburgh from 1885 through the early 1890s. This shaker is assigned to Fostoria on the basis of the Arbogast semi-automatic mold seam around the shoulder, first produced in 1892-1893. Fostoria Glass Company of Moundsville, West Virginia, who has been in production since 1891, began embossing the bases of their glassware with an F in place of labels in the 1940s (Peterson 1985:141-145); however the beginning date of that permanent marking was not determined.

A white milk glass tray with a satin finish was also found in the south wall dump. This small tray, probably a dresser-top type pin tray, has a scalloped
and plumed rim, possibly gold trimmed, or painted with colors. Sherds from the two adjacent units did not mend together, but are most likely associated. The process of producing satin glass by the application of chemicals to the glass was patented by Frederick Shirley of the Mount Washington Glass Company of Boston on June 29, 1886 (Patent No. 335,415).

Miscellaneous glass items found in the excavations include a knob-handled bowl lid pressed in a two-section mold, recovered from Stratum IV along the south wall, and a free-blown decanter with hand-painted horizontal lines, a flared lip, and an applied handle, recovered from the west wall dump. A glass ring of unknown use was also found in the west wall dump and upper strata.

Nine small fragments of decorative art glass, unidentified as to function, were recovered from the Peniel excavations. Why there was such a small sample of this glass is unknown. These small pieces may be representative of the types of glass that bottle collectors would have collected, even though incomplete. In fact, it is reported that bottle diggers dug portions of the Peniel Site in the 1960s.

The decorative sherds found in the excavation consist of Burmese glass, satin glass with an acid etched design, custard glass, an amber sherd with a gold painted rim, and both blue and white milk glass. Burmese glass, containing uranium oxide and gold, was patented by Frederick Shirley of the Mount Washington Glass Company, New Bedford, Massachusetts, on December 15, 1885 (Patent No. 223,294). When the cooled glass, which is initially pale yellow, is reheated, the glass metal becomes a salmon pink on the reheated portion, producing an item of glass that varies from a shaded yellow to salmon pink upon cooling.

After its development, the production of Burmese glass continued with one glass company after another. Mount Washington Glass Company (1866-1894) became the Pairpoint Manufacturing Company in 1894. Pairpoint became the Gunderson Glass Works (1938-1952), which evolved to Gunderson-Pairpoint Glass Works (1952-1957) and the Pairpoint Glass Company, Incorporated, East Wareham and Sagamore, Massachusetts (1958-1970). It is unknown when the production of Burmese glass was discontinued.

The Pearl Satin Ware, also patented by Frederick S. Shirley of the Mount Washington Glass Company of Boston on June 29, 1886 (Patent No. 334,415), is made opaque by sandblasting, or by dipping the glass in hydrofluoric acid (Peterson 1985:198). The custard glass, placed under long-wave ultra-violet light, fluoresces a greenish color, typical of uranium. This glass, the color of egg custard, is known to have been produced by two glasshouses: Harry Northwood of Wheeling, West Virginia, produced from 1901 to 1919 (Darr 1960:85; Revi 1964:226-227), and the Burlington Glass Works of Hamilton, Ontario, from 1875 to 1909 (Stevens 1967:217-219).

In the flatware category, three knives and tablespoons each, and four forks and teaspoons each were recovered, some in good condition and others quite deteriorated. The most common and identifiable pattern is a Rogers Brothers 1847 tipped pattern found on the spoons. This pattern was available by mail order through both Montgomery Ward (1969) and Sears catalogues (Sears, Roebuck and Co. 1970; Perelman 1968) at the turn of the century. Tipped has been produced continuously to the present.

Two knives, 9.4 inches (24.0 cm) in length with oblong indented handles were recovered from Units 23.III and 69.VI. These knives did not appear to be associated with other cutlery excavated. The indented handle tableware is shown in the 1900 Sears catalogue (Sears, Roebuck and Co. 1970:740), selling in sets of six knives and six forks for 40 cents per set. Fragments of one table knife, so badly rusted that it was not identifiable, were recovered from Unit 44.VI.

One plain fork, made of retinned tin, from Unit 86.V was the only complete fork recovered from the excavation. This fork pattern is shown in the 1900 Sears catalogue (Sears, Roebuck and Co. 1970:741). Tines of two forks from the same provenience in Unit 66.VI were found, although no handles were associated to identify their pattern. Four fragments of one fork from Unit 45.VI have an unidentified pattern of a shield at the tip with a fleur-de-lis pattern along the edge of the handle.

Two complete tablespoons, possibly associated with the same deposition period, were recovered from Units 44.VI and 45.VI. These spoons are made in the tipped pattern available from either Montgomery Ward's catalogue sales in 1895 (1969:435) or from Sears in 1900 (1970:149). A badly rusted bowl fragment of another tablespoon.
from Unit 86.V is not further identifiable.

Also in the tipped pattern are two teaspoons from Units 67.V (spoon handle only) and 67.VI (complete spoon). These spoons are stamped ROGERS BROS. 1847 trademark on the back of the handles. The complete teaspoon is also personally engraved. Of particular interest in the table service is the tipped engraved teaspoon, excavated from Unit 67.VI. This teaspoon is engraved with the name GEO. L. RICE placed diagonally across the handle. George L. Rice is first noted in Skagway as a proprietor of one of Skagway's earliest gold rush saloons, the Pack Train. On April 27, 1898, when George Rice was listed as proprietor, the U. S. Customs inspected the Pack Train premises for bootleg liquor, but found none. Tony Stanich is listed as proprietor of the Pack Train in 1899 (Clinton 1899:141). George L. Rice is listed again as proprietor in 1901 (Ferguson 1901:355), but his name does not show up later in Skagway. The Pack Train Saloon is listed as a business in 1902 and 1903, but no names of proprietors are given. In 1905 and 1906, Tony Stanich again appears as proprietor, after which two new owners, Shea and Patten, took over in 1907 (Polk 1907:466), who renamed it the Trail Inn (Spude 1983:155). Apparently, George Rice was a resident of Skagway in 1897-1898 and again in 1902. In addition to these identifiable teaspoons, the rusted fragments of a teaspoon handle were found in Unit 66.V, fragments of a bowl in Unit 71, and a handle in Unit 71. The latter two fragments are probably from the same teaspoon but are so badly deteriorated that they do not mend.

One small sugar tong with an unidentified ornamental pattern, found in Unit 86.V, completes the metal table service assemblage from the Peniel. This unsigned item appears to have been silver-plated.

A folding aluminum cup was also found in a pail containing a number of recent camp kit items in Unit 71. Because of their recent nature and lack of association with the other artifacts found in the Peniel, they were not treated as a feature.

Synthetic, fairly modern artifacts appearing in upper levels of the site consist of two fragmentary plastic drinking straws found in Unit 23.III and Test Pit 5.

Ceramic Tableware

Ten percent of the artifacts from the 1987 Peniel Mission excavations are composed of ceramic sherds. Represented in this assemblage are delicate and heavy porcelain, whitewares of various hardnesses, sometimes referred to as semi-porcelain, stoneware, and ironstone. Patterns consist of floral transfer and decal prints, with the majority of the sherds being unornamented whiteware. Reconstructed dishes, saucers, bowls, teacups, pitchers, and platters excavated from the Peniel Mission were manufactured in England, Germany, and North America. Aesthetic pieces are limited to a single Belleek porcelain pitcher of unknown origin and date, and a decal-printed porcelain tea cup, also unidentified and unsigned.

Twenty-seven individual base mark ceramic signatures were recovered from the Peniel Mission 1987 excavations. Published resources and documents provide the following identifications and dates of manufacture:

TRADE MARK/double shield/STONE CHINA/EDWARD CLARK/BURSLEM, ENGLAND (Black, printed base mark).

Edward Clark's Churchyard Works is dated by Godden (1964:147) as manufacturers of whiteware between 1880 and 1887. One whiteware sherd, unassociated with other patterns, was recovered from Unit 23.VII (Figure 34).
PORCELAINE DE TERRE/TRADE MARK/Shield/JOHN EDWARDS/ENGLAND (Brown, printed base mark).

A whiteware plate with a brown, decal-printed fly, or bee, interspersed with leaves and branches around a gold-trimmed rim, was mended bearing this base mark (Figure 35). Godden (1964:231) gives the dates of 1880 to 1900 for the production of this signature. Decal printing was patented with the U. S. Patent Office by Albert E. Frank and Edward H. Hoad of Pittsburgh, Pennsylvania, on January 12, 1892 (Patent No. 467,909, filed October 5, 1891). Process includes: "...coating transfer paper with a soluble surfacing or glaze, printing the design in any desired colors on said coated surface, applying the design directly to the surface to be decorated, and moistening and removing the paper" (U.S. Patent Office 58:250).

Three different beginning dates for the Greenwood China Company are published in resources consulted: after 1865 (Hartman 1943:1121); around 1870 (Kovel and Kovel 1977:54); and from 1868 through the 1920s (Praetzellis, Rivers, and Schultz 1983:40). This mark, however, dates to circa 1904 (Kovel and Kovel 1986:177m). Oval whiteware bowls and platters of this plain, unornamented heavy ironstone ware were recovered from Unit 21.VI.


Sherds of a teapot, an oval platter, and a complete oval teapot lid (Figure 36) were excavated from top to bottom of Units 67 through 70. English registration of this dark blue transfer-printed MILAN pattern was in 1884 (Godden 1964:294,527), with English registered numbers 1 through 19,754 being filed in that year. However, it was after 1891 that "England" appeared in the banner under the mark (Godden 1964:294). Sherds of this Milan pattern were found with older glass sherds from the late 1880s, as well as with newer bottles manufactured after 1935.

GREENWOOD CHINA/TRENTON, N.J. (Indented base mark).

Three different beginning dates for the Greenwood China Company are published in resources consulted: after 1865 (Hartman 1943:1121); around 1870 (Kovel and Kovel 1977:54); and from 1868 through the 1920s (Praetzellis, Rivers, and Schultz 1983:40). This mark, however, dates to circa 1904 (Kovel and Kovel 1986:177m). Oval whiteware bowls and platters of this plain, unornamented heavy ironstone ware were recovered from Unit 45.VII. This item was produced by the Woodland Pottery of Tunstall, England, between 1914 and 1925 (Godden 1964:294). Apparently this is a plain, unornamented whiteware (Figure 37).


One sherd with this signature was excavated from Unit 45.VII. This item was produced by the Woodland Pottery of Tunstall, England, between 1914 and 1925 (Godden 1964:294). Apparently this is a plain, unornamented whiteware (Figure 37).
Figure 37. Grindley & Co. base mark.

H & CO./LIMOGES/FRANCE (Red, printed base mark).

Fifty percent of this large, heavy porcelain platter was mended with twelve sherds recovered from the lower levels of Units 69 and 70. A small floral decal print of pink and purple flowers had been applied around the scalloped rim of this platter. The Limoges trademark/brand name (TM 19,257) was registered by Haviland and Company of New York City on March 31, 1892 (U.S. Patent Office 54:1717), having begun use of this trademark in 1860. The design for this platter was registered on March 13, 1894 (Design No. 21,113), by Charles Edward Haviland of Limoges, France (U.S. Patent Office 66:1749).

Crown/Rampant lion inside shield/TRADE MARK/THOMAS HUGHES/ENGLAND (Black, printed base mark).

Godden (1964:339-340) dates the use of this pottery manufacturer's mark from 1895 to 1910 by the Hughes Works in Burslem, England. The word abbreviation, Ltd., was added to the firm's signature in 1910. Three-fourths of a whiteware saucer was excavated from Unit 67.II.

ROYAL IRONSTONE CHINA/lion and griffin flanking crowned shield/JOHNSON BROS./ENGLAND (Black, printed base mark).

Eleven sherds of an unornamented whiteware pitcher with handle, from Unit 44.VI may be associated with sherds from Unit 24/21, Strata IV and VI. Godden (1964:355) dates the use of this Johnson Brothers mark from 1883 to 1913.

ROYAL/SEMI-PORCELAIN/Crown/JOHNSON BROS./ENGLAND (Brown, printed base mark).

Two sherds of this brown base mark from Unit 67.III appear on a whiteware that did not mend with any other whiteware or patterned sherds from overlying, underlying or adjacent units. Godden (1964:355) assigns this particular Johnson Brothers mark to be in use around and after 1900.

Crown/JOHNSON BROS./ENGLAND (Light green base mark).

Sherds of several teacups and saucers centered in excavated Unit 67, Strata I through VI, and stray sherds in Units 45, 47, 66, 71, and 86 were manufactured of a white-glazed whiteware with a pale pink floral transfer print pattern against a light blue background. This later variant base mark of Johnson Brothers was in use after 1913 (Godden 1964:356).

THE EDWIN M. KNOWLES CHINA CO./sailing ship/MADE IN U.S.A. (Black, printed base mark).

Edwin M. Knowles China Company of Chester, West Virginia, produced this whiteware with this signature between 1930 and 1948, as the "Made in U.S.A." marking was used after 1930 (Gates and Ormerod 1982:99-100; Debolt 1988:40). Sherds of a saucer and a bowl rim sherd appeared in the South Profile of the Peniel Mission East Wall Test Trench. This tableware has a pattern of a checkerboard decal band of gold, light blue, white, and black squares around the rim, intertwined with pink and pale blue flowers.
K T & K/CHINA (Red, printed base mark).

This base mark is another version of the Knowles, Taylor and Knowles base mark recovered from the Peniel Mission. The mark apparently dates between 1890 and 1905 (Debolt 1988:40; Gates and Ormerod 1982:125). Heavy sherds of two unornamented white-glazed semi-porcelain saucers, one of which was found in Unit 35, Level 3 that mended a sherd from Unit 70.V. A bowl with a portion of the signature present, found in Unit 66.VI, was also recovered.

Eagle holding inverted lion/LAUGHLIN in script (Dark green, printed base mark).

This signature appears on a whiteware plate decorated with a scalloped rim and a turquoise floral decal print. Associated mended sherds from Unit 64 and Unit 70, Stratum V, produced an incomplete plate. Gates and Ormerod (1982:132) date the mark's use by the Homer Laughlin Pottery Company of East Liverpool, Ohio, from 1877 through approximately 1900.

HL monogram/HOMER LAUGHLIN/THE ANGELUS in script (Dark green, printed base mark).

"Angelus" is a whiteware transfer print pattern of pink and purple thistles with a band of small raised dots around the rim of saucers and the heels of tea cups excavated from the Peniel. The Angelus pattern was produced circa 1909 (Gates and Ormerod 1982:134).

THE LIMOGES CHINA CO./SEBRING, OHIO/underglaze/ripple edge design/and process/PAT. APPLIED FOR (Green, printed base mark).

Sherds from Units 21, Stratum IV and 24/21, Stratum III, mended to form a small, yellow-glazed earthenware serving bowl with a dark green, diagonally ribbed rim. The center of this bowl is decorated with a pink, five petaled flower that is cut-sponge printed. Gates and Ormerod (1982:180) date production of this pattern between 1930 and 1945 (Figure 38).

Rampant lion/MADE IN GERMANY inside circle (Black, printed base mark).

Two sherds mending together to form this signature were excavated from Unit 74.V. This mark (Figure 39) was not located among the trademark records nor in published reference books consulted. Function (cup, saucer, bowl, plate, and so on) was not determined.

Figure 38. Small Limoges china serving bowl.

Figure 39. Rampant lion base mark.
Lion and unicorn flanking crowned shield/CHARLES MEAKIN/HANLEY/ENGLAND (Black, printed base mark).

Sherds of whiteware saucers or plates bearing this printed signature were excavated from the dump in Units 67, 69, 70, and 85 and in Stratum II of Unit 84. A similar mark (without "England" underneath "Hanley") dates from 1883-1889, the only dates listed for the Charles Meakin Eastwood Pottery of Hanley, England (Godden 1964:426).

IRONSTONE CHINA/lion and unicorn flanking crowned shield/J. & G. MEAKIN/HANLEY, ENGLAND (Green, printed base mark).

a) A complete, unornamented, whiteware berry bowl was excavated from Unit 23, Stratum IV (Figure 40*aq). The bowl bears the Meakin base mark, used after 1890 by the Staffordshire Potteries of Hanley, England (Godden 1964:427).

b) Ornamented with a dark blue transfer printed "Poppy" pattern on a whiteware, a portion of a dinner plate was mended from Units 47, 64, and 71.

c) A butter dish and tea cup sherds of an unornamented, whiteware were recovered from Units 67, 70, and 84. Bearing partial signatures, none of these sherds mended together.

Sherds of a whiteware teacup from Unit 45.VI and Unit 68.VI mended together, showing three-quarters of this signature. This mark is attributed by Godden (1964:432) to the Cleveland Works of Burslem, England, from 1880 to 1904 (Figure 41).

Figure 40. J. & G. Meakin base mark.

Figure 41. Mellor-Taylor base mark.

Z/DOVEDALL _______/SEMI-PORCELAIN MELLOR, TAYLOR & CO./ENGLAND around/Crown (Black, printed base mark).

Sherds of a whiteware teacup from Unit 45.VI and Unit 68.VI mended together, showing three-quarters of this signature. This mark is attributed by Godden (1964:432) to the Cleveland Works of Burslem, England, from 1880 to 1904 (Figure 41).

Richard V. Briesen of Weehawken, New Jersey, assigned this trademark to the Nippon Mercantile Company of Tokyo, Japan, and New York, on September 21, 1881 (TM no. 8,665) for use on china, porcelain, and earthenware. This rose and orange-colored "poppy" transfer-printed saucer mended with sherds from the upper strata in Units 68, 69, and 70. A possibly associated sherd was excavated from Unit 2/21.III, but did not directly mend with these saucer sherds.

--------------/RD. NO. 163083 (Brown, printed base mark).

Six sherds of this dinner plate pattern, found in Unit 68, Feature 21, Unit 67.V, and Unit 67.II, did not mend together. The pattern is composed of a yellow-glazed white porcelain with a small, yellow and pink sunflower or daisy decal print. The numbering system on the base mark was used in England, where the pattern was registered in 1891, according to Jewitt (1970:259).
ROYAL IRONSTONE CHINA/lion and unicorn flanking crowned shield/WARRANTED (Black, printed base mark).

One-quarter of a bowl with a scalloped rim was excavated from Unit 69, Stratum VI. This otherwise plainly decorated, whiteware bowl is a product of the Vodrey & Brother Pottery, which in 1896 incorporated and officially changed to Vodrey Pottery Company of East Liverpool, Ohio. Although an exact match to this mark was not found in any published reference, very similar marks were used from about 1879 until 1896 (Debolt 1988:74; Gates and Omerod 1982:302; Lehner 1988:492). When the company officially changed to Vodrey Pottery Company in 1896, this type of mark was not used again.

PARIS WHITE/globe/ANTHONY SHAW & CO./ENGLAND WARRANTED (Black, printed base mark).

Sherds of one whiteware plate were collected from Unit 67, and portions of two oval dishes from Unit 69.VI and Unit 86.V. The items, all bearing the Anthony Shaw & Co. base mark, were produced between 1898 and 1900 in Burslem, England. Anthony Shaw Company was preceded by Anthony Shaw and Sons until 1898 and was taken over by A. J. Wilkinson, Ltd., about 1900 (Godden 1964:571).

STERLING/crown/CHINA (Green, printed base mark).

Gates and Ormerod (1982:170) attribute this mark to Sterling China Company of Sebring, Ohio, the name of the Limoges China Company from 1900 to 1902. However, DeBolt (1988:92) presents a convincing argument that this mark was probably a special mark for a known company. He has dated the mark from 1900 to 1915. Associated plate sherds from Unit 24/21.VI mended with Unit 66.VII, and Unit 66.VI (Figure 42).

Figure 42. Whiteware octagonal plate fragment.

STERLING/crown/CHINA (Green, printed base mark).

Gates and Ormerod (1982:170) attribute this mark to Sterling China Company of Sebring, Ohio, the name of the Limoges China Company from 1900 to 1902. However, DeBolt (1988:92) presents a convincing argument that this mark was probably a special mark for a known company. He has dated the mark from 1900 to 1915. Associated plate sherds from Unit 24/21.VI mended with Unit 66.VII, and Unit 66.VI (Figure 42).

PARIS WHITE/globe/ANTHONY SHAW & CO./ENGLAND WARRANTED (Black, printed base mark).

A partial base signature, appearing on a white-glazed whiteware sherd, was excavated from Unit 23, Stratum VI. This specific mark was not located in the published reference sources; however, “England,” was used as part of English pottery marks after 1891 (Godden 1964:658).

STERLING/crown/CHINA (Green, printed base mark).

Gates and Ormerod (1982:170) attribute this mark to Sterling China Company of Sebring, Ohio, the name of the Limoges China Company from 1900 to 1902. However, DeBolt (1988:92) presents a convincing argument that this mark was probably a special mark for a known company. He has dated the mark from 1900 to 1915. Associated plate sherds from Unit 24/21.VI mended with Unit 66.VII, and Unit 66.VI (Figure 42).

WHEELOCK/crown/.

This signature was unidentified. This white porcelain ware has a yellow rose decal print. Three sherds from Unit 19/4.VI were the only sherds of this pattern found in the areas excavated in 1987. The
sherds appear to be part of a bowl or saucer.

RICHMOND/Z.S. & CO./BAVARIA (Green, printed base mark).

The European manufacturer identity and the date of the pottery works producing this porcelain ware were not located. Sherds of a white berry bowl bearing this base mark were found in Units 66 and 67, and scattered saucer sherds from Units 23, 64, 66 to 69, and 71. The pattern features an Iris decal print decoration, indicating that it was manufactured after 1892.

Pottery sherds retrieved from the Peniel Mission are for the most part quite shattered so that individual items are represented by very small sherds. For a minimum count, bases with manufacturer’s marks and the number of bases, rims, and handles did not give an accurate figure. For example, 19 teacups (derived from patterns and mends) are estimated to have been present at the site; however, only 10 unassociated teacup type handle sherds were found, some of which could also be handle parts to pitchers or chamber pots. In addition, many items have no manufacturer’s marks. Teacups and saucers in particular lack manufacturer’s marks.

Minimum count was compiled by associated mended items and by comparing and sorting the following: slip cast patterns, different decal and transfer prints, color of body paste and/or glaze, and in plain white-glazed ware, by separating earthenware, semi-porcelain, and porcelain. Additionally, some sherds having the same pattern, glaze, or paste from the same areas of excavation, even though they did not mend, were assumed to be parts of the same item. An example is a Belleek pitcher represented by 52 distinctive sherds. No attempt was made to mend these pieces, although the sherds are assumed to be components of a single item. The minimum counts shown in Table 11 are based on these comparisons and sorting.

Table 11. Minimum counts of ceramic dinnerware.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 dinner plates</td>
<td></td>
</tr>
<tr>
<td>3 platters</td>
<td></td>
</tr>
<tr>
<td>18 bowls (4 oval, 1 serving, 10 desert/berry,</td>
<td></td>
</tr>
<tr>
<td>2 rice, 1 possible sugar bowl with lid)</td>
<td></td>
</tr>
<tr>
<td>19 teacups</td>
<td></td>
</tr>
<tr>
<td>12 saucers</td>
<td></td>
</tr>
<tr>
<td>3 pitchers</td>
<td></td>
</tr>
<tr>
<td>1 teapot and lid</td>
<td></td>
</tr>
<tr>
<td>1 teapot lid</td>
<td></td>
</tr>
<tr>
<td>6 small plates/saucers or bowls</td>
<td></td>
</tr>
<tr>
<td>4 butter pat dishes</td>
<td></td>
</tr>
<tr>
<td>37 items, unidentified function</td>
<td></td>
</tr>
<tr>
<td>115 Total</td>
<td></td>
</tr>
</tbody>
</table>

Among the ceramic ware bearing transfer prints are a partially reconstructed pitcher and bowl with a blue acorn and maple leaf print. These sherds were recovered from the Builder’s Trench along the south wall/foundation of the Peniel Mission. Associated sherds of the pitcher mended from Units 67.V and 68.VI, whereas the bowl mended from Unit 66.VI and Unit 67.

Also recovered from the Builder’s Trench are a brown poppy transfer print bowl from Unit 67, Strata IV, V, and VI, and 23 sherds from Unit 66.VI that did not mend with the sherds from Unit 67. A dinner plate, also in a similar poppy design, but decal printed, came from the same area. Mended sherds of this plate were reconstructed from Unit 67, Feature 11, and Unit 68.III. Unmended sherds of the decal printed poppyware were recovered from Feature 12 in Units 67.V and 68.

A dinner plate, having a combined Iris floral decal print with leaf blades of transfer print, was recorded from sherds found in the southeast and southwest corners of the Peniel Mission building. The plate was manufactured from a pink paste. None of the plate sherds mended.

One medium-sized porcelain serving bowl (Figure 43) was partially reconstructed from sherds found in Units 64, 71, and 74 along the west wall, associated with a waterline trench previously dug in 1983 by Catherine Blee (Rhodes 1988:11). Sherds of this bowl, which has a molded poppy pattern around a gilded rim, possibly mend with a sherd excavated and reported by Rhodes (1988:321). No sherds bearing this bowl’s signature were found to assist in identifying the pattern, or manufacturer.
Chinese porcelain was represented at the Peniel by sherds of a pale green celadon ware (Figure 44). These sherds are all apparently nonmending fragments of rice bowls, but based on their different locations, are assumed to represent two individual bowls.

Presence of the Chinese population of Skagway is noted in the 1900 census. This census lists all the Chinese then living in Skagway, mainly occupied as cooks and living aboard ships docked at the wharves. Eviction of the Chinese was demanded by the Caucasian residents of Skagway in 1902 (Spude 1983:32), when a Chinese man attempted to take up residence in the Skagway community. This incident resulted in a city ordinance prohibiting any Chinese from living in the town.

Around the same time, other Asians were also the objects of adverse discrimination. In January 1899 a group of Japanese prostitutes were moved from Paradise Alley, the alley between 6th and 7th Avenues east of Broadway, to Jap Alley between 5th and 6th Avenues and west of State Street (Spude 1983:18).

Small porcelain sherds of a primrose decal-printed, bulbous bowl and matching lid found in the Peniel may be more of a decorative item rather than part of a food service. Mended sherds of this bowl, tentatively identified as a sugar bowl, were found under the Builder's Trench portion of Unit 66 and additional sherds were from the Builder's Trench in Unit 71 along the west wall. The small section of the lid mended with sherds from Unit 69, Strata V and VI. Single sherds of this pattern from Unit 67, Feature 12, and 68.III did not mend with either piece.

Three plain, unornamented whiteware teacups were partially mended. A quarter of a rim and the base of a teacup from the west wall of Unit 70.VI mended with eight sherds from Unit 35, under the Peniel Mission Building.

One blue willowware transfer print teacup, associated with Units 66.IV and 69.VI and one unmended willowware sherd from Unit 68.III were found.

Decal printing was noted on three teacups, the most striking of which is half of a porcelain cup retrieved from Unit 35 beneath the mission building. The cups are perhaps associated with the same deposition of the plain whiteware teacup described above. This cup is delicately decorated with orange and yellow bell flowers and a large yellow butterfly on the side.

Other hand painted or elegant tableware pieces were rarely encountered among the discarded items found at the Peniel, possibly reflecting the dominance of hotels and boarding houses where most of the tableware tended toward the plain white ironstone varieties rather than elegant decorated pieces. Those items that had been discarded can be enumerated as the Limoges porcelain platter, the gilded porcelain serving bowl, the porcelain teacup, and a small, thin Belleek pitcher. The Belleek pitcher has a gold gilt scalloped rim and small diamond quilting pattern around the shoulder. It had been shattered into 52 sherds and was not reconstructed. It was found in the
Builder's Trench (Units 44, 45, and 66) and was probably further shattered by the building of the trench.

Unidentified plain earthenware, ironstone, semi-porcelain, and porcelain sherds are listed in the catalogue. These sherds do not include rims, bases, manufacturer’s marks, or other identifying characteristics.

HOUSEKEEPING

Housekeeping, cleaning, and maintenance artifacts found in the excavation suggest three domestic activities at this dump site: laundry, floor mopping, and sewing. Among the laundry artifacts found were clothes line spring pins, wooden clothespins, an ammonia bottle, and a sadiron. The ammonia bottle is a cylindrical bottle with a single-band, collared lip and with GREER'S WASHING AMMONIA ROBT. GREER embossed on the body. The bottle was found in the south wall dump and in Stratum IV-s. Two metal clamps to ends of rag mop handles are probably associated with some of the identified bucket fragments.

Sewing, or mending activities are indicated by a metal thimble, sewing machine oil, and clothing shears. The sewing machine oil bottle is rectangular with a tooled, single-band, collared lip and extract neck. The bottle is embossed with the words SINGER MFG. CO./ TRADEMARK in an oval around /needle-S monogram. Singer began using this trademark in 1879, according to an infringement appeal brought against the June Manufacturing Company on June 9, 1896, in the U. S. Circuit Court. This bottle is air vented on the shoulders, a technology patented in 1875, but not in general use until about 1890. Bottles of this type were manufactured until 1930. The bottle was found in Stratum IV-s.

Miscellaneous artifacts in this category found at the Peniel include a sponge, which may have been recently deposited, and a fragment of a wire clothes hanger. Table 12 shows the inventory of these artifacts by activity group.

None of these artifacts is datable. The mop head clamp is embossed 2-6 501/SR/KROFFEL in script, which appears to be a date code for 6 February 1950-1951. Clothespin springs, according to Blee (1988:112), were in use as early as 1902. Locations of the four wooden clothespins and seven clothespin springs indicate a change in location, perhaps, from a clothesline along the east side of the Peniel Mission building to a southern exposure.

Table 12. Inventory of housekeeping artifacts.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>COUNT</th>
<th>PROVENIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothespin, wood</td>
<td>4</td>
<td>19/4.VI</td>
</tr>
<tr>
<td>Clothespin, spring</td>
<td>2</td>
<td>21.IV</td>
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<tr>
<td>Clothespin, spring</td>
<td>1</td>
<td>23.II</td>
</tr>
<tr>
<td>Sadiron</td>
<td>1</td>
<td>45.VI</td>
</tr>
<tr>
<td>Clothespin, spring</td>
<td>1</td>
<td>23.IV</td>
</tr>
<tr>
<td>Clothespin, spring</td>
<td>1</td>
<td>67.I</td>
</tr>
<tr>
<td>Clothespin, spring</td>
<td>2</td>
<td>67.II</td>
</tr>
<tr>
<td>Clothespin, spring</td>
<td>1</td>
<td>67.IV</td>
</tr>
<tr>
<td>Clothespin, spring</td>
<td>1</td>
<td>68.III</td>
</tr>
<tr>
<td>Bucket handle</td>
<td>2</td>
<td>23.IV</td>
</tr>
<tr>
<td>Bucket</td>
<td>1</td>
<td>23.VI</td>
</tr>
<tr>
<td>Bucket Rim</td>
<td>1</td>
<td>23.VI</td>
</tr>
<tr>
<td>Bucket, granite</td>
<td>1 (4 fragments)</td>
<td>44.VI</td>
</tr>
<tr>
<td>Bucket, granite</td>
<td>1 (22 fragments)</td>
<td>44.VI</td>
</tr>
<tr>
<td>Bucket handle</td>
<td>1</td>
<td>45.VI</td>
</tr>
<tr>
<td>Mop clamp</td>
<td>1</td>
<td>45.VI</td>
</tr>
<tr>
<td>Bucket ear, enamel</td>
<td>1</td>
<td>44.VI</td>
</tr>
<tr>
<td>Bucket handle</td>
<td>1 (4 fragments)</td>
<td>66.VI</td>
</tr>
<tr>
<td>Mop clamp</td>
<td>1</td>
<td>67.I</td>
</tr>
<tr>
<td>Bucket rim</td>
<td>1</td>
<td>68.VI</td>
</tr>
<tr>
<td>Bucket handle</td>
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<td>70.VI</td>
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<tr>
<td>Bucket handle</td>
<td>1</td>
<td>85.V</td>
</tr>
<tr>
<td>Clothing shears</td>
<td>1</td>
<td>45.VI</td>
</tr>
<tr>
<td>Thimble</td>
<td>1</td>
<td>84.V</td>
</tr>
<tr>
<td>Clothes hanger</td>
<td>1</td>
<td>69.IV</td>
</tr>
<tr>
<td>Sponge</td>
<td>1</td>
<td>70.I</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>

FURNISHINGS

Furnishings include all those items found in a house that are part of the household but are not part of the structure, such as furniture, curtain rods, statues, and lamp shades. Lamp parts, particularly lamp chimney glass, comprise the largest group within the furnishing class. Three types of lamp chimneys were collected from the dump. The crimped rim lamp chimney was the most numerous type found, with 124 sherds representing six different chimneys. These sherds were found in the south and west wall dump, under the building, and in the upper strata along the south wall.
Michael J. Owens patented the semi-automatic paste mold for lamp chimneys in 1893 under Patent No. 489,543 (U.S. Patent Office 62:199). The new technology replaced a three-step, hand-blown method of blowing and crimping lamp chimneys. Apparently the number of crimped "pearls" around the lamp chimney rims was a silent trademark among glasshouses. George A. Macbeth Company (1883-1899) and successor, Macbeth-Evans Glass Company of Elmwood, Indiana (1899-1919), produced crimped rim lamp chimneys, which sold as No. 1 and No. 2. No. 1 lamp chimneys had 36 crimps around the rim, whereas No. 2 lamp chimneys had 40 crimpes (Macbeth-Evans Glass Company 1953:34-35). Complete and reconstructed rims from the Peniel show that all crimped rim lamp chimneys discarded there were of the No. 2 variety with 40 pearls, or crimps. The lamp base fonts retrieved from the Peniel are most likely associated with these chimneys. Because the lamp bases found are of Canadian manufacture, Canadian sources for the chimneys were also compared for diagnostic numbers of crimps around the rim. Canadian glass catalogues, as well as the crimped rims excavated from the Burlington Site in Hamilton, Ontario, all show 38 crimps around the rims (Stevens 1967:230).

The second most common type of lamp chimney at the Peniel was the Maple Leaf and Vine Chimney, represented by 83 sherds found in the west and south wall dumps, under the building, and in Stratum IV along the south wall. The Diamond Flint Glass Company of Montreal, Catalogue No. 13, shows this etched and frosted maple leaf pattern on tumblers (Stevens 1967:198). Diamond Flint Glass Company operated between 1903 and 1913 (Stevens 1961:112). The company was preceded by the Dominion Glass Company from 1896 to 1898, who took over again from 1913 to 1925 (Stevens, 1967:29, 132-133). It is possible that Dominion introduced and also continued this pattern. On July 13, 1897, Dominion Glass Company bought the Canadian rights from Toledo Glass Company to manufacture tumblers and lamp chimneys (Scoville 1948:100). Both companies manufactured a full line of tableware, bottles, lamps, and lamp chimneys.

The last identified chimney from the site is the Beaded Rim Lamp Chimney, represented by five sherds from the south wall dump. George W. Blair of Fort Pitt Glass Works, Pittsburgh, Pennsylvania, filed for registration of this beaded rim lamp chimney on December 7, 1891 (Design No. 21,617, Registered June 7, 1892). The term of patent was for 14 years (U.S. Patent Office 59:1601); however, Fort Pitt Glass Works was in operation from 1830 until it closed in 1900. Only a few fragments of this type of lamp chimney were recovered.

Two lamps were found in the excavation, mended from a total of 36 sherds collected from the upper and lower strata along the south wall. Both lamps are the same type—a footed hand lamp with a six-sided base and a ribbed heel. The clear, lead glass bases were press-molded between 1900 and 1925. One lead glass and one milk glass lamp shade, plus a metal wick and socket to a kerosene lamp were also found in the deposits. Jefferson Glass Company, Ltd. of Toronto, shows this lamp font pattern, exemplified by the two discarded Peniel lamps, in its Catalogue No. 21 (Stevens 1967:179). Jefferson Glass Company was founded in Steubenville, Ohio, in October 1900, moving to Follansbee, West Virginia, in early 1907, where it remained in business through 1920 (Revi 1964:206). The Jefferson Glass Company branch of Toronto was purchased in 1912, and operated until 1925 (Peterson 1985:92-95).

Other furnishings found in the dump strata include a furniture caster, a drawer pull, and a curtain rod hanger. The upper deposits produced a porcelain doorknob, a top to a lamp shade, a drape hanger, and a tapered chair leg. Stratum IV, the mixed deposits, contained a curtain rod hook, the metal neck to a lamp, a soap dish, and a ceramic figurine.

MEDICINAL ITEMS

Medicinal items comprise 2.61% of the total domestic artifacts found at the Peniel. The south wall dump produced a higher percentage (4.72%) of medicinal artifacts than the west wall dump, which contained only 1.46% medicinal artifacts. The percentages of this class increased slightly in the upper strata along both walls. A high percentage of medicinal artifacts was found in the upper strata along the east wall, largely due to the presence of 53 chamber pot sherds in a small artifact sample.

The relative percentage of the identified medicinal bottles is 15.00% of the bottles along the south wall and 16.95% of the west wall bottles. The
higher proportion of identified bottles in the medicinal class, relative to the proportion of medicinal sherds, results from the larger number of complete bottles. The percentage of medicinal bottles increases to 21.05% in the upper deposits along the south wall and drops to 7.89% in the upper deposits along the west wall. The apparently higher percentage along the south wall may be misleading, however, as the sample is small and the medicinal bottles are easily identified.

The bottles were divided into external medicines, treatment for digestive problems, cold and cough remedies, and general cure-alls, which promise cures for several unrelated diseases. Many of these medicines, such as Liquozone, were commonly distributed before the 1906 Food and Drug Act eliminated the word cure in their claims and prohibited the sale of quackery type medicinal cures. Liquozone was bottled in an amber cylinder with a tooled, rolled lip and sold by the Liquid Ozone Company, who promised that their product would cure almost every disease afflicting humankind.

Another turn-of-the-century wonder drug found at the dump site was Dr. Henry's Sarsaparilla—a "Remedy for scrofula or King's Evil, rheumatism, salt rheum, ringworm and all diseases arising from impurity of the blood." Scrofula is defined as a "....tuberculosis of the lymphatic glands, esp. of the neck, characterized by the enlargement of the glands, suppuration, and scar formation" (Webster's New World Dictionary 1970:1281). One small bottle fragment with the embossing, DR. HEN—/—AP——, was identified as Dr. Henry's Sarsaparilla. The bottle, found in the upper levels along the west wall, is rectangular with indented panels and a single-band, collared lip. Description of the typical Dr. Henry's Sarsaparilla bottle and its contents are given in Umberger and Umberger (1968:25,26), in which a labeled bottle is pictured, but neither the name of the manufacturer, nor trademark information is printed on the label shown. This patent medicine may have come in from Canada, or it may be a medicinal product of the Renz & Henry firm of Louisville, Kentucky, who patented several cures in early 1892-1893.

A rectangular bottle found in the south wall dump has indented front and side panels, a double collared lip, and the name, DR.MILES/ NEW/ HEART CURE, embossed on the side. Dr. Miles Medical Company was founded in Elkhart, Indiana, in 1884 (Nelson 1980:101,108). Registered as the New Heart Cure, in 1887, the name was changed to Heart Treatment in 1920 (Fike 1987:102-103), some 14 years after the Food and Drug Act was passed in 1906, requiring the removal of the word "cure" from medicinal labels. Maryland Glass Company of Baltimore (1907 to 1971), produced Dr. Miles bottles after 1916 (Fike 1987:102-103). As Maryland Glass Company used the trademark “M” inside a circle on the base of their glassware after 1920, it appears that this bottle was made before 1920.

Dr. Miles Medical Company also produced Little Liver Pills, which were marketed in a small cylindrical vial (Sather 1975:1). Three such cylindrical vials were found in the upper strata along the west wall of the Peniel. All three bottles have screw threads and had been made in a turnmold.

The familiar digestive remedy, Bromo Seltzer, is represented at the Peniel, where a Bromo Seltzer bottle was found in the upper levels along the west wall. The bottle was made for Emerson Drug Company of Baltimore, who compounded the salts as a headache cure. The bottle is cylindrical with a tooled, rolled lip and air vents. This indicates that the bottle was blown sometime between 1889 and 1913, when Maryland Glass Company was licensed to manufacture Bromo Seltzer bottles on Owen's automatic bottle machines (Scoville 1948:95-96). Bromo Seltzer was available through Woodwards, a Canadian company, in 10-, 20-, 45-, and 85-cent bottles in 1898 (Watt 1977:139).

Sherds from a California Fig Syrup bottle were found in both the upper and lower deposits along the west wall of the Peniel. California Fig Syrup, a purgative, was marketed in a rectangular bottle with air vents and a tooled, single-band, collared lip. This type of bottle was blown between 1884 and 1914. Labeled and boxed California Fig Syrup bottles read in part: "Elixir of senna combined in palatable syrup of figs ... active ingredients alcohol 6%, senna, peppermint." This laxative was available through Canadian sources at 40 cents a bottle in 1898 (Watt 1977:139).

Another laxative represented at the Peniel was a John Wyeth and Brothers granular effervescent phosphate, for which a bottle was found in the west wall dump. The square bottle, with a tooled, sheared lip and embossing, was blown after 1899. The rim
of the cap is embossed with the words, THIS CUP HOLDS A DOSE, and the numerals one through twelve.

Also found at the site is a Wyeth and Brothers oval bottle with a tooled, flared lip and air vents. Sherds from the bottle, which once contained liquid malt, were found in both the south wall dump and the overlying intrusive Stratum IV. This bottle was blown after 1892.

A square, amber-colored bottle, embossed with the words, (LACTOPEPTINE) /SOLUBLE /FOOD /FOR /INFANTS AND/INVALIDS, was found in the south wall dump and in the overlying stratum. This medicine was used as a "digestion aid compound and dyspepsia cure." The formula for Lactopeptine, containing 45% powdered milk, 45% dextrine, 10% milk sugar and pig's pancreas, was patented on October 13, 1889, by Reed and Carnrick Company under Patent number 412,839, as a prepared food for infants and invalids (U.S. Patent Office 49:317). The medicine was advertised as a "digestion aid compound and dyspepsia cure." A full page article with front cover illustration about the Reed and Carnrick Company, published by Scientific American (1888[58]:14), mentions that Lactopeptine was manufactured at a laboratory located two miles south of Goshen, in Orange County, New York, their other products being manufactured at Yonkers, New York. In 1898, the price for a bottle of Lactopeptine was 85 cents (Watt 1977:140). Lactopeptine originally was bottled in a cylindrical, cobalt blue bottle, changing to the amber colored, square bottle design about 1880 (Wilson and Wilson 1968:124).

The bottle for a similar product, PEPTONOIDS, a medicinal food manufactured by Arlington Chemical Company of Yonkers, New York, was found in the south wall dump. The embossed square bottle, blown after 1885, has a tooled, single-band, collared lip. The Peptonoids brand name was registered in 1885. The Arlington Chemical Company, owned by Reed and Carnrick, was established in Yonkers, New York, by John E. Andrus about 1877 (Nelson 1980:122). The Peptonoids beef formula was patented under Patent Numbers 412,836 and 412,837 on October 13, 1889 (U.S. Patent Office 49:317). Information on Peptonoids also appears in the article previously mentioned under Lactopeptine (Scientific American 1888[58]:14). The slug plate, which was inserted into the glass mold to produce the embossing, was patented in 1875, as was air venting that appears on the base of this bottle. This neatly blown glassware was not in general production until 1890 (Thomas 1977:iv), making the Peptonoids bottle found at the Peniel one of the earlier bottles produced with this new technology.

External medications found in the dump are represented by a cylindrical vial embossed with the words, ST JAKOBS OEL/VOGELER CO./BALTIMORE, MD U.S.A and HC CO/84, on the body. The pale green vial with a tooled, double-collared lip and air vents was found in the west wall dump. St. Jakobs Oel formula was patented in 1877 as an internal or external medicine for rheumatism and neuralgia (Wilson and Wilson 1968:136). The patent was not located in the U.S. patent records. Use of the St. Jakobs Oel brand name began in 1878. In 1896, the H. C. Co. base mark was applied for by Henry C. Dilworth of New York City, who claimed use of it since May 2, 1895 (U.S. Patent Office 76:957). During the gold rush, St. Jakobs Oel sold for 45 cents a bottle (Watt 1977:141).

A complete, unembossed Mentholatum jar made between 1917 and 1938 was found in the south wall dump. The squat, cylindrical milk glass jar has screw threads and a semi-automatic mold seam around the shoulder. The jar pattern was originally manufactured by Whitall, Tatum, and Company, in business from 1847 to 1938. Whitall, Tatum, and Company used the W. T. Co. trademark on the bases of all their bottles and jars for the 14 year duration of the design patent, from 1902 until it expired in 1916. This pattern would place the date of manufacture of this unembossed Mentholatum jar after their patent expired in 1916. Many glass companies, such as T. C. Wheaton Company of Millville, New Jersey, used semi-automatic glass making machines as late as 1938 (Wheaton Industries 1988:2).

Four Vaseline jars were found in the west and south wall dumps of the Peniel and the overlying strata in the southeast corner and along the south wall. All the jars are squat, wide mouth cylinders of clear glass made in an Arborgast machine. Two of the jars have screw threads; the other two jars have tooled, single-band, collared lips. Three different date ranges are represented, based on the glass composition of the jars. One manganese jar dates from 1893 to 1917, whereas one selenium jar was
most likely made between 1911 and 1930. The two remaining jars dated from 1893 to 1930. Another external remedy container recovered from the site was a rectangular bottle that had contained Nyal Compound Larkspur Lotion, used for "destroying parasites which infest the hair." The bottle had been made in an automatic bottling machine between 1916 and 1929. In addition to the embossing, Bottle Made In U.S.A. Patented Aug. 29th 1916, on the reverse shoulder, this bottle bears the letter “O,” inside a square. This trademark was granted to the Owens Bottle Company of Toledo, Ohio, on March 16, 1920 (TM 13,000), which claimed use since 1914 (U.S. Patent Office 272:540). Owens Bottle Company became Owens-Illinois Glass Company in 1929 (Walbridge 1969:11), and on April 20, 1929, their trademark changed to a figure, “O-I,” inside a Diamond (TM No. 269,225; U.S. Patent Office 393:43). The Skagway agent for Frederick Sterns and Nyal Remedies in 1911 was William Britt Druggist (The Daily Alaskan 1911).

The remaining external remedy represented at the Peniel was an antiseptic named PASTEURINE that came in a cylinder with a ghost mold seam. The bottle, which was blown after 1893, was found in the west wall dump.

Three bottles found in the excavation had once held some unknown prescription medicine. The first bottle is a clear, oval bottle of selenium glass with a tooled, rolled lip and embossed with the numeral “2” on the shoulder and the letter “C” on the base. The letter “C” is the trademark of Consumers Glass Company of Canada. This trademark history dates the manufacture for these bottles between 1917 and the demise of this glasshouse in 1925 (Stevens 1967:xiv). One bottle was found in the west wall dump, whereas the other was located in the upper strata in the southeast corner of the house.

The second prescription bottle found is a clear oval bottle with a tooled, flared lip, air vents, and embossed on the base with the letters “I. G. CO.” inside a diamond shape. This trademark is found in the Illinois Glass Company’s Illustrated Catalogue and Price Guide of 1903. Illinois Glass Company was issued a license to manufacture medicinal type bottles on automatic bottle machines in 1914 (Scoville 1948:105-108), and began using the “I” inside a diamond trademark in 1915 (Peterson 1973:41). This pre-machine made bottle, blown before 1915, was found in the west wall dump.

The third prescription bottle found at the Peniel is a Whitall-Tatum and Company bottle blown between 1901 and 1912. The amber-colored bottle is rectangular, with a front label panel, a single-band, collared lip, and the letters “W(T.CO)/U.(S.A.)” embossed on its base. This particular bottle design was registered in 1898. In 1901, Whitall-Tatum and Company, whose trademark was W. T. & Co., became the Whitall-Tatum Company, with a W. T. Co. trademark (James 1967:75). By 1912, the majority of Whitall-Tatum bottles were machine made (James 1967:78).

Another Whitall-Tatum bottle, embossed with the letters, WTCO/Z/USA, on its base, was also recovered from the excavation. The bottle is square with a tooled, rolled lip and air vents, indicating that it was manufactured between 1901 and 1912.

Two other bottles retrieved from the excavation have been identified as medicinal bottles by their shape, although the brand and contents are unknown. The first container is a rectangular bottle with a fluted neck and shoulders, graduation marks on the side, the symbols “3ii” embossed on the shoulder, and a letter “I” inside a diamond symbol on the base. The trademark showing an “I” inside a diamond symbol was used by the Illinois Glass Company between 1915 and 1929 (Peterson 1985:41). Illinois Glass Company became the Owens-Illinois Glass Company in 1929 (Walbridge 1969:88). Owens-Illinois used the trademark, O-I inside a diamond, registered on April 1, 1930, claiming use since April 20, 1929 (U.S. Patent Office 393:43). The second unidentified bottle is a rectangular, aqua-colored bottle, embossed with an “O” inside a square. Fragments of the bottle are partially melted. The trademark featuring the “O” inside a square was used by Owens Bottle Company from 1914. In 1929, Owens Bottle Company became the Owens-Illinois Company (Walbridge 1969:11), and began to use the O-I inside a diamond trademark from April 20, 1929.

Two eyedroppers were found in the west wall dump. James B. Schmerhorn of Maiden, New York, patented the eye dropper—a small but revolutionary patent—on May 10, 1898, under Patent No. 603,978 (U.S. Patent Office 83:871).

Four unidentified embossed bottles, all of which have tooled lips and three of which show air vent scars, were found in the dump levels. One of the
bottles had once contained clove oil, used to alleviate toothache. Nine unembossed bottles with tooled lips that are either flared, rolled, or have a single- or double-band, collared lip, were also found in the dump. These bottles could be dated between 1890 and 1930 because of the technology used to produce the finishes.

Along with medicinal bottles, a transfer-printed pottery chamber pot, two enema tubes, and possibly fragments of a thermometer were found in Unit 45. Of further interest, these medicinal bottles, in context with other bottles and artifacts in this cluster, appear to be the "older" type of bottles.

Several drugstores, including N.K. Wilson, Pill Box Drug Store, Kelley and Co., and Britt Druggist, operated in Skagway during and following the Klondike Gold Rush. Most of the medicinal items excavated from the Peniel were also available through Canadian distributors and were only shipped into the Yukon through U.S. ports before air service was instituted and the Alcan (Alaska) Highway was built.

Three enema tubes made of hard, black rubber were excavated, two from Unit 23.VI, and one from the adjacent Unit 44.VI. A cream-glazed, sanitary-ware chamber pot was also excavated from Units 23.IV, 23.VI, and 44.VI. This chamber pot, made of whiteware with an applied, brown decal print (Figure 45), has an indented number 12 on the base but is otherwise unsigned. This pot was mended nearly complete from 7 sherds.

Two other chamber pots were excavated, neither as complete as the brown decal-printed pot. One of these is a white-glazed pot of a quality paste, decorated with a turquoise vine-and-leaf transfer print. The pot bears a turquoise printed base mark, signed with the name, BISMARK, inside a Banner, F. W. & CO./ENGLAND. This signature was used by F. Winkle and Company of Stoke, England, between 1890 and 1910 (Godden 1964:678). Sherds of this chamber pot from Unit 23.II and IV mended with sherds from Units 44.II and 45.VI.

The other chamber pot of an unornamented white-glazed ironstone was excavated from Unit 69.VI. The base of the pot is signed on with the mark, WARRANTED/eagle inside wreath/K. T. & K./GRANITE. This basemark is identified as the mark of Knowles, Taylor and Knowles of East Liverpool, Ohio, and is dated as having been manufactured between 1890 and 1907 (Gates and Ormerod 1982:119).

Recent medicinal-oriented artifacts found in the excavation include a modern Band Aid from the surface level of Unit 71.II, a squeeze tube cap from Unit 66.V, and a squeeze tube fragment from Unit 68.III. The screw-threaded squeeze tube cap is composed of a hard, black plastic and embossed with the brand name MENTHOLATUM in a circle on the top. Mentholatum, a medicinal salve and liniment product of the Yucca Company of Wichita, Kansas, was produced after December 1894 in metal tubes, or small white milk glass jar containers. The Mentholatum brand name was registered with the U.S. Patent Office on November 19, 1895 (U.S. Patent Office 74:1280). The brand name, WORDEN'S CATARRHAL JELLY, is embossed around the shoulder of a lead metal squeeze tube fragment. No information was found about this brand of medicine, which was intended for the treatment of nose and throat inflammations.

In addition, five fragments of an apparent medicinal container were found in the excavation. The pieces are fragments of an oval tin can on which a metal cap would fit, on which are printed with dark blue lettering on white the partial words, "--here--- particle of --any med--/--ny/th/part of/and/- oduces/---sne/---too Pat. Off---/Veh---". Additional identification was not made, due to the extremely rusted condition of the particles.

Figure 45. Brown printed chamber pot.
PERSONAL ARTIFACTS

The artifacts in this group include items that were generally owned and used by one person only, and are not included in the Activities Group. Categories in the Personal Artifacts Group include clothing, clothing fasteners, clothing accessories, personal ornamentation, grooming and hygiene, and miscellaneous.

CLOTHING

Textiles, leather, and rubber fragments, all in poor condition, compose the inventory of clothing items found at the Peniel. A total of 567 artifact fragments was collected from the site. None of the badly deteriorated textile remains, which shredded and disintegrated when handled, could be functionally identified. Most of the leather and rubber items, which are somewhat less severely deteriorated, could be identified. The artifact fragments are categorized in Table 13.

Table 13. Inventory of clothing fragments.

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>324</td>
</tr>
<tr>
<td>Leather</td>
<td>1</td>
</tr>
<tr>
<td>Shoes</td>
<td>44 (from 3 leather high-top shoes)</td>
</tr>
<tr>
<td>Boots</td>
<td>36 representing 1 leather work boot</td>
</tr>
<tr>
<td>Boots</td>
<td>150 from 1 pair India rubber boots</td>
</tr>
<tr>
<td>Moccasin</td>
<td>1</td>
</tr>
<tr>
<td>Gloves</td>
<td>6 representing two leather gloves</td>
</tr>
<tr>
<td>Hat</td>
<td>5 representing one felt hat</td>
</tr>
<tr>
<td>Total</td>
<td>567 clothing fragments</td>
</tr>
</tbody>
</table>

Textile materials found at the site include cotton, canvas, rayon, wool, burlap, and felt. Fragments of white and dark brown machine-knit cloth and a black and brown plaid material were found, as well as identified loom weave patterns of a tabby (plain) weave and both fine and coarse twill weaves. A very high percentage (91%) of the clothing remains are dark colored, mostly black or brown. These colors may reflect the “winter colors,” common at the turn-of-the-century, or work clothes, both of which tend toward dark colors. The canvas fragments may be either clothing remains or tent fragments.

Nine pieces of burlap are included with the textiles, although they were not generally used for clothing, but as recycled bulk containers or gunnysacks.

Five items of leather footwear and one pair of rubber boots were found at the site. One complete high-top shoe, made of a black-dyed calfskin, was retrieved from Unit 23.VI. The shoe’s upper is machine-stitched, and its sole and heel are nailed in place. The shoelaces are laced through pairs of seven eye holes and three hooks. Remnants of two other high-top shoes were found scattered about in Units 19/4, 44, 45, and 66 through 70. Portions of a heavy work boot were also recovered from Unit 45. A hand-cut sole fragment of one moccasin was found in Unit 66.V. The moccasin may have been locally made by moccasin makers who advertised this custom-made footwear in the early Skagway directories (Polk 1903–1915). One pair of India rubber knee-high boots, fragile and fragmented into 150 pieces, was retrieved from Units 23, 44, and 45. The soles of the boots are embossed with the trademark, OLD COLONY RUBBER CO.

A cluster of 23 leather fragments found in Units 23 and 44 appear to be part of a cape or cloak. This outer garment piece bears a punched keyhole design and tear-drop stamping along its edge.

Other remnants of leather wearing apparel identified at the Peniel include the finger portions of two gloves—one glove found in Unit 45, the other glove located in Unit 68. It was not possible to tell if the gloves were used as dress or work gloves.

Remnants of one felt hat from Unit 73.IV complete the clothing assemblage from the site. All of the clothing remnants came from deposits dating from the early 1900s through 1930.

CLOTHING FASTENERS

Ten identifiable types of clothing clasps and shoe fasteners were collected from the excavations and are itemized in Table 14.
Table 14. Clothing fasteners and shoe fasteners.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoe Eyes</td>
<td>60</td>
</tr>
<tr>
<td>Snaps</td>
<td>26</td>
</tr>
<tr>
<td>Safety Pins</td>
<td>16</td>
</tr>
<tr>
<td>Buttons</td>
<td>102</td>
</tr>
<tr>
<td>Buckles</td>
<td>9</td>
</tr>
<tr>
<td>Rivets</td>
<td>7</td>
</tr>
<tr>
<td>Suspender Clasps</td>
<td>2</td>
</tr>
<tr>
<td>Garment Strap Guides</td>
<td>11</td>
</tr>
<tr>
<td>Garter Hooks</td>
<td>7</td>
</tr>
<tr>
<td>Fastener (?)</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>241</td>
</tr>
</tbody>
</table>

Shoe eyes, hooks, snaps, and safety pins found at the site are machine made of copper or brass based metal. The remainder of the fasteners are either made of copper, brass, or ferrous metal that has oxidized. Five of the items bear stamped trademarks. Two snaps are stamped, one with the word, SCOVILLE, the other with the brand name, MEYERS. One small buckle is stamped with the mark, FINIPARIS, and two garter hooks are stamped with the LINDSAY name. A total of 102 buttons was found at the dump site. The buttons, itemized by composition, include: 6 celluloid, 18 white milk glass, 11 glass, 43 metal, 11 shell, 8 bone, 1 metal and glass button, 1 ceramic, 1 rubber or BAKELITE, and 2 plastic buttons.

Clustering of fasteners appeared in Units 68.VI, 70.VI, and 71.IV, although these clusters were not associated with any clothing or textile remains. The age of items found in Unit 68.VI was determined by glassware also found in the unit, whose date of manufacture was between 1909 and 1915. Liquor bottle seals from Unit 70.VI date to between 1894 and 1895, while glass from the same provenience dates to between 1902 and 1907. Unit 71.IV was dated after 1936 by the presence of two plastic buttons.

Clothing accessories found at the Peniel include a black rayon umbrella and the remains of at least two hand purses. The umbrella remnants, consisting of 15 wood and metal spokes with adhering rayon cloth fragments, were recovered from Units 69.VI, 71.IV, 71.III, 71.VI, and 86.V. Viscose rayon was developed in 1892 but not widely used before 1910. Rayon was initially called artificial silk, imitation silk, or wood fiber silk. In 1911, the Viscose Company of Pennsylvania began producing the material and selling it under the name rayon (Encyclopaedia Britannica 1970(9):230).

The rim frame of a small coin purse, recovered from Unit 71.IV, may be associated with a purse clasp found in a cluster of artifacts, also located in Unit 71, east of the wood fence (Feature 15). Another metal purse frame was recovered from Unit 70.VI.

PERSONAL ORNAMENTATION

A total of 19 items relating to personal ornamentation was recovered from the excavation. These articles are itemized in Table 15.

Table 15. Articles for personal ornamentation.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beads</td>
<td>8</td>
</tr>
<tr>
<td>Locket</td>
<td>1</td>
</tr>
<tr>
<td>Lapel Pins</td>
<td>3</td>
</tr>
<tr>
<td>Shirt Studs</td>
<td>5</td>
</tr>
<tr>
<td>Cuff Link</td>
<td>1</td>
</tr>
<tr>
<td>Collar Stay</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
</tr>
</tbody>
</table>

Seven of the eight beads in the inventory are manufactured of glass; one bead is made of plastic. Five clear, six-sided, faceted beads were recovered from adjacent Units 64.03 (1) and 69.VI (4). These beads appear to be associated with a royal blue seed bead, an ornamental copper lapel pin, and a finely engraved locket, all found in Unit 69.VI. Unit 64.3, a unit excavated beneath the Mission building, is dated later than a Sanford’s ink bottle, manufactured in 1904 (Sanford Manufacturing Company 1904), that was discarded under the building. Unit 69, Stratum 13, was dated between 1902 and 1916, on the basis of glass found in that level. The remaining two beads include a yellow tubular plastic bead from the isolated Unit 150, and a blue, glass seed bead, associated with modern artifacts in Unit 71.II. Two other lapel pins were recovered from the excavations, including a photo print from Unit 23.IV.2, and a metal-backed rhinestone pin from Unit 67.8.

Two white milk glass shirt studs were found in Units 45 and 74. Three celluloid studs were recovered from Units 23.VI, 68.VI, and 71. One of the celluloid studs is possibly associated with the mother-of-pearl inlaid cuff link, also found in Unit
23.VI, which is dated between 1901 and 1907 on the basis of glass found in the unit.

GROOMING AND HYGIENE

A total of 34 artifacts relating to grooming and hygiene was assembled from the Peniel excavations. The assemblage is itemized in Table 16.

Table 16. Inventory of items relating to personal hygiene and grooming.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain hair combs</td>
<td>6</td>
<td>(9 fragments)</td>
</tr>
<tr>
<td>Fashion combs</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Straight hairpin fid</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fashion hairpin</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Other hairpins</td>
<td>2</td>
<td>(3 fragments)</td>
</tr>
<tr>
<td>Hair band</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hair wave clip</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Toothbrushes</td>
<td>5</td>
<td>(19 fragments)</td>
</tr>
<tr>
<td>Denture</td>
<td>1</td>
<td>bridge tooth</td>
</tr>
<tr>
<td>Perfume bottles</td>
<td>6</td>
<td>(3 bottles, 3 stoppers)</td>
</tr>
<tr>
<td>Cosmetic bottles</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Cosmetic jars</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>

Hair combs found at the site include two plastic combs from Units 23.II and 70.III, one rubber comb from Unit 23.IV, and three tortoise-shell type celluloid combs from Units 68.IV, 69.VI, and 84.III. In addition, the three fashion combs, used to hold hair in place, a straight hairpin, and one fashion hairpin, all composed of celluloid, were recovered (Figure 46). Two of these combs, found in Units 66.I, 67.IV, and 68.IV, are made of unornamented, mottled brown, artificial tortoise-shell. The third fashion comb, made of plain black celluloid, was found at the base of Unit 71. One fashion comb design from Unit 68.IV was patented by John T. Wilcox on January 11, 1898 (Design No. 28,156, U.S. Patent Office 82:334). The design of the hairpin found in Unit 66.I was patented by George T. Farmer on July 25, 1893 (Design No. 22,642, U.S. Patent Office 64:554). Celluloid was developed in 1869 (Friedel 1987:19). Plastic was first commercially produced in 1910 (Encyclopaedia Britannica 1979[18]:5). No particular distribution or associations were noted among the combs and artifacts from these units.

Metal hairpins were almost absent from the archaeological record at the Peniel, possibly due to the soil dampness that tended to deteriorate most metal artifacts in the excavation. Only two metal hairpins were present in the excavation, one recently manufactured bobby pin from Unit 21/2.III, and two fragments of a wire hairpin from Unit from Unit 85.VI. One aluminum spring-type hair curler and a black elastic hair band were recovered from Units 71.II and 71.IV. The hair band, which appears to be quite recent, is covered with a gold metallic material, and the ends are decorated with yellow plastic beads.

Numerous fragments of bone toothbrushes were scattered throughout the excavated units at the Peniel Mission. One toothbrush mended completely from fragments found in Units 69.V and 69.VI. Neither brand name nor name of manufacturer was apparent on the toothbrush remnants; nor were any dental container remnants found. One synthetic tooth from a denture bridge was found in Unit 23.II. No other particular associations were noted for this artifact.

Toiletry type containers recovered from the site include perfume bottles, hair dressing, and cosmetic jars. Most of these containers appeared in every other unit along the west southeast walls of the Peniel building. Cosmetic skin cream bottles found include an embossed amber-colored Dickey Pioneer Chemist jar, incompletely mended from Units III-e, and VI-e, an Ingram’s Milkweed Cream jar from Stratum VI-w, a Pompeian Massage Cream jar from Stratum VI-e, one vertically ribbed milk glass jar (mended from Strata II-e and V-w) and a plain, lead glass jar from Stratum VI-s.

The Dickey jar, rectangular with a tooled, single-
band, collared lip once contained the product, CREAM DE LIS. The Dickey Pioneer Chemist, one of the earliest druggists in San Francisco, was begun by George S. Dickey and Charles Hodge in 1850. Hodge left the company 10 years later, after which Dickey turned the management over to William Wentzell in 1867 (Wilson and Wilson 1968:112). Apparently, Wentzell assumed ownership between 1867 and 1873, when he applied for the above trademark registration. Early Dickey Pioneer Chemist cosmetic bottles were cobalt blue, changing to the amber bottles after the 1890s (Wilson and Wilson 1968:112). The Creme de Lis product was advertised until 1923 (Fike 1987:45).

The Ingram's Milkweed Cream was marketed in 1892 in a squat, cylindrical jar with screw threads made in an Arbogast machine. The cream container was patented in 1892; however, the Milkweed brand name was not trademarked until 1900. Other information on this little jar was not located, although it has been seen with a zinc metal screw-on cap, and in some cases the milk glass has turned pink, from the presence of manganese in the glass.

Pompeian Massage Cream was bottled in a squat cylinder with a rolled lip. Pompeian cream was originally registered as a trademarked brand name for a semi-liquid bath tonic. This brand name was first applied to Pompeian Massage Cream in 1901; the cream remained a popular advertised product through World War II (Sobolewski 1986:6). The Pompeian Massage Cream is pictured in its bottle, bearing an 1895 trademark, in Woodwards 1898 catalogue (Watt 1977:149), who advertised the product at 40, 60, and 80 cents a jar. This bottle/jar is pre-machine made. In 1922, the Montgomery Ward Catalog shows this jar with a screw top closure (Cohen 1922:392).

Hair preparation bottles found at the site include an amber Parker's Hair Balsam bottle, mended from Strata IV-s & VI-s, and a clear Mansfield's Capillaris container from Stratum VI-w. The Parker Hair Balsam—a dandruff remedy and hair dye—was marketed in a rectangular amber-colored jar with indented panels, air vents, and a tooled, double-collared lip. At least four technological glass manufacturing changes have been made in Parker's Hair Balsam bottles since they were first produced. Hiscox Chemical Works, Inc. was established in 1875 (Fike 1987:26); and Hiscox and Company registered Parker's Hair Balsam in 1876. The first amber bottles produced, with crudely applied lips without airventing, are an earlier variant of the tooled, neatly applied lip and air vented bottles found on the Peniel Mission Hair Balsam bottles. The tooled lip was followed by an automatic, machine-made bottle manufactured by the Diamond Glass Company of Royersford, Pennsylvania, 1885 to present. This bottle bears the D. G. Co. trademark on the base. Diamond Glass Company installed semi-automatic machinery in 1917, followed by automatic bottle machines in 1924 (Davis 1949:2). The air-vented Parker's Hair Balsam bottles recovered were probably made between 1890 and 1917, when Diamond Glass installed semi-automatic machinery. At the height of the gold rush, Parker's Hair Balsam sold at 65 cents a bottle (Watt 1977:149).

Six different brands of perfume were used and discarded at the Peniel, as indicated by the perfume bottles and stoppers found at the site. An incomplete aqua-colored bottle for Murray and Lanman's Florida Water, with a cork and lead cover seal instead of a stopper, was found in Stratum VI-s. This product came in bottles with four different types of tapered lips: an early, applied tapered lip; a tooled, tapered lip such as the one excavated at the Peniel; a machine-made tapered lip; and a screw-threaded machine made variant produced by Pierce Glass Company of Allegheny, Pennsylvania, from 1906 to the present. The Pierce Glass Company machine-made variant, which indicates that the toilet perfume contained 75 percent alcohol, was manufactured by Kemp-Barclay and Company, Incorporated of New York City.

A clear Ricksecker bottle; an oval, manganese glass container with a tooled, rolled lip; was found articulated with an embossed stopper in Stratum VI-e. The bottle was made before 1917, when manganese ceased to be used in glass production by U.S. glass manufacturers. During the period of 1872 to 1900 Theodore Ricksecker registered two trademarks in the U. S. Patent Office. The first was for a Ricksecker's Nursing Bottle, under Label No. 1,304, Registered December 11, 1877. The second trademark was for Ricksecker's Bay Rum Shaving Stick, under Label No. 1,419, Registered February 12, 1878. By 1884, Ricksecker was manufacturing perfumes, and was still in business in 1923 (Fike 1987:178).
Perfume bottle stoppers found in the excavation include: one heart-shaped stopper from Unit 69.V, one floral stopper from Unit 71.IV, and one square stopper with beveled corners, recovered from Unit 69.V. An unembossed perfume bottle found in Stratum IV-s probably is not associated with the stopper found in Stratum IV-w.

**MISCELLANEOUS ITEMS**

Seven types of artifacts relating to the personal use category were found at the Peniel. The 15 miscellaneous artifacts relating to personal use are listed in Table 17.

Table 17. Articles for personal use found in the excavation.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoe polish</td>
<td>6</td>
</tr>
<tr>
<td>Lock</td>
<td>1</td>
</tr>
<tr>
<td>Key</td>
<td>1</td>
</tr>
<tr>
<td>Pipe</td>
<td>1</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>3</td>
</tr>
<tr>
<td>Pocket knife</td>
<td>1</td>
</tr>
<tr>
<td>Chewing gum</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

One small copper lock was found in Unit 23.VI, and a small gold-plated metal key was recovered from Unit 86.V, but the two items were unassociated. Either article may have fit a locket, diary, or trinket box. Unit 23.VI was dated between 1901 and 1907 by artifacts; Unit 86.V appeared to be disturbed, and was not dated. One white ball clay pipe stem and portion of bowl incised with MCDOUG(AL) was recovered from Unit 66.VI. The surrounding associated artifacts from this stratum may have been deposited during the gold rush, as glass dates for this stratum ranged from 1898 to 1921. A small, badly rusted, double-bladed pocket knife with riveted, unidentifiable type handles was found in Unit 45.VI. This unit/stratum dated between 1914 and 1916, on the basis of several types of artifacts found there.

Of more recent manufacture, three cigarette butts, two of which have filters, were recovered from the upper strata of Units 67 and 69. Two chewing gum and gum wrappers were found, one printed with WRIGLEY’S DOUBLEMINT GUM, in red and white on green, and the other wrapper printed with BEECHNUT GUM in white and black print on red and orange metallic paper. Both wrappers came from Unit 72.II.

Six shoe polish bottles were collected from the excavation—four from the dump strata, one from Stratum IV, and one from Stratum II. The only brand-identified shoe polish container found in the dump is a square bottle with a tooled, single-band, collared lip and the trademark FRANK / MILLERS / CROWN / DRESSING / NEW YORK /U.S.A. embossed on the bottle. In addition, three unidentified shoe polish bottles, two aqua-colored and one pale green with tooled, rolled lips, and air vents were recovered from the dump. The two bottles found above the dump strata are embossed on the shoulder with the trademark WHITTEMORE’S.

A broad range of dates, from the first manufacturing of automatic bottling machine (ABM) bottles to the discontinuation of selenium has been assigned to these two bottles. One of the bottles is manufactured of a clear glass, blown between 1909 and 1930, whereas the other container is of grayish, selenium glass blown between 1911 and 1930. Whittemore’s first shoe polish bottles were clear, aqua-colored, machine-made bottles embossed around the shoulders. Later on, the company changed over to clear, colorless labeled bottles. These bottles were always cork-stoppered with an attached dauber, trademarked in 1905 under TM No. 47,510, registered November 7, 1905 (U.S. Patent Office 119:333).

**MISCELLANEOUS ACTIVITIES**

Categories within the miscellaneous artifact group include leisure items, children’s toys, office/store/school supplies, bulk storage containers, munitions, transportation items, coins, and mineral ores.

Adult recreational artifacts were limited to (1) parts of a harmonica, deposited in Strata II and IV-e probably after 1936, (2) a single wooden die from a pair of dice, recovered from Stratum VI-s, and (3) five scraps of newspaper. These few items appear to be unrelated and in no particular context as far as could be determined.

Children’s toys, somewhat more numerous at the site, were recovered from along the west wall, and
from the southwest and southeast corners of the Peniel Mission building. Two metal toy truck parts were located, one each in Units 71 and 21/24. One of these trucks is a relatively late metal Tonka toy found in the Builder's Trench and Strata II and III in Unit 71, which was recently disturbed by a posthole. The word Tonka is embossed on the wheels, four of which were found in Stratum I of Unit 71, along with a small plastic toy top embossed with the words, Made in Hong Kong. Possibly associated with the toy assemblage found throughout this unit is a small, pot metal miniature shovel blade recovered from Stratum VI.

Balloon fragments were found in Stratum II-w. Glass marbles were found in Strata VI-w, VI-s, and the upper west wall deposits. Three clay marbles—one unglazed, one glazed with a brown Bennington glaze, and one glazed with a white glaze—were located in the lower levels of Units 45, 70, and 71.

Three fragments of pink biscuit doll parts were recovered from along the south wall in Units 66.VI, 67.IV, and 68.II. These parts, which did not mend with each other, are parts of different sized dolls. One doll part from 66.VI appeared to be deposited in association with a toy tea set, a saucer of which was found in Unit 69.V, a plate from Unit 71.BT, and a toy sadiron in Unit 66.VI. One doll body part was found in Unit 47, beneath the Peniel Mission building. The other doll part, a brown glass eye, was located in the upper strata of Unit 71.

Orange, red, and green fragments of wax crayons, classified as toys, may also be associated with a school-related class or office supplies and pencil fragments. Most of these artifacts were found along the west wall of the Mission building, as shown in Table 18.

<table>
<thead>
<tr>
<th>Provenience</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>24/III</td>
<td>Red chalk, 2 fragments</td>
</tr>
<tr>
<td>ETA.8</td>
<td>Orange crayon</td>
</tr>
<tr>
<td>45.VII</td>
<td>Black rubber band</td>
</tr>
<tr>
<td>66.VI</td>
<td>Pencil lead</td>
</tr>
<tr>
<td>68.BT</td>
<td>Pen fragment</td>
</tr>
<tr>
<td>68.BT</td>
<td>Pencil lead</td>
</tr>
<tr>
<td>68.V</td>
<td>Pencil</td>
</tr>
<tr>
<td>68.VI</td>
<td>Paper clip</td>
</tr>
<tr>
<td>69.VI</td>
<td>Paper clip</td>
</tr>
<tr>
<td>70.III</td>
<td>Green crayon</td>
</tr>
<tr>
<td>70.V</td>
<td>Green chalk</td>
</tr>
<tr>
<td>70.V</td>
<td>Pencil lead</td>
</tr>
<tr>
<td>71.2A (FI)</td>
<td>Crayons (green, red, orange)</td>
</tr>
<tr>
<td>71.2A (FI)</td>
<td>3 pencils (4 fragments)</td>
</tr>
<tr>
<td>71.IV</td>
<td>Pencil lead</td>
</tr>
<tr>
<td>71.IV</td>
<td>Thumb tack</td>
</tr>
<tr>
<td>71.V</td>
<td>Thumb tack</td>
</tr>
<tr>
<td>72.II</td>
<td>Orange crayon</td>
</tr>
<tr>
<td>85.II</td>
<td>Rubber band</td>
</tr>
</tbody>
</table>

Five Sanford bottles, representing four bottle types, were found in the excavations. A cone-shaped ink or mucilage Sanford bottle with a tooled, double-collared lip was found in the west wall dump. The Sanford Manufacturing Company, including their ink and mucilage formulas and their original Royal Crown brand name, was purchased from the Sanford Brothers of Worcester, Massachusetts in 1857 by Dr. Frederick W. Redington. Dr. Redington, a professor of Greek and Latin from New York City, relocated this company to Chicago in 1866 (Sanford Manufacturing Company 1916, 1988). According to Colette Mastalarz, manager of the Consumer Service Division of the Sanford Corporation, 1891 was the first date of use of this bottle and brand name (Mastalarz 1988). This particular Sanford’s bottle is made of selenium glass, placing its date of manufacture between 1911 and 1930.

A squat cylindrical jar with a tooled, double-collared lip, dating the manufacture of the container between 1895 and 1917, was found under the house and in the lower strata along the east wall. Two other squat cylinders found in the strata above the dump have the lettering, SANFORD’S/INK around 39, on the base. These bottles, also with double-collared lips, were made in an automatic bottling machine sometime between 1914 and 1930. Levi H. Thomas (L. H. Thomas Ink Company) assigned this bottle design to the Safety Bottle and Ink Company of

Ink bottles identified and dated by the Sanford Ink Company (Mastalarz 1988) show no particular distribution pattern, although fragments from an L. H. Thomas ink bottle from Unit 67, Stratum 3 B, mended with fragments from Unit 69, Stratum 13. The bottle is a squat cylinder with a ring around the shoulder and heel and a tooled, rolled lip. Although the Thomas ink bottle design was registered in 1896, the ink bottle is shown in a patent for an ink bottle stopper registered on July 9, 1895 (U.S. Patent Office 72:207). Little information was found on the Levi H. Thomas Company to provide an end date for manufacture of this bottle. The glass composition of the bottle does contain manganese, indicating that it was manufactured before 1918.

Three bottles with the name CARTER'S embossed on the base were found in the excavation. The bottles represent two different types of containers for inks or mucilage. One type is an aqua-colored, squat cylinder with a tooled, double-collared lip, dating between 1895 and 1930. The other design is similar in shape and technology, except that the glass has a light lavender shade indicating a manganese component, which was replaced by selenium after 1917. This Carter’s ink or mucilage bottle is the L. H. Thomas Ink bottle design, registered July 21, 1896, for a patent term of 14 years (U.S. Patent Office 76:464). John W. Carter patented a formula for the manufacture of writing ink on March 12, 1872, under Patent No. 124,544. Levi Thomas assigned this design to the Safety Bottle and Ink Company, who evidently made this bottle design for Carter’s Ink Company and Sanford’s Manufacturing Company as well.

The last identified ink bottle found in the Peniel is square with a vertically paneled press pattern made after 1906. Pierce Glass Company, who used the "p" inside a circle trademark, was organized in 1906 from the Saint Mary’s Bottle Works of St. Mary’s, Pennsylvania (Peterson 1973:49). This inkwell design is pictured in a patent for an ink bottle stopper registered by Henry C. Thompson of Boston on September 23, 1890 (U.S. Patent Office 52:2082).

Three ink bottles not identified by brand were found in the dump levels, in addition to two bottles found in Stratum IV and another bottle in Stratum III. Two of the bottles in the dump were blown after 1900.

Four glue and mucilage containers were found at the site. These containers consist of a recent LePages mucilage bottle with a rubber tip applicator from Unit 66.5, a machine-made paste jar from Unit 70.II, a Sanford’s paste bottle from 69.VI and a Sanford’s mucilage bottle from Unit 64.3. Other scattered miscellaneous items include: slate fragments from Stratum 7 in Units 66 and 67, and an ornamental metal cash register top, also from Unit 66.7.

Thin sheet fragments of a brass/copper stencil were recovered from Unit 23, Strata 6.3, 7.1, and 7.2. These particles are pieces of ink stencils used to mark boxes for shipment. Cutout letters identified are the letters “CS” and “224/W. First Street.”

Bulk containers, specifically identified as parts of a barrel/keg rim and slit from Units 21/2.4 and 68.4 are represented by numerous fragments of metal bands, also recovered throughout the site. Rough-cut box slats with circular saw marks had been discarded in Unit 35 and Units 66 through 74.

Eighteen railroad spikes were recovered along the west wall in the dump deposits and in the upper layers near the top of the dump. These spikes appear only along the west wall; no other railroad artifacts were found. The presence of five of these spikes in the dump places deposition of some portions of the dump after the railroad was built in 1898.

Thirty-three cartridges, ranging from revolver cartridges to big game rifle shells, were found at the Peniel. Most of the cartridges bear headstamp marks. Such ammunition was sold by D. C. Brownell, an outfitter located at 3rd and Broadway in 1899 and probably by John F. and James F. Green, who were gunsmiths located on 9th Avenue in Skagway during 1899 (Clinton 1899:135), as well as others. One single 22-caliber, rim fire shell was recovered from the upper strata of Unit 71. This cartridge bears the headstamp mark “P” of Peters Cartridge Company of Cincinnati, Ohio, trademarked on February 26, 1895. Peters Cartridge Company, organized in 1887 at Kings Mills, Ohio, claimed that they had used this headstamp mark since January 1895. Peters Cartridge Company was absorbed by duPont and Remington in 1934 (Logan 1959:10),
dating the manufacture of this cartridge shell between January 1895 and 1934.

Five centerfire, .44 Colt revolver cartridges, bearing the UMC headstamp, were found at the site. This type of cartridge was introduced by the Union Metallic Cartridge Company about 1871 (Barnes 1972:196). One cartridge was recovered from Unit 35, Stratum 1, and four others were collected from Unit 74, Strata 4B and 9. Also four centerfire 30-30 shorts, bearing the UMC trademark, were recovered from Units 71.9, 85.9, and 86.10. One fragment of a cartridge with the headstamp, UMC/5.08-03, was recovered from Unit 70.15. The UMC headstamp was trademarked on February 26, 1884 (TM No. 10,967). Union Metallic Cartridge Company of Bridgeport, Connecticut, was organized in 1867 and merged with Remington Arms in 1902 (Logan 1959:10). Between the trademark date and merger, these cartridges were manufactured from 1884 to 1902. One 30-caliber short cartridge, found in Unit 150.5, was used in Sharps four barrels and Stetson single shots. This cartridge bears an H headstamp. The H headstamp was trademarked by the Winchester Repeating Arms Company of New Haven, Connecticut, for small arms on May 25, 1897 (TM No. 30,074). The H symbol stood for B. Tyler Henry, their chief engineer. This cartridge was designed and patented by G. R. Stetson in 1871 (Patent No.29,403) and was used as late as 1919 (Barnes 1972:276).

Three other cartridges, identified as a 32-caliber long, also bearing the H headstamp, were described as a cross between a 32 long and a 32 extra long (Logan 1959:64,66). This cartridge is shown in the Winchester catalogue for 1926/27, where its use is described "for revolvers and single shot pistols, rifles and rifle canes; also Winchester single shot rifles" (Winchester Repeating Arms Company 1926:132). Winchester Repeating Arms Company, organized from the New Haven Arms Company in 1866, was purchased by the Western Cartridge Company in 1932 (Logan 1959:201). Winchester claimed use of this trademark from July 1, 1858.

Another headstamp of Winchester Repeating Arms Company, WRA CO./.40-AH, is found on a 30-30 centerfire that was designed for a Model 94 lever action deer rifle (Barnes 1972:34). This particular shell came from Unit 68, Feature 12. Two shells with the headstamp WRA CO./.40-82/WCF were recovered from Units 44.7.2 and 45.7. These shells were introduced in 1885 for the Winchester Model 68 lever action repeater and single shot big game rifles (Barnes 1972:92, 123). This cartridge is also shown in the 1895 Montgomery Ward Catalogue, where it is described as "40 caliber, 82 grains powder, 260 grains centerfire for Winchester rifle Model 1886. Per box of 20 $0.64" (Montgomery Ward 1969:471). The 1926/27 Winchester catalogue lists this type of cartridge for the Winchester single shot and repeating rifle, Model 86 (Winchester Repeating Arms Company 1926:138). One shell marked WRA CO./.45-90/WCF came from Unit 66.7. This cartridge is a bottlenecked cartridge developed in 1886/87 for repeating big game rifles and Bullard single-shots. This cartridge is also shown in the 1895 Montgomery Ward Catalogue, to be used for the "Winchester repeating rifle 1886, 45 caliber" (Montgomery Ward 1969:472), but it is not shown in Winchester's 1926/27 catalogue.

One cartridge case that bears the headstamp, WRA CO./.40-AH, was retrieved from Unit 69, Feature 14. These WRA shells were apparently manufactured from 1886 until Winchester's purchase by Western Cartridge Company in 1932. The headstamp, S.H./46, appears on a centerfire cartridge from Unit 35 Stratum III. This model is listed in the 1895 Montgomery Ward Catalogue as the recommended ammunition for a "Spencer Carbine" rifle (Montgomery Ward 1969:470). No other information was located on this cartridge.

A total of eight coins, including six U. S. copper pennies and two U. S. nickels, was collected at the site, along with two U. S. Customs tokens. Found in Unit 72.II, which overlay a deposition of Duraglass bottles and Wrigley's Spearmint gum wrappers, the two customs tokens (or stamps) appear to date from the early gold rush era. One of the stamps, crudely cut from lead with an applied, raised circular seal, bears the inscription E.J. BRO or E.J. BRO? on the outer rim. This unidentified name may be the name of a ship rather than the customs official. An applied, raised central portion of this stamp bears the words, U.S.C./SKAGUAY, ALASKA. The obverse side of the stamp reads, BOND/NI, meaning "not in transit".

Minted U. S. coins found at the site are described in Table 19.
Table 19. Description and provenience of minted U.S. coins.

<table>
<thead>
<tr>
<th>Date</th>
<th>Denomination</th>
<th>Provenience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1897</td>
<td>U.S. cent</td>
<td>Unit 23.IV</td>
</tr>
<tr>
<td>1898</td>
<td>U.S. cent</td>
<td>Unit 45.VII</td>
</tr>
<tr>
<td>1907</td>
<td>U.S. cent</td>
<td>Unit 66.V</td>
</tr>
<tr>
<td>1916</td>
<td>U.S. five cents</td>
<td>Unit 71.IV (unit disturbed by a posthole)</td>
</tr>
<tr>
<td>1936</td>
<td>U.S. cent</td>
<td>Unit 67.II</td>
</tr>
<tr>
<td>1941</td>
<td>U.S. five cent</td>
<td>Unit 69.II</td>
</tr>
<tr>
<td>1952</td>
<td>U.S. cent</td>
<td>Unit 71.IV</td>
</tr>
<tr>
<td>1952</td>
<td>U.S. cent</td>
<td>Test Trench 21D, above pipe</td>
</tr>
</tbody>
</table>

One stoneware jar indented with the name WEYMAN on the heel was found in the excavations. This vessel is a cream-glazed, one-quart tobacco jar, filled by Benjamin F. Weyman of Pittsburgh and New York City. The trademark was registered with the U.S. Patent Office on September 18, 1894, after being used since 1866 (U.S. Patent Office 68:1516). The jar, measuring 5.9 inches (15 cm) in height and 2.7 inches (6.8 cm) base diameter, is nearly complete, missing only half of the lip after mending 23 sherds from Unit 44, Strata II and III (Figure 47). Several tobacco shops sold snuff and tobacco supplies during the gold rush, as advertised in the Skagway newspapers and directories of the time. However, it is unclear from their ads if the distributors sold the contents of this particular bulk container by the ounce or by the jar. Unusual lithic specimens, consisting of sulphur, agate quartz, and calcite recovered from the site were possibly from a mineral sample collection that had been discarded. Thirteen samples of copper were recovered from the southeast and southwest corners of the building in Units 23, 66, and 67. Associated with the copper ores in Unit 23.IV was one sample of copper ore and iron pyrite embedded in granite. Two samples of a metal embedded in quartz were also recovered from Unit 23, Stratium IV. Other miscellaneous pieces of unusual lithic material found in the excavation include calcite from Unit 45.VI, covellite mixed with copper ore from Unit 66.V, three agate quartz specimens from Units 45.VI, 66.V, and 67.III, a piece of copper/mica schist from Unit 67.I, and specimens of lead, pyrite, copper, and malachite from Unit 68.III.

Figure 47. Tobacco jar.

FUNCTIONAL ANALYSIS

The following analysis of the percentages of functional types of artifacts found in the different strata along the three walls of the Peniel is provisional, due to all the documented mixing. The representation of the various periods in Skagway has been confused by these disturbances, even though there is solid evidence for the existence of dumping activities into the twentieth century. Thus, inferences on past behavior based on analysis of the functional types at the site are presented tentatively.

Rhodes (1988:473-474) found that 36.0% of the artifacts from the 1983 and 1985 excavations were structural, versus 58.0% nonstructural and 8.0% unclassified. The lower dump strata contained a lower proportion of structural remains than the upper strata (Table 20). Rhodes concluded that the higher proportion of structural artifacts in the later periods resulted from several reconstruction events that took place in the twentieth century. The structural materials found in the dump were seen as resulting from the construction and demolition that took place during the gold rush. The strata dug in 1987 had
similar proportions of structural and nonstructural artifacts as the 1985 excavation.

The comparison of structural and nonstructural artifacts is difficult however, for many artifact classes have differential rates of disintegration. The bottles and heavier metal artifacts were well preserved, but items such as bricks, mortar, concrete, tin cans, and bones, had disintegrated into such large numbers of minute pieces that it was impossible to collect all the tiny fragments. The south wall dump, in particular, was composed almost entirely of highly decomposed chipboard, wood fragments, and dimensional lumber that was not collected. Also, most of the bricks found in the later east wall dump were not collected, as they were discovered in the backhoe trench. In addition, the number of bones does not necessarily reflect the amount of bone in a unit, as the bones found in the excavations varied from tiny calcined particles to large pieces of butchered bone.

When comparing strata within the site, this report follows Rhodes' analysis and does not include the cans, food remains, or construction materials in any comparison of functional types. As in the earlier analysis, the removal of these classes affects the proportions of the functional classes represented. Overall, the structural remains increased proportionally over the site except for Strata VII-w, IV-s, and the upper strata along the west wall. This effect is most evident in Stratum VI-w where the percentage of structural remains increases 16%, while the domestic class drops approximately 24%. This variation is largely due to a large can and bone concentration at the south end of the west wall dump.

The relative proportion of artifact classes without the cans, food remains, and construction materials is presented in Tables 21 and 22. The relative percentages of classes along the west wall is similar to the south and east wall dumps. This result is surprising, considering the large amount of wood in the south wall dump. It was expected that a higher percentage of structural metal artifacts, particularly nails, would have been found along the south wall. Although nails comprise the most numerous structural class for all three dumps (strata IV, V, and VII), the largest concentration of nails anywhere in the site was found at the south end of the west wall in Stratum VI (Figures 24*t and 25*u). This concentration may have resulted from the burning of structural wood from dismantled buildings.

Window glass was the second most numerous class of structural artifacts found in the 1987 excavation. The proportion of window glass was higher in the upper strata, particularly along the south wall where there were concentrations in Units 23 and 45. Rhodes (1988:481) also noted an increase in the proportion of window glass in the upper strata and suggested that it was a result of the breakage of windows in the Peniel and perhaps Building I.

The remaining structural classes, hardware, and utilities, have similar representations in the south and west wall dumps, but differ in the upper strata. The later deposits along the south wall have little hardware or utilities represented, whereas the west wall has slightly higher proportions than the dump. The major utility items were three plumbing features found around the building. The well pipe located in the southeast corner was probably the early water source for the Peniel before its hook up to the city water system. The sewer pipe along the south wall would be part of a septic system that constructed during the 1940s when the house was hooked up to the city system. Another ceramic sewer pipe was found along the east wall, but it is unknown whether this pipe extended under the building. Electrical items date to the 1898 installment of electricity in Skagway.

The beverage storage class comprised 44.8% of the nonstructural artifacts found in the dump during the 1983 and 1985 excavations (Rhodes 1988:479). Food storage items, the next most numerous class, make up 32.2% of the collection. The upper deposits were reversed, containing 52.3% food storage, 15.5% beverage, and 13.8% food service materials. As Table 22 shows, food service, not beverage-related artifacts, comprised the largest functional category in the lower deposits along the three walls. These differences may be more apparent than real, however, as unidentified glass was not classified in the same manner for these two studies. Rhodes (1988:245), citing reports that established a slight correlation between the color and function of curved glass (Blee 1983, 1988), has assigned unidentified amber, olive green, green, and black curved glass to the beverage class and clear, aqua, and amethyst glass to the food storage class.
Table 20. Percentages of structural and nonstructural artifacts.

<table>
<thead>
<tr>
<th>Artifact Type/Excavation % (quantity)</th>
<th>Structural</th>
<th>Nonstructural</th>
<th>Unclassified</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Strata</td>
<td>46.95 (1595)</td>
<td>36.80 (1250)</td>
<td>16.25 (552)</td>
<td>(3397)</td>
</tr>
<tr>
<td>Lower Strata</td>
<td>29.00 (5252)</td>
<td>67.10 (12146)</td>
<td>3.90 (705)</td>
<td>(18103)</td>
</tr>
<tr>
<td><strong>1987 Excavation West</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Strata</td>
<td>41.18 (1261)</td>
<td>53.13 (1627)</td>
<td>5.68 (174)</td>
<td>(3062)</td>
</tr>
<tr>
<td>Lower Strata</td>
<td>31.78 (5168)</td>
<td>58.82 (9751)</td>
<td>9.40 (1558)</td>
<td>(16577)</td>
</tr>
<tr>
<td><strong>1987 Excavation South</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Strata</td>
<td>70.64 (835)</td>
<td>24.62 (291)</td>
<td>4.74 (56)</td>
<td>(1182)</td>
</tr>
<tr>
<td>Lower Strata</td>
<td>35.44 (2887)</td>
<td>55.73 (4540)</td>
<td>8.83 (719)</td>
<td>(8146)</td>
</tr>
<tr>
<td><strong>1987 Excavation East</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Strata</td>
<td>50.24 (211)</td>
<td>44.05 (185)</td>
<td>5.71 (24)</td>
<td>(420)</td>
</tr>
<tr>
<td>Lower Strata</td>
<td>33.46 (256)</td>
<td>61.18 (468)</td>
<td>5.35 (41)</td>
<td>(765)</td>
</tr>
</tbody>
</table>

In order to determine if these classifications are appropriate for the Peniel Mission, the color of each identified bottle was compared to its function. It can be seen from Table 23 that a high proportion of the clear, aqua, and amethyst bottles are liquor or medicinal rather than food storage bottles. It therefore does not seem appropriate to classify all the unidentified glass sherds of these colors to the food storage category. However, 85% to 91% of the amber, green, olive green, and black glass bottles were beverage containers; and it could be reasonably assumed that 85% to 91% of the unidentified sherds of these colors came from beverage bottles. However, because only a portion of the unidentified glass could be classified functionally by color, all the unidentified glass sherds were left uncategorized.

Even considering these differences in classification, it is evident that food service artifacts predominate in the west wall dump excavated in 1987, making food service the largest category in the south and east wall dumps. The predominance of food service items found along the west wall is largely the result of a concentration of ceramics in Stratum VI, Units 68 and 69. The difference in the proportions of classes between the 1983, 1985, and 1987 excavations may be the result of localized variations within the west wall dump. The majority of the food service artifacts consisted of general utilitarian tableware, suggesting that much of the deposition came from businesses and other institutions in town. Further, the scarcity of fancy ceramics or cut glass at the site implies that the users were relatively poor. Two porcelain rice bowls may have been abandoned by Japanese who lived in town around the turn-of-the-century.

The dating of the dump site ceramics, which bear manufacturers' marks used as early as 1864 through an end date of 1948, involves a more complex interpretation than that of dating the Peniel glassware. Comparing ceramic to glass bottle dates, Adams and Gaw (1977:218-231) concluded that a consistency, or time lag of 21 to 23.5 years exists between acquisition dates and disposal of ceramic artifacts within an archaeological site. The dating of
the Peniel porcelain and whiteware sherds indicates that the time lag between manufacture and disposal of a ceramic artifact may be affected by the material composition and function of the item.

The wide variation in the composition and durability of the Peniel ceramics must also be taken into consideration in the determination of their deposition dates at the site. For example, Homer Laughlin's Angelus tea cups, saucers, and plate sherds produced circa 1909, were found throughout the Peniel Site strata. Decorated with a transfer-printed pattern of pink and purple thistles, the ware is a poorly manufactured earthenware, mass produced for daily tableware use. The paste of this tableware is soft and chalky, indicating that it was made of poor clay, or fired for too short a time or with a firing temperature too low to produce a quality-hard whiteware product. Under daily use, the Angelus ware did not appear to be durable enough to withstand more than a few years use. This interpretation was borne out by the dating of bottles stratigraphically associated with the Angelus ware. Barring any evidence of disturbance, this ware appeared to have been discarded within five years of use, sometime between 1909 and 1914.

In contrast, the deposition dates of the more durable, heavy, everyday ironstone tableware from the Peniel excavations range from 0 to 44 years after possible manufacture. No particular pattern of time lag was found among these whiteware artifacts, although distribution of sherds was consistent with that of glassware dates. The dates of deposition for ceramics from the Peniel site suggest that other factors—mainly the function and quality of the ware—must be considered before assigning time lag dates for ceramics.

The percentages of glass container types recovered from the Peniel are given in Table 24. Liquor and beer bottles comprised the majority of the beverage containers found at the site. Imported beer was sold in addition to the products of three breweries in town. Older pre-machine bottles with tooled lips, and automatic bottling machine bottles (ABM) were found in the lower deposits. Liquor bottles found at the site consisted primarily of whiskey containers, although cognac, rum, gin, and even creme de menthe were represented. A minimum of seven wine or champagne bottles, included in the liquor bottle category and represented by 80 olive-green sherds, was also recovered from the deposits. Rhodes (1988:492) found a much higher percentage of wine bottles in the 1983 and 1985 excavations. This difference in the proportion of wine bottles may be due to variations within the dump or to the ravages of the bottle collectors known to have dug along the south wall. Green glass was the predominant color in the 1983 and 1985 excavations (n=1866; 38.5%), as opposed to the 1987 excavations in which clear glass (46.54%) predominated.

Food storage items from the site, consisting primarily of cans, are typified largely by unidentifiable can fragments, canning jars, and commercial food bottles. Commercial food products represented included condiments such as ketchup, mustard, Worcestershire sauce, salad dressing, flavoring extracts, olives, olive oil, and onions.

At least 17 canning jars dating from 1858 to 1920 were found at the site. Three technologies of manufacture are represented in the jars: the hand-blown technique, the semi-automatic bottling machine, and the automatic bottling machine. The three types of canning jars found at the site indicate that the jars were still in use at the Peniel early in the twentieth century, as evidenced by the small jelly jars from the dump, most of which date after 1908. Because canning jars are kept and reused for a long time, the presence of all three technologies in the dump is further evidence of disturbance or a longer time span for the lower deposits.

The medicinal artifacts identified at the site ranged from bottles dating as early as the 1880s to a modern band-aid. The bottles and jars, made with either the semi-automatic or the automatic bottling process, were containers for external medicines, cough remedies, digestive remedies, and the cure-alls so characteristic of the turn-of-the-century. Thirty-four of the identified bottles were found in the dump levels along the south and west walls. All but six of these bottles had beginning dates before 1900. The two walls did not share the same brands of medicine bottles, even though the same types of medicine bottles were distributed evenly between the two dumps. Four of the seven bottles found in the upper strata mended with bottles found in the lower dumps. Only one of the three remaining bottles in the upper strata had a beginning date after 1900.

The personal artifacts recovered from the site
consist mainly of clothing, clothing fasteners, and accessories, in addition to toiletries and hygiene artifacts. Personal artifacts make up 9.14% of the nonstructural artifacts from the west wall and 11.63% of the nonstructural artifacts from the south wall. There is no significant change in percentage of personal artifacts in the upper strata except along the south wall where the personal artifacts drop to 7.08% of the total nonstructural items. These artifacts reveal little about the origin of the dump, except that personal artifacts from one or more households were deposited in the dump. The dated bottles from the dump indicate that the lower deposits may be later than previously thought.

The miscellaneous artifacts, which represent a variety of artifact classes found outside of the household, may be more instructive than the personal artifacts. The large number of ink and mucilage bottles (n=17) suggests disposal by a school or business. Pencils, crayons, rubber bands, and paper clips also imply a school or business activity. The remaining classes—cartridges and railroad spikes—in this group are not represented in large enough numbers to suggest any particular source for the dump. The cartridges recovered were the typical caliber of the turn-of-the-century and do not suggest deposition by the military. The presence of the railroad spikes could indicate that the railroad was using this dump; however, the absence of any other railroad-related items in the dump suggests that this use was unlikely.

A comparison of the relative percentages of artifact classes from the Skagway sites was attempted. However, a valid comparison is difficult because of the dissimilar collection and classification procedures employed in the different site excavations. However, the artifact classes are variously represented in the different strata from the Depot, Moore House, Peniel Mission, and the excavations at Block 37, Lot 1, across from the Depot, as shown in Table 25. The percentages of the structural classes at the Peniel are most similar to Block 37, Lot 1, located on 2nd Avenue in Skagway.

The food storage artifacts comprise the largest category of nonstructural artifacts in the south and west wall dumps. The other sites contain lower proportions of this class, particularly at Block 37, Lot 1, which has not been occupied as a residence for most of the century. The Moore House also had lower percentages of food storage remains, even though it had been a residence, largely due to the many small can fragments found in the dump. When these are removed from consideration, food service, and beverage items become the larger categories. The presence of a lot of can fragments may be characteristic of dump deposits in Skagway. Cans from the Moore House may have been deposited in its own dump, which Blee (1988:308) believes is located to the north of her excavations in the same stream channel that contained the Peniel Dump.

The lower representation of beverage items in the west wall dump relative to the south wall is unexplained. It would seem logical that beverage bottles—the most readily discarded items—would be highly represented in both dumps. It may be that beer and soda pop bottles were recycled or reused, which may account for the low numbers of these items. The unusually high percentage of beverage bottles in the upper strata in Block 37, Lot 1, consisted primarily of recent beer bottles discarded when the lot was abandoned (Stilson 1986).
Table 21. Percentage of structural artifact types.

<table>
<thead>
<tr>
<th>Provenience/Type</th>
<th>East Wall</th>
<th>South Wall</th>
<th>West Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper</td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Window Glass</td>
<td>15.13 (23)</td>
<td>17.97 (23)</td>
<td>62.57 (463)</td>
</tr>
<tr>
<td>Nails</td>
<td>65.70 (100)</td>
<td>51.56 (66)</td>
<td>36.22 (268)</td>
</tr>
<tr>
<td>Hardware</td>
<td>6.58 (10)</td>
<td>19.53 (25)</td>
<td>0.81 (6)</td>
</tr>
<tr>
<td>Utilities</td>
<td>12.50 (19)</td>
<td>10.94 (14)</td>
<td>0.41 (3)</td>
</tr>
<tr>
<td>Total</td>
<td>(152)</td>
<td>(128)</td>
<td>(740)</td>
</tr>
</tbody>
</table>

Table 22. Percentage of nonstructural artifacts* found in the excavation.

<table>
<thead>
<tr>
<th>Provenience/Type</th>
<th>East Wall</th>
<th>South Wall</th>
<th>West Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper</td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Beverage</td>
<td>4.29</td>
<td>15.32</td>
<td>32.50</td>
</tr>
<tr>
<td>Food Service</td>
<td>23.57</td>
<td>24.42</td>
<td>15.83</td>
</tr>
<tr>
<td>Food Storage</td>
<td>2.86</td>
<td>2.34</td>
<td>4.17</td>
</tr>
<tr>
<td>Medicinal</td>
<td>38.29</td>
<td>4.94</td>
<td>7.08</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>4.29</td>
<td>9.87</td>
<td>3.33</td>
</tr>
<tr>
<td>Other</td>
<td>20.00</td>
<td>38.70</td>
<td>29.58</td>
</tr>
<tr>
<td>Total</td>
<td>(140)</td>
<td>(385)</td>
<td>(240)</td>
</tr>
</tbody>
</table>

* Total % does not add up to 100 because cans and food remains are not included.

Table 23. Color and function of identified bottles from the excavation.

<table>
<thead>
<tr>
<th>Glass Color/Container Type</th>
<th>Green</th>
<th>Olive</th>
<th>Amber</th>
<th>Amethyst</th>
<th>Clear</th>
<th>Aqua</th>
<th>Total Sherds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverage</td>
<td>2.38 (12)</td>
<td>8.85 (17)</td>
<td>0.39 (3)</td>
<td>0.00</td>
<td>3.41 (22)</td>
<td>0.00</td>
<td>(54)</td>
</tr>
<tr>
<td>Liquor Storage</td>
<td>85.15 (430)</td>
<td>91.15 (175)</td>
<td>87.35 (670)</td>
<td>93.81 (106)</td>
<td>26.32 (170)</td>
<td>34.23 (344)</td>
<td>(1895)</td>
</tr>
<tr>
<td>Food</td>
<td>10.50 (53)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>33.13 (214)</td>
<td>62.79 (631)</td>
<td>(898)</td>
</tr>
<tr>
<td>Medicine</td>
<td>1.98 (10)</td>
<td>0.00</td>
<td>12.26 (94)</td>
<td>6.19 (7)</td>
<td>37.15 (240)</td>
<td>2.99 (30)</td>
<td>(381)</td>
</tr>
<tr>
<td>Total</td>
<td>15.64 (505)</td>
<td>5.95 (192)</td>
<td>23.76 (767)</td>
<td>3.50 (113)</td>
<td>20.01 (646)</td>
<td>31.14 (1,005)</td>
<td>(3,228)</td>
</tr>
</tbody>
</table>
Table 24. Percentages of glass container types* found in the excavation.

<table>
<thead>
<tr>
<th>Provenience/Type</th>
<th>East Wall</th>
<th></th>
<th>South Wall</th>
<th></th>
<th>West Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper</td>
<td>Lower</td>
<td></td>
<td>Upper</td>
<td>Dump</td>
</tr>
<tr>
<td>Beer</td>
<td>33.33</td>
<td>(1)</td>
<td>12.50</td>
<td>(2)</td>
<td>21.05</td>
</tr>
<tr>
<td>Liquor</td>
<td>33.33</td>
<td>(1)</td>
<td>18.75</td>
<td>(3)</td>
<td>10.53</td>
</tr>
<tr>
<td>Soda pop</td>
<td>0.00</td>
<td>6.25</td>
<td>(1)</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Food Storage</td>
<td>0.00</td>
<td>6.25</td>
<td>(1)</td>
<td>26.32</td>
<td>(5)</td>
</tr>
<tr>
<td>Food Service</td>
<td>0.00</td>
<td>18.75</td>
<td>(3)</td>
<td>10.53</td>
<td>(2)</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>2.00</td>
<td>(2)</td>
</tr>
<tr>
<td>Office/Store</td>
<td>0.00</td>
<td>31.25</td>
<td>(5)</td>
<td>10.53</td>
<td>(2)</td>
</tr>
<tr>
<td>Medicine</td>
<td>0.00</td>
<td>0.00</td>
<td>21.05</td>
<td>(4)</td>
<td>15.00</td>
</tr>
<tr>
<td>Toiletries</td>
<td>33.33</td>
<td>(1)</td>
<td>6.25</td>
<td>(1)</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>(3)</td>
<td>(16)</td>
<td>(19)</td>
<td>(100)</td>
<td>(38)</td>
</tr>
</tbody>
</table>

* The number of bottles per stratum is inflated because many of the bottles were found in more than one stratum.

The southeast corner of the Depot also had a high representation of beer bottles, deposited when the building was abandoned during the 1960s (Blee 1983:58).

When cans and food remains are not considered, food service items become the most common nonstructural class in the south and west wall dumps. The large number of ceramics found may have been disposed of by nearby restaurants. The Moore House had higher representation of food service artifacts in the later deposits, perhaps as a result of the normal accumulation of ceramics due to breakage. The high percentage of ceramics in the upper deposits along the west wall may be the result of mixing. Many of the items mended from sherds found in both the upper and lower deposits.

**SUMMARY**

The 1987 excavations revealed a wood dump along the south wall and a later brick dump along the east wall of the Peniel, in addition to the west wall ash and cinder dump. The dating and the stratigraphic relationships between the dumps were obscured by several later intrusions, including foundation repairs in 1937 and 1962. Along the west wall a north-south oriented trench had been excavated through the dump from Stratum III to create an apparent drainage trench alongside the wall. A large excavation filled with gravel and cobbles was also found. This excavation may have been related to the placement of a foundation for a stairwell added to the building in 1937. A large intrusion found along the south wall had created the mixed Stratum IV deposit that lay over the dump. A later excavation from Stratum III into Stratum IV for a sewer pipe was also revealed, as well as another excavation from Stratum III into IV and an intrusion from Stratum II into III for the placement of a wooden box. In the southeast corner, the placement and subsequent disconnection of a well had essentially destroyed the stratigraphy in that corner.
Table 25. Artifact classes from Skagway sites.

<table>
<thead>
<tr>
<th>Site/Artifact Class</th>
<th>Peniel Mission</th>
<th>Moore House - Operation 17(^1)</th>
<th>Block 17, Lot 1(^2)</th>
<th>Railroad Depot(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Peniel Mission</td>
<td>Moore House - Operation 17(^1)</td>
<td>Block 17, Lot 1(^2)</td>
<td>Railroad Depot(^3)</td>
</tr>
<tr>
<td>% (quantity)</td>
<td>Peniel Mission</td>
<td>Moore House - Operation 17(^1)</td>
<td>Block 17, Lot 1(^2)</td>
<td>Railroad Depot(^3)</td>
</tr>
<tr>
<td></td>
<td>Peniel Mission</td>
<td>Moore House - Operation 17(^1)</td>
<td>Block 17, Lot 1(^2)</td>
<td>Railroad Depot(^3)</td>
</tr>
<tr>
<td>Nonstructural Artifacts</td>
<td>Peniel Mission</td>
<td>Moore House - Operation 17(^1)</td>
<td>Block 17, Lot 1(^2)</td>
<td>Railroad Depot(^3)</td>
</tr>
<tr>
<td></td>
<td>Peniel Mission</td>
<td>Moore House - Operation 17(^1)</td>
<td>Block 17, Lot 1(^2)</td>
<td>Railroad Depot(^3)</td>
</tr>
<tr>
<td>Food Storage</td>
<td>5.24</td>
<td>26.97</td>
<td>7.33</td>
<td>10.18</td>
</tr>
<tr>
<td>Food Service</td>
<td>6.58</td>
<td>3.51</td>
<td>3.56</td>
<td>1.09</td>
</tr>
<tr>
<td>Food Remains</td>
<td>8.12</td>
<td>11.67</td>
<td>1.82</td>
<td>2.73</td>
</tr>
<tr>
<td>Beverage</td>
<td>-</td>
<td>8.38</td>
<td>5.55</td>
<td>0.73</td>
</tr>
<tr>
<td>Other Nonstructural</td>
<td>19.11</td>
<td>10.04</td>
<td>5.88</td>
<td>5.27</td>
</tr>
<tr>
<td>Structural Artifacts</td>
<td>Peniel Mission</td>
<td>Moore House - Operation 17(^1)</td>
<td>Block 17, Lot 1(^2)</td>
<td>Railroad Depot(^3)</td>
</tr>
<tr>
<td></td>
<td>Peniel Mission</td>
<td>Moore House - Operation 17(^1)</td>
<td>Block 17, Lot 1(^2)</td>
<td>Railroad Depot(^3)</td>
</tr>
<tr>
<td>Window Glass</td>
<td>18.29</td>
<td>8.14</td>
<td>13.87</td>
<td>14.36</td>
</tr>
<tr>
<td>Nails</td>
<td>23.62</td>
<td>25.09</td>
<td>43.06</td>
<td>59.27</td>
</tr>
<tr>
<td>Materials</td>
<td>12.72</td>
<td>4.37</td>
<td>15.49</td>
<td>4.55</td>
</tr>
<tr>
<td>Other Structural</td>
<td>2.50</td>
<td>1.82</td>
<td>3.44</td>
<td>1.82</td>
</tr>
<tr>
<td>Total Number of Artifacts</td>
<td>(4,679)</td>
<td>(21,337)</td>
<td>(2,415)</td>
<td>(550)</td>
</tr>
</tbody>
</table>

\(^1\) Blee 1988

\(^2\) Automated National Catalog System, on file Klondike Gold Rush National Historical Park, Skagway, Alaska. This information has not been published before.

\(^3\) Blee 1983
The foundation renovations also created wide trenches dug for the replacement of the foundation posts and footings. These trenches were found around the entire perimeter and along each north-south oriented row of posts. Similarly, the two restoration attempts of the rear addition have disturbed most of the area under the rear of the building. The roof section found in Unit 47 had been deposited during one of the renovations.

The artifact dates from the 1987 excavation indicate that the south and west wall dumps existed well into the twentieth century. The terminus post quem (tpq)—the beginning date for the most recent artifact in a stratum—often dated deposits to a younger age than the overlying strata. The TPQ dates indicate that the later dates are partially the result of intrusions. Use of the south and west wall dumps most likely did last into the early twentieth century, however, as indicated by the large number of post-1900 artifacts found there. The age of the dumps may be better expressed in the mean artifact dates, which average of all the dates, providing some indication of the middle point of the stratum's deposition. These dates place the mean points of deposition for the south and west wall dumps and the lower deposit along the east wall in the first decade of the twentieth century, thus indicating that intrusions are not solely responsible for the later artifacts in the lower deposits.

The later dates for the dump deposits pose some interpretive problems. Rhodes (1988) has compiled considerable photographic, historic, and archaeological information documenting that the Peniel was built on top of a dump deposited in a stream channel during the gold rush. Stratigraphic information collected in 1987 also indicates that the west wall dump predated the removal of a fence, thought to be the original west boundary fence for the Moore property. The dump dates before the removal of the fence in 1899 and probably also before the construction of the adjacent Building I. The south wall dump also postdated a fence, thought to have been constructed in 1901, along the east wall. The change in matrix from the west wall to the south wall, and the lack of a thick dump deposit under the building suggest, however, that the dumps were deposited around the building, thus postdating its construction in 1900. One early photograph also showed a channel under Building I, where the dump presently lies, documenting that the channel was filled after 1899. The lack of dump under the Peniel also affirms that the Peniel was built over a former empty streambed—not a filled-in channel. The west and south wall dumps could have been an attempt to fill in the low areas on the property after the Peniel was constructed in 1900 and perhaps even after the old channel was again exposed in Lot 3 after the removal of Building I in 1911.

Stratum IV varied from a mixed deposit containing artifacts to waterlaid sediments alternating with organic lenses. This stratum, which formed above the dump, resulted from flooding and some kind of mixing activity that incorporated dump deposits into the stratum. The Stratum III sands found around the perimeter and under the building most likely resulted from floods depositing sand over the dumps and in the former channel under the building. Stepping stones in the sands along the south wall indicate that at least one flood occurred after Dr. Polley altered the rear addition in 1937.

Attempts to compare the composition of functional artifact types in the different strata along the three walls met with limited success, due to the post-depositional mixing. Differences between the upper and lower strata were obscured by the large amount of artifacts redeposited by subsequent intrusions. Thus, comparisons of the strata to derive information on the time periods represented in the deposits could only be done tentatively.

The most significant difference between the lower deposits along the three walls was in the amount and type of structural remains within each deposit. However, it was impossible to collect the entire mass of wood, brick, cinders, and mortar uniformly; therefore the major differences between the dumps are not reflected in the percentages of structural remains. When the structural remains were not considered in the analysis, the relative proportions of classes in the south and west wall dumps and the lower deposits along the east wall were roughly similar. This was surprising, considering the large amount of structural wood found along the south wall. The large numbers of nails in the ash and cinder deposit along the west wall suggest that the nails came from burnt wood from dismantled buildings. The burning of structural materials may have taken place after the gold rush when the population of Skagway shrank dramatically.
and many buildings were torn down. The wood dump along the south wall most likely was deposited then.

The upper strata along all three walls contained higher proportions of structural remains than the lower strata—particularly along the south wall. These higher proportions most likely are related to the many renovations on the building in the twentieth century.

Ceramic artifacts were highly represented in the dumps. Even considering the possibility of a five-year time lag between manufacture and deposition, the ceramic dates suggest that the dump was open in the early twentieth century.

Beverage artifacts, predominantly liquor and beer bottles, were not highly represented in the lower deposits. The lack of alcohol containers in the early period may have been the result of recycling or reuse. The earlier excavations at the Peniel produced a large amount of wine bottles. The lower representation in the 1987 excavations appear to have been the result of local differences in the dump deposits.

Canning jars made under three different manufacturing processes were found in the dump, suggesting that they were deposited by the more stable population of the first decade of the twentieth century than by the transient miners of the gold rush.

When the Peniel dump deposits are compared to other sites in Skagway, the artifact compositions indicate that the dump deposits are unlike the Moore House in having higher percentages of food storage and food service items and food remains. This difference may have been a result of sheet trash accumulating around the single family Moore house, as opposed to an intentional dump used by a number of households or businesses. The Peniel Mission dump deposits were also unlike the upper strata in the abandoned Block 37, Lot 1, and the southeast corner of the depot, both of which contained high percentages of alcohol containers.

The upper Peniel deposits were similar to the later Moore House and the depot deposits, all of which had higher proportions of structural remains than the lower deposits. At all the locations, the higher representations can be related to known reconstruction events. Block 37, Lot 1, was unique in having lesser amounts of structural remains, most likely due to the site's abandonment during much of the twentieth century.

**RECOMMENDATIONS**

**COMPLETE ANALYSIS OF THE DATA RECOVERED**

The authors have done a good job of describing the site's history, context, and artifacts. However, the job has just begun. The artifacts' in-ground archaeological context and site history have yet to be connected to each other. The materials from this site have the potential to tell us more about the lives of the Peniel missionaries and other possible contributors to the dump. In *Historical Archaeology in Skagway, Alaska*, Adams and Brauner (1991:103,113) suggest the investigation of "social integration and control in Skagway, 1897 to present" as a viable research topic. Other archaeologists have done studies of the history and material culture of reform minded women in the nineteenth and early twentieth centuries that provide material for comparison with the Peniel Mission, so there should be an interest in this material (Spencer-Wood 1991, 1994; DeCunzo 1994). A study of this material should focus on the influences of the Peniel Mission on Skagway's citizens during the early twentieth century. Creative partnerships with universities to share the data base may result in a furthering of knowledge about these subjects and should be encouraged.

**INTERPRET THE ARCHAEOLOGY OF THE PENIEL MISSIONARIES**

The story of the Peniel Missionaries will help balance the gold rush theme interpreted at the park, adding a different perspective of the lives of women during the gold rush and the development of social controls during Skagway's transformation from a gold rush boomtown to a railroad town. The archaeological record of the Peniel Mission and the Mill Creek Dump should be included on guided and self-guided walking tours of Skagway's historic sites.
PRESERVE AND PROTECT PORTIONS OF THE MILL CREEK DUMP

NPS archaeologists excavated thousands of artifacts from the Mill Creek dump, and these are available for study. The research potential of the remaining portions of the Mill Creek Dump is amply demonstrated by the three studies that have resulted from archaeological examination of it to date. These studies clearly indicate that the dump has the potential to yield important scientific information, one of the criteria for nomination to the National Register of Historic Places. As such, even without formal nomination to the Register, disturbance to the remaining dump deposits should be avoided. Preservation of portions of this archaeological feature will allow reexamination of it using future theoretical and methodological advances.
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<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Publisher</th>
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<tr>
<td></td>
<td>1988b</td>
<td>Personal communication. Soda bottle expert.</td>
<td></td>
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<td>and Dana E. Ormerod</td>
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<td></td>
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</table>
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APPENDIX A: PENIEL MISSION GLASS
METHODS

Given the absence of most chemical action on alkali glass in the Skagway excavations, 1987 laboratory processing of the Peniel Mission glass artifacts followed simple procedures. After the priority of preserving any possible information present (paint, silver or metal coating, recycling residues, and so on), initial laboratory cleaning and processing of glass was begun by soaking fragments and bottles in warm water with a small amount of commercial TSP (tri-sodium phosphate) added. More stubbornly adhering materials, such as rust, were removed by rubbing with full-strength isopropyl alcohol. The glass was then rinsed in clear water and placed on drying racks.

Associations, possible associations, or cross-mending of artifacts from differing units or stratigraphic layers were also noted during cleaning; and such individual fragments were tagged. Following sorting and bagging in Ziploc plastic bags and cataloguing, the associated and diagnostic sherds of glass were held out for future cross-mends, analysis, numbering, and mending. Sherd edges of mended glass were cleaned with full strength ammonia before mending with Epo-Tex 301 epoxy. A total of 7,482 bottle and tableware glass sherds (or 17% of the total artifacts) were processed through the lab (Figure A1). All clear glass was sorted by mineral (flux) content: lead (or flint), manganese, selenium, and arsenic. This identification was double checked by UVS (ultraviolet spectrum) long wave/short wave light sources.

U.S. patents, designs, trademarks, and label registrations published in the U.S. Patent Office Official Gazette (1872-1932) provided the primary source of identification and dating of the Peniel Mission artifacts. This primary source was supplemented by published books and articles considered to be well documented and whose research was reputable and thorough. Technological changes in glass manufacturing of specific bottles and jars, and some labeled brand names were identified by accessible comparative bottle collections.

Dates given in this research have not been adjusted for time-lag in the transportation time to reach isolated outposts; however, bottles (not fruit jars or tableware) were generally disposed of within two to three years after purchase (Adams and Gaw 1977:1). Attribution of lips to specific glasshouses and dating cannot be done by the lip bore at this time and age. Therefore, these dimensions, except for wide mouth bottles and jars, are omitted. Likewise, redundant "post mold" and "cup mold" base terms that do not assist in dating or identification are omitted. Owens machine suction scars and valve marks on bases do assist in dating the holloware of this era, and these are noted.

Proveniences are located by strata and the side of the Peniel Mission building on which they were found, with w=west, s=south, e=east, and c=under the Peniel Mission. Abbreviations describing some bottle characteristics include: ABM=automatic bottle machine, DCL=double collared lip, MNB=minimum number of bottles, SBCL=single band collared lip, SCA=sun colored amethyst, TCL=tapered collared lip, and UVS=ultraviolet spectrum.

![Figure A1. Minimum bottle count percent.](image-url)


1880  Two piece, hinged mold introduced; formed all but the bottle finish*. Machine-made bottles first appeared in 1882, but not in general use until ca. 1890 (Thomas 1977:v).

1880-1915  Demand for clear glass bottles promoted widespread use of manganese as a glass decolorizer (Munsey 1970:55).


-1890  Crude, applied blob tops in use generally before 1890 (Thomas 1977:v).

* Also known as "semi-automatic" by glassmakers and collectors (Macbeth-Evans Glass Co. 1920:60, 61). Can also be referred to as "machine-made with hand tooled lips."

1897/1898  KLONDIKE GOLD RUSH

1907-Present  First automatic machine-made bottles (beverage) placed on the market (Riley 1958:260)

1907/1908  First machine made with tooled finish (small mouth bottles) production successful (Scoville 1948:180, 325).

1909  First small mouth machine-made prescription bottles (6 ounce ovals) made by Dominion Glass Company of Montreal, Canada (Wallbridge 1969:80).


1915-1917  Diminished use of manganese as a decolorizer hastened by loss of German sources of manganese during World War I (Munsey 1970:55).

1916-1933  ALASKA PROHIBITION


1924  Conventional screw threads adopted (Leif 1965: 27).

1930  All bottles (except art glass) in United States machine-made (Scoville 1948:78).


1933  21st Amendment repealed December 5, 1933; Prohibition ended (Anderson 1973:10).
ALE, BEER, STOUT

A.B.G.M. CO. in circle around/mold number on base (Figure A2)

Cylinder
Tooled, short TCL, bulgy neck
Air vents around shoulder
Base: embossed above
Color: amber
H 27.9 x D 7.1 cm (pint)
Dates: 1886-1928
Contents: Bottled beer, malt tonic, or near beer
Manufacturer: Anheuser-Busch Brewing Association (1879-1919); Anheuser-Busch, Inc. (1919-present), St. Louis, Missouri
Glasshouse: Adolphus Busch Glass Manufacturing Company, St. Louis Missouri (1886-1928)
Brand name: (probably) ORIGINAL BUDWEISER TM 10,068 registered June 8, 1886
Brand name used since: January 1884 (U.S. Patent Office 25:116).

E. Anheuser Company's Brewing Association first bottled beer following Louis Pasteur's U.S. patent for "brewing beer and ale" in 1873 under Patent No. 135,245 (U.S. Patent Office 3:105). In 1877, C. Conrad and Company, Mainz Geisenheim-on-the-Rhine, Germany, and St. Louis, Missouri applied for the Budweiser brand name and trademark (TM 6,376), which was registered on July 16, 1878. Anheuser-Busch Companies' Original Budweiser brochure states that C. Conrad bottled Budweiser until 1883, and then in 1891 the trademark passed to the Anheuser-Busch Brewing Association. However, the trademark records indicate the transfer was made in 1884 and registered in 1886 (see above).

Adolphus Busch Glass Manufacturing Company, owned by E. Anheuser Company's Brewing Association, manufactured their own beer bottles from 1886 through closure of their St. Louis glass factory in 1928. This St. Louis plant used the A.B.G.M. CO. trademark while the joined AB trademark was used by their bottle manufacturing company at Belleville, Illinois. Bottles bearing the A.B.G.M. CO. trademark were also made for other beer bottlers, who applied their own labels (Anheuser-Busch 1983:1). Between 1907 and 1912, Anheuser-Busch Brewing Association had a branch office at 11th and Corner of Bryant in San Francisco (McGuire 1967:1). In the years of 1908 and 1914, Skagway's Mascot Saloon, at Broadway and Third Streets, advertised Budweiser Beer in the local Daily Alaskan newspaper, as did the Board of Trade and the Monogram Saloon in 1912.

Mold Number D3 on base:
MNB 1; 7 sherds
Provenience: VI-s

Mold Number H16 on base (also associated/mended):
MNB 1; 5 sherds
Provenience: III-c

Mold Number Y1 on base:
MNB 1; complete
Provenience: VI-w

Mold Number C1 on base:
MNB 1; complete
Provenience: VI-w

Mold Number X1 on base:
MNB 2; 42 sherds
Provenience: VI-w

Mold Number unknown:
MNB 1; 1 sherd
Provenience: III-w

Figure A2. A.B.G.M. bottle.
Ale, porter, or stout

Cylinder turn-mold (Figure A3)
Applied blob top
Slight basal convex
Apple green, olive green
H x D 6.0 cm (pint)
Dates: 1887-1910

Ale is a heavily bodied, hop-flavored liquor that is fermented quickly under warm temperatures, and contains a higher alcohol content than beer. Porter, similarly heavy bodied, is a malt liquor similar to ale (Anderson 1973:5). Apparently, during the pre-Prohibition era, "porter was bottled in England and imported, or prepared for bottling upon arrival" (Baron 1962:59). No business advertisements placed by Skagway local establishments promoted ale, porter, or stout, so it is assumed that these bottles recovered came from Canadian sources.

The turn mold design for producing these seamless bottles was patented by William Modes in 1887. The applied blob lips found on these bottles are usually associated with older bottles of the 1880s and 1890s, and it is unlikely that they were made later than 1910.

MNB 4; 144 sherds
Provenience: III-e, IV-e & VI-e, III-s, IV-s & VI-s, III-c, VII-c, BT-w, II-w, III-w, IV-w, & VI-w Under

Two crescents inside oval on base; 4 on heel

Cylinder quart
Tooled crown top
Air vents around shoulder
Pale green
H 35.0 x D 8.1 cm
Dates: undetermined
MNB 1 (27 sherds - mended 90% complete)
Provenience: VI-w

ONE - around heel, I. G. CO. around/2 on base (Figure A4)

Cylinder
ABM crown top
Ghost mold seams
Base: embossed above
Aqua
H x D 7.5 cm
Dates: 1914-1929
Contents: bottled beer, malt tonic, or beverage
Manufacturer: various bottlers
Trademark: not registered

I. G. Co. is a trademark of the Illinois Glass Company and is found either plain or inside a diamond. Although Illinois Glass Company was issued a license on June 11, 1910, (along with the Charles Bolt Glass Company of Cincinnati) to manufacture automatic machine-made whiskey bottles, the American Bottle Company held exclusive rights to manufacture machine-made beer and soda pop bottles until 1914. Illinois Glass Company obtained this right to manufacture machine-made beer bottles on May 22, 1914 (Walbridge 1969:88). Illinois Glass Company became the Owens-Illinois Glass Company in 1929, placing the manufacture date of this bottle before April 1 of that year, when they adopted an O around an I inside a Diamond trademark (U.S. Patent Office 393:43).

MNB 1; 13 sherds
Provenience: II-s

Figure A3. Ale bottle neck.
Figure A4. Illinois Glass Co. maker's mark.

**NB on base** (Figure A5)

Cylinder
Short tooled TCL, brandy finish neck
Air vents on shoulders
Base: embossed above
Pale green
H 3.0 x D 7.7 cm (quart)
Dates: undetermined
Manufacturer: N B Soda Works, North Bay, Ontario

Information on this NB trademark or brand name has been quite elusive and appears to be unidentified among glass collectors. It has been suggested by people connected with the Royal Ontario Museum that this mark may be that of the North Bay Soda Works north of Toronto that closed about 15 years ago.

MNB 2; 50 sherds
Provenience: VI-w, V-s, VI-s

Figure A5. NB Soda Works maker's mark (probable).

**NO DEPOSIT NO RETURN** around shoulder

Cylinder stubby
ABM crown top
Base: NW/652/59/12, Duraglas stippled
Amber
H x D: undetermined
Date: December 1959
Contents: beer
Glasshouse: Northwestern Glass Company, Seattle, Washington (1932-present)

Northwestern Glass Company, the first successful glasshouse on the Northwest Coast, is first listed in Polk’s City Directory in 1932 (1075). As with the Owens-Illinois base number codes, this Northwestern Glass Company beer bottle was manufactured in December 1958 (Glass Packaging Institute ND:2).

MNB 1; 59 sherds
Provenience: III-s
21/O around I inside diamond/6/4606 on base (Figure A6)

Cylinder
ABM crown top
Base: embossed above
Amber
H 16.0 x D 6.8 cm (pint stubby)
Date: November 1936
Contents: beer
Glasshouse: Owens-Illinois Glass Company, Toledo, Ohio (and various other locations), 1929 to present
Trademark: “O” around I inside Diamond
TM 269,225 registered April 1, 1930
Trademark used since: April 20, 1929 (U.S. Patent Office 393:43).

Owens-Illinois Glass Company adopted the O around an I inside a Diamond trademark shortly after the company’s formation in 1929. Prohibition for beer and wine ended on April 7, 1933 (Anderson 1973:9-10). The dating code on the base of this beer bottle denotes that it was manufactured in November 1936.

MNB 1; complete
Provenience: III-e

0 around 1/3 on base (Figure A7)

Cylinder quart
Tooled crown top
Base: embossed above
Clear, selenium glass
H ? x D 8.0 cm
Manufacturer, glasshouse, and brand name unknown
Dates: 1911-1930

MNB 1; 38 sherds
Provenience: VI-s

Figure A6. Owens-Illinois maker’s mark.

Figure A7. Unknown maker’s mark.

S.B. & G. CO./12 on base (Figure A8)

Cylinder
Tooled crown top
Air vents around shoulder
Base: embossed above
Amber
H 29.0 x D 7.5 cm (quart)
Dates: 1893 and 1898-1907
Contents: beer
Manufacturer: Various bottlers
Glasshouse: Streator Bottle and Glass Company, Streator, Illinois
(1898-September 1907)
Brand name: Various bottler labels

Streator Bottle and Glass Company was formed from the Streator Bottle and Glass Works in 1898. On September 7, 1905, Streator consolidated with Ohio Bottle Company and Busch (Anheuser-Busch) Bottle Company to form the American Bottle Company, the first automatic bottle manufacturer (Scoville 1948:104). Streator continued to be operated as a hand shop (Scoville:104) until manufacture of ABM blob top beer bottles was successful on Machine Number 3 (Walbridge 1963:3). The first ABM bottles also had fire-polished lips to remove rough lip seams and cannot be differentiated between off-hand blown bottles (Miller and Sullivan 1984:15). In 1907, the first machine-made bottles were placed on the market (Riley 1958:260) and probably were fire finished without the machine-made seam running through the lip.

MNB 2; 16 sherds
Provenience: VI-s

Base Mold number 15, pint:
MNB 1; 5 sherds

W. G. CO./2 on base (Figure A9)

Cylinder
Lip finish: applied blob top
Base: embossed above
Amber
D 7.5 cm (quart)
Dates: before early 1900s
Contents: beer

Positive identification of the glasshouse using the W. G. Co. trademark has not been made. This glasshouse mark also appears on the bases of aqua, applied groove wax seal jars. Neatly finished, or machine-made bottle and jar container lips are not found with this glasshouse trademark, which indicates that the glasshouse was out of business by the early part of the 1900s. Kroll (1972:5) suggests that Wrightman Glass Company of Parker's Landing, Pennsylvania, in business between 1900 and 1930, may have been the manufacturer; but this is too late for applied bottle and fruit jar lip finishes.

MNB 1; 10 sherds
Provenience: VI-e, VI-s

Figure A8. Streator Bottle and Glass Co. maker's mark.

Figure A9. W. G. Co. maker's mark.
Unidentified pre-machine-made amber beer bottles, 1890-1930  (Tooled lips or air venting around shoulders)

MNB 3; 67 sherds
Provenience: VI-e, VI-s, II-c, VI-c, II-w, VI-w

Unidentified pre machine-made pale green/aqua beer bottles, 1890-1930  (Tooled lips or air venting around shoulders)

MNB 2; 52 sherds
Provenience: III-s, VI-s, VII-s, III-c, II-w, IV-w, VI-w, VII-w

Applied short TCL, 1870s-1910

MNB 1; 2 sherds
Provenience: VI-w

Amber stubby beer bottles, 1933-present  (ABM lips or ring around shoulder)

MNB 1; 32 sherds
Provenience: III-e, II-s, II-c, II-w, III-w, IV-w

Duraglas stippled amber beer bottles, 1940-present

MNB 1, 15 sherds
Provenience: IV-e, VI-e, II-w

CANNING JARS

No whole canning jars were recovered from the Peniel Mission 1987 excavations. As indicated by the mended embossed jars, as well as lip and base counts, a minimum of 17 jars were discarded. All three glass manufacturing technologies developed during the 1880-1930 period (off-hand blown, pre-machine-made and automatic machine-made) were represented; thus some beginning dates of the later machine-made jars could be documented as not being deposited before a definite date.

Except for the mold-blown Putnam's Lightning jar, which took an entirely different closure of metal bail and glass lid, all lids for the off-hand blown, and pre-machine-made jars were present but not articulated. Automatic machine-made Ball Perfect Mason jar metal lids or bands were not recovered.

1) BALL in script diagonally/MASON
Cylinder
Machine made with tooled finish screw threads, smooth lip, shoulder seal
Base: row of five dots
Pale green
Quart
H x D 11.1 cm
Dates: 1897-1909

2) BALL in script diagonally/MASON
Cylinder
ABM screw threads, smooth lip
Shoulder seal
Base: Roman numeral IV mold number
Deep aqua
Pint
H 13.0 x D 7.9 cm
Dates: 1909-1917
Glasshouse: Ball Brothers Glass Manufacturing Company, Muncie, Indiana, and other locations, 1888-present
Trademark: BALL (Figure A10)
TM 61,527 registered March 26, 1907
Trademark used since: 1897 (U. S. Patent Office, J. Howard Bishop, witness).

1) MNB 3; 32 sherds
Provenience: VI-s, II-c, BT-w, VI-w

2) MNB 2; 35 sherds
Provenience: V-s, I-c, III-c, VI-w

Figure A10. BALL canning jar trademark.

TRADEMARK. REGISTRED MAR. 26, 1907.

BALL in script diagonally/PERFECT/MASON horizontally
Cylinder
ABM screw threads, ghost mold seams
Bead seal
Base:
Quart
H x D (Lip opening, 6.0 cm)
Dates: 1917-1940
Jar patented: (Beaded development of Mason's November 30, 1858, fruit jar patent)
Glasshouse: Ball Brothers Manufacturing Company,
Muncie, Indiana (1888-present)
Trademark name: BALL (block script)
TM 221,780 registered December 14, 1926
Trademark name used since: 1917 (U. S. Patent Office 353:305)

In his guest of honor speech printed by the Newcomen Society in 1960, Edmund F. Ball listed the following dates and locations for Ball Brothers (Ball 1960:9-14,18):

THE WOOD JACKET CAN COMPANY,
Buffalo, New York, 1880-1885
BALL BROTHERS, Buffalo, New York, 1885-1886
BALL BROTHERS GLASS (MFG.) CO. (INC.),
Muncie, Indiana
1888-present
More than 12 plants in 11 different locations in 1960

Deep aqua or Ball Blue glass fruit jars were discontinued in favor of clear glass during World War II.

1) MNB 1; 87 sherds
Provenience: IV-s, BT-w, IV-w, V-w, V-w, VI-w

2) Valve mark on base (made between 1930 and 1940, Munsey 1970:41).

MNB 1; 20 sherds
Provenience: II-c

BOYD'S GENUINE PORCELAIN LINED around rim
White milk glass jar lid liner
D 6.5 cm
Dates: ca. 1883-1918
Glasshouse: Hero Glass Works (1869-1883); Hero Fruit Jar Company (1883-1909); Hero Metal Products (1909-1918)
Location: Philadelphia, Pennsylvania
Trademark name: BOYD (Covers or caps for fruit jars)
TM 6,557 registered September 10, 1878, Consolidated Fruit Jar Company, New York, and New Brunswick, New Jersey.
Trademark used since: not stated (U.S. Patent Office 14).

From a Hero Fruit Jar letterhead dated 1892, the printed letterhead states that Hero was... "the manufacturers of Boyd's Porcelain Lined" (Tyson 1971:19). The liner initially was patented by Boyd and assigned to the Consolidated Fruit Jar Company. Because of infringements on this patent, a suit was brought by Consolidated against the Bellaire Stamping Company on April 13, 1886 (U.S. Patent Office 35:627-630). Several fruit jar firms producing screw threaded jars also had their lids and liners stamped with variations of the Boyd trademark. Consolidated’s liners were embossed Genuine Boyd Cap around a CFJ Co. monogram made by the Medford Glass Works of Medford, New Jersey (Tyson 1971:23). These liners are actually not made of porcelain, but of opalescent and white milk glass. This liner fits the Hero Cross/Mason’s Patent Nov. 30th 1858 half gallon jar excavated in Units 69 and 70.

MNB 2; 3 sherds
Provenience: IV-s

BOYD PORCELAIN LINING/MASON’S FRUIT JAR CO. around rim

White milk glass jar lid liner
D 6.4 cm
Dates: 1885-1900
Liner Patented: Patent No. 88,439, registered March 30, 1869
Lewis R. Boyd (Executive Documents 1870, 3:352).
Glasshouse: Mason Fruit Jar Company, Philadelphia, Pennsylvania (1885-1900)
Trademark name: BOYD

Trademark name used since: not stated

Mason’s Fruit Jar Company of Philadelphia produced this jar lid liner for the Mason’s/ Keystone/ Patent/ November 30th/1858 jars (Creswick 1987:143).

MNB 2; 4 sherds
Provenience: IV-s, VI-s

GEM (PAT. NOV. 26 67 on base) (Figure A11)

Cylinder
Ground lip, screw threads
Top seal
Base: embossed above
Clear, arsenic glass
Pint, quart
D 7.0 cm (pint lip)
Dates: 1875-1909
Glasshouse: Burlington Glass Works and successors, Hamilton, Canada (1874-1909)
Trademark: not registered

Excavations conducted by the Royal Ontario Museum at the site of the Burlington Glassworks in Hamilton, Canada, reported the manufacture of Gem jars by this glassworks (Rottenberg and Tomlin 1982:6). The Hero Glass Works (of which the patent date appears on the bases of these clear Gem jars) made only Aqua gem jars, leading to the speculation that these clear Gem jar sherds from the Peniel had originated in Canada. Correspondence from the Royal Ontario Museum noted that...."Burlington Glass Works, however, produced jars that were made also in the United States. They had purchased the molds and the right to manufacture Gem jars from the Hero Fruit Jar Co. .... Another with Gem embossed and the patent Nov 26 67 marked in the base was also produced in the U.S. and Burlington.
Sherds from the Burlington Site are in clear and aqua colors. The flint glass from Burlington, however, apparently has a slight yellowish tinge to it. Gem jars clear in color were later produced by the Sydenham Glass Co., Wallaceburg (1895-1913), but these jars have a smooth lip. Burlington Glass Works on the other hand operated from 1874-1909" (Jeffery 1988, personal communication).

1) Quart  
MNB 1; 15 sherds  
Provenience: VI-s, II-c, VI-c, III-w

2) Pint  
MNB 1; 31 sherds  
Provenience: VI-s, II-c, II-w, III-w, V-w, VI-w

Figure A11. GEM canning jar sherds.

A complete clear glass Gem jar lid insert (Figure A12) was excavated from Unit 44, St. 7, Level 2. This 7.5 cm diameter lid fits the quart-sized jar.

Figure A12. GEM jar glass insert lid.

<table>
<thead>
<tr>
<th>TRADE MARK</th>
<th>arched/LIGHTNING (PUTNAM/780 on base) (Figure A13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder</td>
<td></td>
</tr>
<tr>
<td>Ground lip, old style lightning seal</td>
<td></td>
</tr>
<tr>
<td>Base: embossed above</td>
<td></td>
</tr>
<tr>
<td>Aqua</td>
<td></td>
</tr>
</tbody>
</table>
Pint
H 15.0 x D 8.0 cm (mouth, 6.0 cm)
Dates: 1882-1905
Glasshouse: Clayton (Moore Brothers) Glassworks, Clayton, New Jersey (1880-1914); Newark Star Glass Works (Edward H. Everett Co.), Newark, Ohio (ca. 1881-1904).
Trademark: LIGHTNING
TM 46,199 registered September 12, 1905
Trademark used since: April 25, 1882 (U.S. Patent Office 118:578)

Examination of letterheads from correspondence written to Charles Yockel of Philadelphia indicates that Charles Yockel (mold maker) supplied the glass molds for the Lightning fruit jars to the Clayton Glassworks and also the Newark Star Glass Works (Tyson 1971:11,15,24). In 1905, Henry William Putnam (Jr.?), then living in San Francisco, first applied for the Lightning trademark. From the other variants of Lightning jars it appears that following this trademark registration the phrase, Registered U.S. Patent Office, was added to these Lightning jars. The associated metal bail was found with this jar intact; however the embossed, patent dated glass lid was not recovered.

MNB 1; 11 sherds
Provenience: VI-w

Figure A13. Lightning canning jar (mended).

1) MASON'S arched/PATENT/NOV. 30th/1858
Cylinder
Ground lip, screw threads
Shoulder seal
Base: mold number B299/2
Pale aqua
Quart
D 9.0 cm
Dates ca.1880 - ca. 1910

2) Base: mold number 866 (or 988) deep aqua
Pint
D 7.9 cm
Dates: 1880-ca. 1910
Glasshouse: in the public domain after 1879
Trademark name: MASON
TM 7,752 registered October 28, 1879 (Filed April 12, 1877), Consolidated Fruit Jar Company, New York, New York
Trademark name used since: 1861 (U.S. Patent Office 14:269).

John L. Mason owned the Mason Manufacturing Company (New York, New York, 1869-1872) and Mason Standard Union Manufacturing (Camden, New Jersey, ca. 1873-1875) (Creswick 1987:153). Consolidated Fruit Jar Company of New York City and New Brunswick, New Jersey may have been formed from these two companies of John L. Mason. Consolidated Fruit Jar Company was the owner of John Mason's jar patents from 1861 (U.S. Patent Office 1:275).

D. and H. Chambers, Pittsburgh, Pennsylvania (1843-1886) and Whitney Glass Works, Glassboro, New Jersey (1887-1917), made canning jars for the Consolidated Fruit Jar Company (Creswick 1987:141). Possibly Lorenz and Wightman Glass, operating between 1871-1883 in Pittsburgh, Pennsylvania, were also jar manufacturers for Mason or Consolidated. An 1870 ad of Lorenz and Wightman shows this Mason's Patent Nov. 30th 1858 jar (Creswick 1987:105, 275).
1) MNB 1; 53 sherds  
Provenience: VI-w, VII-w

2) MNB 1; 16 sherds  
Provenience: III-w, VI-w

3) MNB 1; 4 sherds  
Provenience: BT-w, VI-w

showing the C.F.J. Co. monogram on fruit jars was 1885 (Creswick 1987:304). All C.F.J. Co. monogrammed fruit jars have shoulder seals.

MNB 1; 5 sherds  
Provenience: V-w, VI-w

1) C.F.J. CO. inside circle Hero Cross/MASON'S arched/PATENT/NOV. 30th/1858

Cylinder  
Ground lip, screw threads  
Shoulder seal  
Base: unknown (possibly associated with number 2 below) Pale aqua  
Quart  
H x D: unknown (Lip opening)  
Dates: 1892-1918

MNB 1; 29 sherds  
Provenience: VI-w

2) PAT (Nov)/(26) 67 on base, post-bottom mold

Cylinder  
Pale aqua  
Quart  
H x D: unknown

MNB 1; 3 sherds  
Provenience: VI-w

3) (Hero Cross) (MASON'S)/PAT(ent)/NOV. 30th/1858

(Figure A14)

Cylinder  
Base: PAT. NOV 26,67 around 566  
Aqua  
D 9.3 cm

MNB 1; 17 sherds  
Provenience: VI-w
Pat. Nov. 26 67 appears on the bases of jars made by the Hero Fruit Jar Company (and assignees), organized in 1869 (Creswick 1987:142, 267). The Hero Cross was never registered as a trademark, and little published documentation exists to date the beginning of the Hero Cross use. This shoulder seal Mason's 1858 jar patent was not in the public domain until after Mason's (Consolidated Fruit Jar Company) expiration in 1879. Peterson (1973:47) states that the C.F.J. Co. Cross was first advertised in 1892. The excavated Boyd's Genuine Porcelain Lined milk glass liner was used as the metal screw-on cap liner for the Hero Cross jars, made by the Mason Fruit Jar Company.

2) Base: mold number 193, post bottom mold
One-half gallon
D 9.3 cm
(Executive Documents 1859, 10.3:655).
Glasshouse: Mason Fruit Jar Company, Philadelphia, Pennsylvania (1885-1900)
Trademark name: not registered
Trademark name used since: unknown
1) MNB 1; 19 sherds
Provenience: VI-w
2) MNB 1; 74 sherds

Figure A14. Mason's Hero/1858 canning jar.

1) MASON'S arched/circled Keystone /PATENT/NOV. 30th/1858 (Figure A15)

Cylinder
Ground lip, screw threads
Shoulder seal
Base: mold number 85, post bottom mold
Pale aqua
Quart
D 9.0 cm
Dates: 1885-1900

Mason's patent November 30, 1858, jar sherds not otherwise associated or mended:

Unit 64, Level 3: M----/----NT/--- -Oth Aqua; 4 sherds
Unit 68, Builder's Trench: -ATE--/-V 3--/18-- Pale green; 1 sherd

Figure A15. Mason's Keystone /1858 canning jar sherds.
Unit 68, Builder's Trench: —NT/--- --TH Apple green; 1 sherd
Unit 68, St. VI: —N-/30--/--58 Aqua; 3 sherds
Unit 69, Level VI: -A-----/NO- Pale green; 2 sherds
Unit 71, Level III: -----/S/------ Aqua; 1 sherd
Unit 84, St. II: PA--/NOV Pale green; 2 sherds
Unit 86, St. VI: ----/18-- Aqua; 28 sherds

Miscellaneous fruit jar fittings

1) Glass jar lid insert (unidentified)
Square 64, Level 3
Row of four rings around rim (1 sherd)
Aqua glass sherd
H 1.1 cm
Dates: unknown

2) Red jar rubber (4 sherds), Unit 66, St. II

3) Glass jar lid liner (3 sherds - 1/2 liner)
Concentric rings around rim (complete)
White milk glass
D 6.4 cm
Dates: unknown

JELLY JARS

Giles jelly jar

Plain cylinder
Giles lid seal lip
Clear, greenish-grey selenium glass
H x D: unknown
Dates: 1913-1925

Known as the Giles cold pack vacuum jar, the lid seal that takes a rubber gasket, was introduced in 1902/1903 (Leif 1965:22). U.S. manufacturers were not located; however, Dominion Glass Co., Ltd. of Montreal, Canada (1913-1925) manufactured this jar for meat products in 3 ounce and 8 ounce capacities that could be reused as tableware (Stevens 1967:154).

MNB 1; 2 sherds
Provenience: VI-s

Greek key jelly jar

One band of small octagons below lip; two rows of Greek Key bands below octagon pattern band
Sure seal lip
Clear, manganese glass
H x D: unknown
Dates: 1908-1917

The sure-seal lip was first produced in 1908 (Leif 1965:22), and the discontinuation of manganese as a glass decolorizer in the U.S. places production of this jar between 1908 and 1917.

MNB 1; 3 sherds
Provenience: VI-e

Banded jelly jar

Five rows of vertically ribbed bands below lip
Sure seal lip
Clear, lead/flint glass
H x D: unknown
Dates: 1908-

These product packers jars were made after the 1908 introduction of the sure seal lip (Leif 1965:22), and were produced for reuse as tumblers or jelly jars.

MNB 1; 4 sherds
Provenience: II-w, IV-w

Banded Jelly Jar

Two rows of vertically ribbed bands below lip
Fluted heel
Sure seal lip

1) Clear, lead glass (Figure A16)
H 9.5 x D 5.9 cm
Dates: 1908-

2) Clear, manganese glass
Dates: 1908-1917

This packer’s type jar is labeled with jams, jellies and preserve contents. Manufacturing of the sure-seal lip began in 1908 (Leif 1965:22).

1) MNB 2; 7 sherds
Provenience: VI-s, III-w, IV-w

2) MNB 1; 3 sherds
Provenience: II-w, IV-w

Fluted jelly jar

Interior fluted heel
Sure seal lip
Clear, grayish selenium glass
H 8.7 x D 6.2 cm
Dates: 1911-1930

Producer of this jelly jar is unknown. The jar may have been used as a packer’s jar intended for reuse. The sure seal lip was introduced circa 1908 (Leif 1965:22). The glass metal was cleared by the addition of selenium—a process used between 1911 and 1930.

MNB 1; 2 sherds
Provenience: II-c, V-c

Jelly jar/bucket

Depression below rim for metal bail
Press molded
Polished rim for sure seal cap
Clear, lead glass
H 7.9 x D 7.1 cm
Dates: 1908-

Ripley and Company (later George Duncan and Sons) designed the glass jam jar buckets. Originally, these buckets took a glass lid with a Lightning seal closure (Creswick 1987:229), patented by Putnam in 1882. George Duncan and Sons became Factory D in the United States Glass Company merger of 1891. Apparently sometime after the merger, reinforcement around the bail depression was added, and the lip modified to take a metal sure seal cap, introduced about 1908 (Leif 1965:22). United States Glass Company was still operating in 1947 with a small glass factory in Tiffin, Ohio (Scoville 1948:236).

MNB 1; 4 sherds
Provenience: VI-w

Plain Jelly Jar

Cylinder
Rounded Heel
Sure Seal lip
Clear, lead and clear, selenium glass
H 9.5 cm
Dates: ca. 1925

Squire Dingee Company, Chicago, Illinois, used this style jelly tumbler to distribute preserves. It was known to be in use in 1925 having a trademarked Banner Jelly brand on metal lids (Creswick 1987:28).

MNB 1; 4 sherds
Provenience: VI-s, VI-w
Ribbed Jelly Jar (Figure A17)

Vertically ribbed interior
Sure Seal lip, ABM
Clear lead glass
Half-pint
H X W: undetermined
Dates: 1930s-present

Sure seal lips to take metal lids were introduced about 1908 (Leif 1965:22). Vertically ribbed jelly jars, also known as the Ball Jelly Mould, were produced both by Ball Brothers Glass Company, Incorporated, of Muncie, Indiana (1888-present), and Kerr Glass Manufacturing Corporation, (various locations, 1903-present). These are pictured in the 1934 Ball Blue Book (canning book) and Kerr Home Canning Book (Kerr Glass Manufacturing Corporation 1972).

MNB 1; 5 sherds
Provenience: V-s, II-w, V-w

Figure A17. Ribbed jelly jar (one-half pint).

COSMETIC AND TOILETRY BOTTLES

DICKEY/PIONEER - 1850 inside Mortar and Pestle/CHEMIST/S.F. horizontally

Rectangular

Tooled, slightly flared SBCL
Base: plain
Amber
H 14.3 x W 4.5 x T 3.8 cm
Dates: 1900-1923

Contents: cosmetics
Manufacturer: William T. Wenzell, San Francisco, California
Brand name: CREAM DE LIS
TM 1,334 registered June 24, 1873
Brand name used since: not stated (U.S. Patent Office 4:686)

MNB 1; 16 sherds
Provenience: III-e, VI-e

INGRAM'S MILKWEED CREAM around shoulder (Figure A18)

Squat cylinder jar
Arborgast mold seam around shoulder
Screw threads
Base: bottle PATd NO. 481,953
White milk glass
H 6.0 x D 4.5 cm
Dates: 1892/93-
Contents: cosmetic cream
Manufacturer: Frederick F. Ingram, Detroit, Michigan
Brand name: not trademarked before 1900

MNB 1; complete
Provenience: VI-w

Figure A18. Ingram's Milkweed Cream jar.
T. HILL MANSFIELD'S CAPILLARIS. NEW YORK around shoulder

Squat cylinder jar (Figure A19)
Tooled SBCL
Four air vents on base
Base: mold number 4
Clear, lead glass
H 7.5 x D 5.6 cm
Dates: unknown
Contents: hair preparation
Manufacturer: T. Hill Mansfield, New York, New York
Brand name: MANSFIELD'S CAPILLARIS
APPLICATION FOR THE HAIR AND SCALP, Label 2,741 registered August 22, 1882
Brand name used since: not stated (U.S. Patent Office 22:590)

Mansfield's Capillaris is advertised in Woodward's Catalogue (1898) at 60 cents a bottle (Watt 1977). No other information was located on this product.

MNB 1; complete
Provenience: VI-w

Figure A20. Florida Water Cologne bottle.

FLORIDA WATER/ MURRAY & LANMAN/ DRUGGISTS/NEW YORK vertically

Cylinder (Figure A20)
Tooled, tapered lip
Air vent on reverse shoulder

Base: plain
Aqua
H 14.7 x D 4.7 cm
Dates: 1881-
Contents: toilet water perfume (cologne)
Manufacturer: George Kemp, New York, New York
Glasshouse: unknown
Brand name: MURRAY & LANMAN
TM 8,728 Registered October 11, 1881
Brand name used since: not stated (U.S. Patent Office 21:1026)
MNB 1; 15 sherds
Provenience: VII-s

Base: plain
Amber
H 17.6 x W 6.1 x T 3.2 cm
Dates: 1890-1917
Contents: hair tonic... "used for restoring the natural color and life to grey or faded hair, importing vigor to the scalp, cleaning it and eradicating dandriff" (White 1974:87)
Manufacturer: Hiscox and Company, New York, New York
Glasshouse: unknown
Brand name: PARKER'S HAIR BALSAM
Label 553 registered February 15, 1876
(Re-registered Label 1,704, 1 October 1878)
Brand name used since: not stated (U.S. Patent Office 19:2888)
MNB 2; 39 sherds
Provenience: IV-s, VI-s

**POMPEIAN/MASSAGE/CREAM**

Squat cylinder jar
Rolled lip, ground neck
Air vents around shoulder
Base: plain
Clear, flint glass
H 6.8 x D 3.1 cm
Dates: 1895-ca. 1920
Contents: complexion cleanser
Manufacturer: Charles M. Martin, San Francisco, California
Glasshouse: unknown
Brand name: POMPEIAN (Figure A21)
TM 26,422 registered April 16, 1895
Brand name used since: January 22, 1895 (U.S. Patent Office 71:449).

MNB 1; 12 sherds
Provenience: VI-e

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**Unembossed perfumer**

Rectangular
Tooled, rolled lip, ring around base of neck
Air vents on shoulder corners
Base: plain
Clear, lead glass
H 14.0 x W 4.3 x T 3.3 cm
Dates: 1890-1930

MNB 1; complete
Provenience: IV-s

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**Perfume bottle stopper** (Figure A22)

Pressed heart shape
Screw threaded shank
Clear, manganese glass
L 4.7 cm
Dates: 1880-1917

MNB 1; complete
Provenience: V-w

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Figure A21. Pompeian Massage Cream brand name and trademark.

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**RICKSECKER/NEW YORK vertically on sides**
**(RICKSECKER across ground glass stopper)**

Oval bottle stopper
Tooled, rolled lip, ground neck
Base: plain
Clear, manganese glass

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Figure A22. Perfume bottle stopper.
Perfume bottle stopper

Pressed, square, beveled corners
Top faceted
Clear, lead glass
H 2.0 x W 3.0 cm
Dates: unknown

MNB 1; 1 sherd
Provenience: IV-w

Unembossed cosmetic jar (Figure A24)

Wide mouth cylinder
Ground lip, screw threads
Clear, lead glass
D 5.2 cm
Dates: before 1920
MNB 1; 9 sherds
Provenience: VI-s

Perfume bottle stopper

Pressed floral pattern
Ground stem
Clear, lead glass
H 3.2 x D 2.3 cm
Dates: unknown
MNB 1; 1 sherd
Provenience: IV-w

Figure A24. Unembossed cosmetic jar.

Cosmetic jar (Figure A23)

Wide mouth cylinder
Vertically ribbed pressed glass
Screw threads
White milk glass
H 6.8 x D 5.9 cm
Dates: unknown

MNB 2; 3 sherds (1 complete)
Provenience: II-c, V-w

Unembossed cosmetic jar (Figure A25)

Squat cylinder
Screw threads
Base: plain
White milk glass
H 3.6 cm x D 7.0 cm
Dates: unknown

MNB 1; complete
Provenience: VI-s

Figure A23. Cosmetic jar.

Figure A25. Unembossed squat cosmetic jar.
CULINARY BOTTLES AND PACKER'S JARS

Bordeaux olive oil

Cylinder
Tooled, SBCL, ladies-leg neck
Base: plain
Aqua
H 32.2, 36.0 x D 4.6, 6.1 cm (2 bottles)
Dates: 1880-1930
Contents: olive oil, salad oil
Manufacturer: Brandenburg Freres, William Randolph, and others
Glasshouse: unknown
Brand name: BRANDENBURG FRERES/BORDEAUX/HUILE D'OLIVE/SUPERFINE DOUBLEMENT CLARIFIER
TM 17,539 registered February 18, 1890.
Brand names used since: 1864 (U.S. Patent Office 50:843).

Two manufactures are known to have used this Bordeaux olive oil bottle style: William Randolph of San Francisco and Brandenberg Freres of Bordeaux, France. Randolph trademarked his salad oil in San Francisco, California in 1884 (Zumwalt 1980:114), and Brandenberg Freres trademarked his product on February 18, 1890 (U.S. Patent Office 50:843).

MNB 3; 8 sherds
Provenience: VI-s

Plain ketchup bottles (Figure A26)

Cylinder
Tooled TCL
Air vents around shoulder
Base: plain
Clear, lead glass
H 25.0 x D 7.0 cm
Dates: 1913-1925
Contents: tomato ketchup
Glasshouse: Dominion Glass Company, Montreal, Canada (1913-1925)

Unembossed Maraschino cherry bottle

1) Tapered cylinder (Figure A27)
Tooled, flared lip
Four air vents around shoulder
Base: unmarked
Pale green
H 15.8 x D 4.9 cm (lip bore, 4.8 cm)
Dates: 1896-1930

2) Tooled, rolled lip
Clear, selenium glass
Dates: 1911-1930
Contents: marinated cherries
Manufacturer: unknown
Glasshouse: Austin, Nichols Company, New York,
NY
Brand name: unknown
Brand name used since: unknown
Bottle patented: Design No. 25,942 registered
August 18, 1896, George Jenkins, Philadelphia,
Pennsylvania, assignor to Austin, Nichols, and
Company (U.S. Patent Office 76:1107).

TRADEMARK/ASK FOR vertically; CRESCENT
diagonally. SPICES AND/FLAVORING
EXTRACTS/CRESCENT MFG. CO./ SEATTLE
vertically. (W. T. & CO./U.S.A. on base). (Figure
A28)

1) MNB 1; complete
Provenience: VI-s

2) MNB 1; 5 sherds
Provenience: VI-w

Figure A27. Unembossed Maraschino cherry bottle.

Unembossed condiment jar

Twelve sided
ABM SBCL
Base: Owens Machine mark
Clear, grayish selenium glass
H. 11.1 X D 5.0 cm (mouth opening, 3.0 cm)
Dates: 1911-1930

MNB 1; 2 sherds
Provenience: VI-w

Figure A28. Crescent Spice and Flavoring Extract
bottle (tracing).
THE CUDAHY PACKING CO./U.S.A. on base

Squat cylinder pot
Wide mouth, slightly rolled lip
White milk glass
H 5.6 x D 4.8 cm
Dates: after 1890
Contents: provisions, extracts, and compounds from hogs, cattle, and sheep
Manufacturer: the Cudahy Packing Company, Chicago, Illinois, and South Omaha, Nebraska
Glasshouse: unknown
Brand name: REX
TM 28,558 registered July 7, 1896.
Brand name used since: 1 August 1890 (U.S. Patent Office 76:160).

MNB 4; 1 sherd, 3 bottles
Provenience: II-s, IV-s, VI-s, VI-w

Cudahy milk glass lid
D 6.2 cm

MNB 1; 1 sherd
Provenience: II-w

CURTICE BROS. CO./PRESERVERS
/ROCHESTER, NY, inside circle on shoulder

Cylinder
Tooled screw threads
Ribbed shoulders and heel
Base: not recovered
Clear, lead glass
Dates: 1888-1929
Contents: tomato ketchup
Manufacturer: Curtice Brothers Company, Rochester, New York
Brand name: BLUE LABEL
TM 18,148 registered July 8, 1890
Brand name used since: September 1, 1888 (U.S. Patent Office 52:164).

Shoulder embossing of this bottle was not recovered; however, enough associated sherds were present to reconstruct this bottle as a Curtice ketchup. According to Zumwalt (1980:101-103), production of Curtice Company preserved foods began in 1868 and is currently known as Curtice-Burns, Incorporated. "In 1929 Blue Label Ketchup came out with a wide mouth bottle..." (Zumwalt 1980:102). Bottles and jars were made for Curtice Brothers by glassworks known under various names of Reed or Rochester (Creswick 1987:40).

MNB 1; 9 sherds
Provenience: IV-s, VI-s

CUTTING PACKING CO./SAN FRANCISCO, CAL., around/GRiffin

Jar lid
Clear, flint glass
D 5.9 cm
Dates: ca. 1880-1916
Contents: jam or jelly
Manufacturer: Cutting Packing Company, San Francisco, California
Glasshouse: unknown
Brand name: Griffin Representation
TM 18,120 registered July 1, 1880.
Brand name used since: 1858 (U.S. Patent Office 52:2).

Cutting Packing Company was established in 1858 in San Francisco and is claimed to have been the oldest cannery on the West Coast. The company established branch salmon canneries on the Columbia River in 1865 and the first Alaska salmon canneries, at Sitka and Cook Inlet, in 1872. Cutting’s distributors were located in St. Louis, Chicago, Cincinnati, New York, and London by 1880. Cutting Packing Company, at 17 Main Street, San Francisco, (1880) is listed as packaging salmon, fruit, vegetables, preserves, jams, jelly, and meat in tin cans; pickles in kegs, champagne cider in quarts, and only honey in jars. (Hittell 1882:240). The date when Cutting began using glass jars for preserves, jams, and jellies was not located. In June 1899, Cutting Packing Company joined the California Fruit Canners Association, but continued to maintain its Griffin brand symbol until combining with Delmonte on November 9, 1916 (Zumwalt 1980:107). This jar
laid apparently fits a half-pint sized, clear jar embossed: Griffin/CUTTING'S/JAMS & JELLIES, of which no identified sherds were excavated.

MNB 1; complete jar lid
Provenience: IV-s

DODSON-HILLS MFG. CO. around/DH
Monogram/ST. LOUIS (Figure A29)

Wide mouth cylinder
Tooled, wide SBCL
Air-vents around shoulder
Base: plain
Pale green
H 6.8 x D 6.2 cm
Dates: ca. 1890-1897
Contents: unknown (possibly mustard)
Manufacturer: Dodson-Hills Manufacturing Company, St. Louis, Missouri

The DH monogram used by Dodson-Hills Manufacturing Company was never registered as a trademark. Dodson-Hills did register 3 brand names for ketchup on September 27, 1892, in which Blue Point, Oyster, or Dish of Oysters on Half-Shell labels appear on clear, bulbous, small mouth bottles (U.S. Patent Office 60:1882). This wide mouth bottle is also featured in a smaller size containing mustard. Earlier bottles of Dodson-Hills, apparently manufactured in the 1870s and 1880s, are aqua and emerald green glass food bottles. According to trademarks registered in 1898 (U.S. Patent Office 82:107; 83:1064), Dodson-Hils became Dodson-Braun Manufacturing Company early in 1897.

MNB 1; complete
Provenience: V-w

1) E. R. DURKEE & CO./SALAD DRESSING/NEW YORK vertically. (BOTTLE PATENTED/APRIL 17, 1877 around registry mark on base)

Tapered cylinder
Tooled, screw threads
Arbogast mold seam around shoulder
Air-vents hidden in embossing: E._ P._ Durkee_
Clear, lead glass
a) H 11.7 cm
b) H. 17.5 cm (Figure A30-left)
Dates: 1893-1929

2) E. R. DURKEE/& CO./NEW YORK vertically. (BOTTLE PATENTED/APRIL 17, 1877 around/297 on base) (Figure A30-right)

Tapered cylinder
Tooled, screw threads
Arbogast mold seam around shoulder
(No air vents)
H 12.4 x D 5.7 cm
Dates: 1893-1929

Contents: salad dressing
Manufacturer: Eugene R. Durkee, Brooklyn, New
York
Glasshouse: unknown
Brand name: **Gauntlet Brand**
TM 8,188 registered March 3, 1881
(Re-registration, filed December 26, 1871)
Brand name used since: not stated (U.S. Patent Office 19:488).
Bottle patented: unknown

1) MNB 2; 10 sherds, 1 complete bottle
   Provenience: VI-w (1a), VI-s (1b)
2) MNB 1; complete
   Provenience: VI-s

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**Figure A30. Durkee Salad Dressing bottles.**

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**Unembossed extract bottles**

1) Rectangular, indented front, reverse and side panels
   Tooled SBCL, extract neck
   Air vents on shoulder corners
   Base: plain
   Clear, lead glass
   H 14.9 x L 4.9 x W 2.4 cm
   Dates: 1890-1930
2) Selenium glass

---

Dates: 1911-1930
1) MNB 2, 3 sherds
   Provenience: II-w, VI-w
2) MNB 1; 11 sherds
   Provenience: VI-w

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**GILLETTS/HIGH GRADE/TRADEMARK inside Crescent flanking Owl/EXTRACT horizontally (E. W. GILLETT CO./CHICAGO, U.S.A. on side panels)** (Figure A31)

Rectangular, indented front and side panels
Tooled, SBCL extract neck
Air vents on shoulders
Base: plain
Clear, arsenic glass
H. 14.0 x W 4.8 x T 2.4 cm
Dates: 1880-1902
Contents: flavoring extracts
Manufacturer: Egbert W. Gillett, Chicago, Illinois
Glasshouse: unknown
Brand name: **HIGH GRADE EXTRACT**
Brand name used since: before 1874

A trademark registration for **High Grade Extract** was not located for the dates between 1872 and 1900, although it is known that "Sherer & Gillett's High Grade Extract (a former partnership) appears on embossed bottles before 1874 (Zumwalt 1980:172). E. W. Gillett also manufactured perfume extracts, for which he registered a trademark (Florentine) on October 31, 1882 (U.S. Patent Office 22:1450). Gillett operated between 1880-1902 (Fike 1987:163).

MNB 1; 3 sherds
Provenience: VI-s
trademark application for mustard (1879) was filed by Charles Gulden. Charles Gulden Company became Charles Gulden, Incorporated in 1916 (Zumwalt 1980:188). This Arbogast pre-machine-made bottle was replaced by an Owens machine-made, screw-threaded bottle with the Owens suction scar on the base (later with the H/A trademark of Hazel-Atlas Glass Company). Hazel-Atlas received a license to manufacture automatic machine-made packer’s ware on May 20, 1909 (Scoville 1948:105), which places the manufacture of this bottle before that date.

MNB 1; 13 sherds
Provenience: VI-s

Figure A31. Gillett’s Highgrade Extract bottle (tracing).

(C)HA(RLES) (GULDEN) arched/(NEW YORK)
(GULDEN’S PATENT/CAP MUSTARD in circle around/No 6 on base)

Squat cylinder
Tooled SBCL, wide mouth jar
Arbogast mold seam around shoulder
Base: embossed above
Clear, lead glass
D 6.0 cm (base)
Dates: 1893-1909
Contents: mustard
Manufacturer: Jacob and Charles Gulden, Charles Gulden, Jr., New York, New York
Glasshouse: Hazel Atlas Glass Company, Wheeling, West Virginia (1886-1964)
Brand name: bottle inside circle
TM 7,559 registered August 5, 1879.
Brand name used since: not stated (U.S. Patent Office 16:221).
Bottle patented: Design 8,207 registered March 16, 1875, Jacob Gulden (U.S. Patent Office 7:427).

Father and son, Jacob and Charles Gulden, began the Excelsior Mustard Company in 1864 (Zumwalt 1980:188). The date when Excelsior became Charles Gulden Company is unknown; however, their first
H. J. HEINZ CO./PAT. around/49 on base

Tapered cylinder
ABM SBCL
Base: Owens Machine mark, embossed above
ABM ghost side seams
Clear, lead glass
H 19.7 x D 5.5 cm (Lip bore, 3.7 cm)
Dates: 1909-1910
Contents: olives
Manufacturer: Henry J. Heinz Company, Pittsburgh, Pennsylvania
Brand name: HEINZ’S
Label 4,688 registered December 29, 1885.
Brand name used since: not stated (U.S. Patent Office 33:1502).

On July 19, 1909, Henry J. Heinz was licensed to manufacture culinary bottles for the use of his own company only (Scoville 1948: 105-108). Base mold numbers 1-100 were used by Heinz between 1874-1910 (Zumwalt 1980:209).

MNB 1; 22 sherds
Provenience: II-s

1) HORLICKS/MALTED MILK in circle around/TRADE/MM/MARK; RACINE-WIS-U.S.A. horizontally (W.T. CO./4 on base)

Cylinder
Ground lip, screw threads
Base: embossed (above)
Aqua
Half pint; one and one-half pint
Dates: 1901-1912

2) HORLICKS/MALTED MILK in circle around/TRADE/MM/MARK; RACINE-WIS-U.S.A. horizontally.

Cylinder
ABM screw threads

Base: plain
Aqua
Half-pint
Dates: 1912-1923
Contents: food preparation for infants and invalids
Manufacturer: James and William Horlicks, Mt. Pleasant and Racine, Wisconsin (Horlicks Food Company)
Glasshouse: Whitall-Tatum Glass Company, Millville, New Jersey (1854-1938)
Brand name: MM/MALTED Milk
TM 14,856 registered October 25, 1887.
Brand name used since: June 1, 1887 (U.S. Patent Office 41:358).

1) MNB 3; 85 sherds
Provenience: IV-s, VI-s, VI-c, VI-w, VII-w
2) MNB 1; 34 sherds
Provenience: II-s, VI-s

LO(NG'S)/CALIF(ORNIA)/P(RESERVES) on base

Cylinder Wide mouth packer's jar
Lip: not present, but known to be SBCL
Base: embossed, above
Clear, manganese glass
H x D: unknown
Dates: 1896-1917
Manufacturer: H. C. Long Syrup Refining Company, San Francisco, California

MNB 1; 2 sherds
Provenience: V-c

Unembossed milk bottle

1) Wide mouth cylinder
Tooled, rolled lip, internal ledge
Clear, manganese glass
H x D: unknown
Dates: 1899-1917

2) Wide mouth cylinder
ABM rolled lip, internal ledge
Clear, peach selenium glass
H x D: unknown
Dates: 1911-1930
Contents: milk
Bottle patented: Design No. 30,418 registered

1) MNB 1; 2 sherds
Provenience: VII-c

2) MNB 1; 2 sherds
Provenience: VI-w

**Unembossed mustard barrel** (Figure A32)

Barrel-shaped
Three rings around shoulder and heel
Tooled SBCL
Air vents below rings on shoulder
Base: plain
Clear, lead glass
H: 12.5 x D 4.9 cm (lip bore, 2.5 cm)
Dates: ca. 1884-1909
Contents: mustard
Manufacturer: Charles Gulden, New York, New York
Glasshouse: possibly Hazel (Hazel-Atlas) Glass Company, Wheeling, West Virginia (1886-1964)
Brand name: representation of a mustard barrel upon a circular label
TM 24,298 registered March 6, 1894.
Brand name used since: June 1877 (U.S. Patent Office 66:1589).

MNB 2; 2 sherds, 1 complete bottle
Provenience: VI-s

Figure A32. Unembossed mustard jar.

**Olive bottle**

Wide mouth oval bottle
Tooled, slightly flared lip, interior ledge; ring around shoulder
Clear, lead glass
D 5.0 cm (lip)
Date: 1930

MNB 1; 7 sherds
Provenience: VI-w

**14 On base (olive bottle)** (Figure A33)

Cylinder Wide mouth
ABM rolled lip
Ghost side mold seams
Base: Owens machine mark
Clear, selenium glass
H 16.0 x D 4.8 cm (lip bore, 3.0 cm)
Dates: unknown
Contents: olives
Manufacturer: S. S. Pierce Co., Importers and Grocers, Boston, Massachusetts
Glasshouse: unknown
Brand name: SUFFOLK BRAND
Brand name used since: 1872-1900

MNB 1; complete
Provenience: IV-s

Figure A33. Olive bottle.

2274/D on base (olive oil)

Cylinder
Applied, tapered lip
Base: embossed above
Aqua
D 6.0 cm
Contents: olive oil
Manufacturer: W. A. Castle, Springfield, Massachusetts
Brand name: CASTLE’S CREAM OLIVE OIL

MNB 3; 21 sherds
Provenience: II-c, V-c, VI-w

Unembossed olive oil bottle

Cylinder
Vertically ribbed
Tooled, tapered lip (not recovered)
Aqua
Dates: 1886-1924
Contents: olive oil

Brand name: EPICUREAN/Royal Arms of England
TM 13,922 registered December 28, 1886.
Brand name used since: June 15, 1886 (U.S. Patent Office 37:1360).
Crosse and Blackwell became a subsidiary of Nestle-Lemur Company in 1924 (Zumwalt 1980:96).

Crosse and Blackwell became a subsidiary of Nestle-Lemur Company in 1924 (Zumwalt 1980:96).
MNB 1; 5 sherds
Provenience: VI-s

Unembossed packer’s jar (Figure A34)

Twelve vertical panels
ABM SBCL
Base: Owens suction scar
Clear, grayish selenium glass
H 11.0 x D 4.8 cm
Dates: before 1930

MNB 2; 2 sherds, 1 complete jar
Provenience: III-w, IV-w, VI

Figure A34. Unembossed packer’s jar.

P. C. S. CO. Monogram (PACIFIC COAST SYRUP CO./S.F., CAL. on base) (Figure A35)

Wide mouth cylinder
Tooled, rolled lip; interior lip seal ledge
Air vents around shoulder
Base: embossed above
Clear, lead glass
H 13.7 x D 7.3 cm (base)
Dates: 1898-1930
Contents: blend of maple and white syrup
Manufacturer: Pacific Coast Syrup Co., San Francisco, California
Glasshouse: unknown
Brand name: TOBAGGAN (Figure A36)
TM 70,526 registered September 8, 1908.
Brand name used since: 1898 (U.S. Patent Office 1908:434).

Commerce and Industries of the Pacific Coast for the year of 1880 gives no listing for The Pacific Coast Company (Hittell 1882). A thorough search was made through the 1889-1891 registered trademarks and labels for the "grape" trademark stated to have been registered to Pacific Coast in October 1890 (Zumwalt 1980:326) without success. It is assumed that Pacific Coast Syrup Company began operations sometime between 1880 and 1890 and continued until closure in 1953 (Zumwalt 1980:326).

MNB 4; 13 sherds, 1 complete jar
Provenience: VI-e, IV-s, VI-s, II-c, IV-w, VI-w, Under

Figure A35. P.S.C. Co. Syrup jar (Toboggan brand).

This jar type is known generally as a pickle or relish bottle used by many product packers. The Lewis Packing Company of San Francisco used the Red Rose Brand label for pickles, chow-chow, and onions, which they distributed in this type of bottle. Charles Gulden also used this kind of container for Queen Olives registered May 16, 1899, under Label 6,932 (U.S. Patent Office 87:1079) as well as Albert Blair of Brattleboro (Vermont) Jelly Company for uncolored pickles.

MNB 1; complete
Provenience: VI-w
Unembossed packer's jar

Wide mouth cylinder
SBCL, internal ledge
Arborgast mold seam around shoulder
Base: plain
Clear, manganese glass (SCA)
H 13.7 x D 7.3 cm (base) x D 4.6 cm (mouth)
Dates: 1893-1917

MNB 2; 8 sherds, 1 complete bottle
Provenience: III-c, VI-w

Unembossed packer's jar

Wide mouth cylinder
Tooled, rolled lip, interior ledge
Base: plain
Clear, manganese glass
H 13.6 x D 7.2 (base) x D 5.2 cm (lip bore)
Dates: 1880-1917

MNB 2; 3 sherds, 1 complete bottle
Provenience: VI-c, Under

Unembossed packer's jar (Figure A38)

Wide mouth cylinder
Rolled lip
Base: cup mold
Arborgast mold seam around base of neck
Pale green (Vaseline)
H 10.3 x D 7.4 cm (lip opening, 5.5 cm)
Dates: 1893-1930

MNB 2; 2 sherds, 1 complete bottle

PATd OCT. 18th 1898 around rim

Round knobbed jar lid
Clear, lead glass
H 1.5 x D 4.5 cm
Dates: 1898-1922
Glasshouse: Pennsylvania Glass Company,
Anderson, Indiana (1888-1915), and Dunbar, West Virginia (1915-1922)
This knobbed glass lid took a wire clamp to seal the following unembossed jar.

MNB 1; complete
Provenience: VI-w

**Unembossed Schies jar** (Figure A39)

Octagonal
Tooled, flared lip, sealing ledge, ring around neck
Base: plain
Clear, lead glass
H 18.8 x D 7.0 cm
Dates: 1897/1898-1922
Glasshouse: Pennsylvania Glass Company,
Anderson, Indiana (1888-1915), and Dunbar, W.
Virginia (1915-1922)
Jar patented: Design 29,082 registered July 12,
1898, John Schies, Anderson, Indiana (U.S.

MNB 5; 20 sherds
Provenience: IV-s, VI-s, II-s, III-w, VI-w

---

**Schies jar with 331X on base** (Figure A40)

Rectangular
Vertically ribbed heel and shoulder
Rolled lip, internal seal ledge
Air vents on shoulders
Base: embossed above
Clear, grayish-green selenium glass
H. 20.0 x L 6.0 x W 4.9 cm (lip bore, 3.1 cm)
Dates: 1911-1929
Contents: Pickled, pearl onion chutney
Glasshouse: Kearns-Gorsuch Bottle Company,
Zanesville, Ohio (1893-1929)
Bottle patented: Design No. 34,957 registered
August 20, 1901, Charles H. Hess, assignor to
Kearns-Gorsuch Bottle Company, Zanesville, Ohio

This food bottle fluoresces a brilliant citron (yellow-green) under a black light, indicating uranium in the glass composition. Kearns-Gorsuch Bottle Company, who was assigned this bottle design for a 7-year term, was in business from 1893 through 1929.

MNB 1; complete
Provenience: VI-s

---

Figure A39. Octagonal Schies jar and trademark.

Figure A40. Rectangular Schies jar.
Crown TRADEMARK inside circle on shoulder; (SEVILLE PACKING CO., NEW YORK in circle around stars and crown on base)

Wide mouth cylinder
Vertically ribbed neck and heel
Tooled, rolled lip
Base: embossed above
Emerald green
H 18.1 x D 5.1 cm (Lip bore 3.4 cm)
Dates: 1897-1906
Contents: olive and pepper relish
Manufacturer: Seville Packing Company, New York, New York
Glasshouse: unknown
Brand name: OLIVETTE in script
TM 31,210 registered February 1, 1898.
Brand name used: Since December 11, 1897 (U.S. Patent Office 82:748).

Seville Packing Company is documented through 1906 (Zumwalt 1980:371).

MNB 1; complete
Provenience: VI-w

Unembossed relish jar

Oval
Three ribs scrolled around label space
Lip: not recovered
Clear, lead glass
Pint size
Dates: 1940s

MNB 1; 1 sherd
Provenience: III-w

THE T.A. SNIDER PRESERVE CO./CINCINNATI, 0. in circle on base

Cylinder
Tooled screw threads
Base: embossed above
Clear, lead glass
D 6.0 cm
Dates: ca. 1900-1923
Contents: tomato ketchup
Manufacturer: T. A. Snider, Incorporated, Cincinnati, Ohio
Glasshouse: Diamond Glass Company, Royersford, Pennsylvania
Brand name: SUNNYSIDE (Figure A41)
TM 39,035 registered October 14, 1902.
Brand name used since: January 1897 (U.S. Patent Office 78:443).

Before the development of this plain ketchup container, Snider used a vertically ribbed bottle, designed by Frank Schilling and assigned to Snider on April 9, 1898 (U.S. Patent Office 88:1057). Evidently this ribbed bottle was not popular, nor produced over a long period of time before being replaced by a plain ketchup bottle, such as the one excavated from the Peniel Mission. This plain, screw-threaded finish lip was replaced by an Owens machine-made crown top sometime after 1918. The monopoly on Owens ABM bottle machines was held until 1918, and only H. J. Heinz produced small mouth machine-made food bottles between 1909-1918 (Scoville 1948:105-108). Most Snider ketchup bottles are also embossed with the glasshouse D inside a Diamond trademark of Diamond Glass Company, Royersford, Pennsylvania.
**Worcestershire Sauce**

*Figure A41. Sunny Side Brand name and trademark.*

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Worcestershire Sauce</strong></td>
<td>Around shoulder.</td>
</tr>
<tr>
<td><strong>Lea &amp; Perrins</strong></td>
<td>Vertically from heel to shoulder.</td>
</tr>
</tbody>
</table>

*Figure A42. Lee & Perrins bottle.*

**Cylinder**
- Tooled club sauce finish lip
- Air vents hidden in embossing
- (Worcestershire) Base: J71D/S

**Aqua**
- H 18.0 x D 5.5 cm
- Dates: 1874–1920/21

**LEA & PERRINS**
- Around rim
- Pale aqua glass stopper
- H 3.0 cm

**Contents:** sauce for meats, fish, game, gravies, soups

**Manufacturer:** Lea & Perrins, Worcester, England;
- (John Duncan & Sons, New York, New York, Importer)

**Glasshouse:** Salem Glass Works, Salem, New Jersey

**Brand name:** Worcestershire Sauce

**TM 21,208** registered May 31, 1892.

**Brand name used since:** 1874 (U.S. Patent Office 59:1427).

**MNB 1; 8 sherds**
- Provenience: VI-s

**MNB 2; 7 sherds, 1 complete bottle**
- Provenience: VI-s, II-c, IV-w, VI-w

**Stoppers**

**MNB 2; 1 sherd, 1 complete stopper**
- Provenience: VI-s, VI-w

**Unidentified packer's/culinary jar fragments**

**Tooled SBCL, Clear selenium glass**
- Dates: 1911-1930

**MNB 1; 2 sherds**
- Provenience: III-c

**Cylinder, tooled SBCL, ring around shoulder, clear lead glass**
Dates: 1890-1930
MNB 1; 2 sherds
Provenience: II-c

**SBCL, Arbogast pre-machine-made, clear lead glass**

Dates: 1893-1930
MNB 1; 2 sherds
Provenience: VI-w

**ABM snap top, clear lead glass**

Dates: 1930-present
MNB 1; 2 sherds
Provenience: VI-w

**Cylinder, tooled SBCL, clear lead glass**

Dates: 1890-1930
MNB 1; 10 sherds
Provenience: VI-s

**DOMESTIC**

**GREER'S/WASHING/AMMONIA/ROBT.**
**GREER in script/TRADE MARK inside circle.**
**CONTENTS 16 OZ on heel (Figure A43)**

Cylinder
SBCL
Base: plain
Aqua
D 7.6 cm
Contents: washing ammonia
MNB 1; 18 sherds

**Lepage's Glue**

Bell-shaped
Lip: ABM, rubber cap dispenser
Clear, lead glass
H x D: unknown
Contents: glue
Manufacturer: Russia Cement Company, Gloucester, Massachusetts
Brand name: LE PAGE'S MUCILAGE
Label 5,127 registered February 22, 1887.
Brand name used since: not stated (U.S. Patent Office 38:786).

MNB 1; 2 sherds
Provenience: IV-s

**FRANK/MILLER'S/CROWN/Crown/DRESSIN G/NEW YORK/U.S.A. horizontally (Figure A44)**

Square-based bottle
Tooled SBCL
Air vents on shoulder corners
Base: mold number 27
Aqua
H 12.5 x D 4.1 cm square
Date: ca. 1906
Contents: dressing for ladies’ and children’s boots and shoes.
Manufacturer: Frank Miller Company, New York, New York
Brand name: CROWN/Crown
Serial Number 17,335 Filed 1906.

MNB 1; complete
Provenience: VI-w

Design for this bottle was registered to Levi Thomas in 1895 and assigned to the Safety Bottle and Ink Company of New Jersey (U.S. Patent Office 76:464). Sanford Manufacturing Company first began using this bottle design in 1904 (Mastalarz 1988, personal communication).

SANFORD’S arched/89/3 on base (Figure A45)

Cone-shaped jar
Off-set ABM screw threads
Clear, lead glass
H 6.5 x D 5.5 cm
Dates: after 1914
Contents: paste
Manufacturer: Sanford Manufacturing Company, Chicago, Illinois
Glasshouse: unknown
Brand name: SANFORD’S/LIBRARY PASTE/ESPECIALLY/ADAPTED FOR/MOUNTING PHOTOGRAPHS/IF IT THICKENS ADD WATER.
Brand name used since: 1914 (Sanford 1914:32-33).

Library Paste was first registered by the Sanford M’F’G. Company as a trademark on August 13, 1901. This particular paste jar was the smallest of five paste containers first sold by Sanford’s in 1914 (Mastalarz 1988, personal communication).

MNB 1; complete bottle
Unit 69, St. 13, Level 2

SANFORD’S arched/27 on base

Squat cylinder
Ring around shoulder and heel
Tooled DCL
Air vents around shoulder
Pale aqua
H 7.0 x D 2.5 cm
Date: after 1904
Contents: mucilage
Manufacturer: Sanford Manufacturing Co., Chicago, Illinois
Glasshouse: Safety Bottle and Ink Company of New Jersey
Brand name: EXTRA ADHESIVE/MUCILAGE in script
Brand name used since: 1904 (Sanford 1904:20-21).

Figure A44. Frank Miller’s Shoe Dressing bottle.

Figure A45. Sanford’s Paste jar.
SINGER MFG. CO./ TRADEMARK in oval around/needle-S monogram (Figure A46)

Rectangular
Tooled SBCL, extract neck
Base: plain
Air vents on shoulder corners
Clear, lead glass
H 12.3 x W 4.6 x T 3.5 cm
Dates: ca. 1890-1930
Contents: sewing machine oil
Manufacturer: The Singer Manufacturing Company,
New York, New York Glasshouse: unknown
Brand name: sewing machine shuttle and bobbin over
two crossed sewing machine needles with thread
passing through eyes of needles forming letters
S/SINGER
TM 12,396 registered July 7, 1885 (U.S. Patent
Office 32:2)
Brand name used since: 1879 (U.S. Patent Office
75:1704, infringement).

Singer began using this trademark in 1879, according
to an infringement appeal brought against the June
Manufacturing Company on June 9, 1896, in the
U.S. Circuit Court. This bottle is air vented on the
shoulders, a patented technology of 1875, but not in
general use until about 1890.

MNB 1; complete
Provenience: IV-s

1) WHITTEMORE'S around shoulder

Cylinder
Lip: missing
Base: missing
Clear, flint glass
H x D: unknown
Dates: 1905-1930

2) WHITTEMORE'S POLISH around shoulder
(Figure A47)

Squat cylinder
ABM rolled lip
Base: mold number 3
Grayish selenium glass
H 9.0 x D 5.0 cm
Dates: 1911-1930
Contents: leather polish
Manufacturer: Whittemore Brothers and Company,
Cambridge, Massachusetts
Brand name: WHITTEMORE'S RUSSET POLISH
Brand name used since: not stated (U.S. Patent
Office 117:2357).

1) MNB 1; 2 sherds
Provenience: IV-s

2) MNB 1; complete bottle
Provenience: II-c

Figure A46. Singer Sewing Machine Oil bottle.

Figure A47. Whittemore's Polish bottle.
Unembossed glue jar

Squat cylinder
ABM screw threads
Base: valve mark
Pale green
H 6.8 x D 4.5 cm (mouth bore 2.5 cm)
Dates: 1924-present

Conventional screw threads were first produced in 1924 (Lief 1965:29).

MNB 1; complete
Provenience: BT-w

1) Unembossed shoe polish bottle (Figure A48-left)

Cylinder
Tooled, rolled lip
Air vent on front and reverse shoulder
Base: mold number 14
Aqua
H 9.4 x D 5.1 cm
Dates: 1890-1930

2) Unembossed shoe polish bottle (Figure A48-right)

Cylinder
Tooled, rolled lip
Air vent on front and reverse shoulder
Base: plain
Pale green
H 9.4 x D 5.1 cm
Dates: 1890-1930
Contents: Shoe polish/dressing

Ink Bottles and Inkwells

1) CARTER'S ink bottle base

Squat cylinder base
Ring around shoulder and heel
Tooled DCL
Aqua
Dates: 1895-1930

2) CARTER'S bottle (Figure A49)

Cylinder
H 6.3 x D 6.4 cm
Manganese
Dates: 1895-1917
Contents: writing fluids, ink
Glasshouse: Safety Bottle and Ink Company of New Jersey
Brand name: CARTER'S
TM 10,101 registered 13 March 1883; re-registered March 20, 1906
Brand name used since: (U.S. Patent Office 23:942).

1) MNB 2; 23 sherds
Provenience: VI-e

2) MNB 1; complete
Provenience: VI-s

Figure A49. Carter’s Ink bottle.

CARTER’S INKS

Black ebonite stopper
Scalloped rim
H 2.5 x D 3.5 cm

1) VI-e
2) VI-s
3) VI-c

P on base in reverse image (Figure A50)

Square
Sheared, fire annealed lip
Vertically paneled pressed pattern
Base: embossed above
Clear, lead glass
H 4.1 x D 6.7 cm square
Dates: 1906-
Contents: ink
Manufacturer: unknown
Glasshouse: Pierce Glass Company, Port Allegheny, Pennsylvania

Bottle Patented: September 23, 1890 (U.S. Patent Office 52:2082).

Pierce Glass Company was organized in 1906 from the Saint Mary’s Bottle works of St. Mary’s, Pennsylvania, and used the P inside a circle trademark (Peterson 1985:49). This ink well design is pictured in a patent for an ink bottle stopper registered by Henry C. Thompson of Boston, Massachusetts on September 23, 1890 (U.S. Patent Office 52:2082).

MNB 1; complete
Provenience: V-s

Figure A50. “P” inkwell.

SANFORD’S on base ink bottle (Figure A51)

Conical
Tooled DCL
Ring around shoulder
Clear, yellowish selenium glass
H 6.2 x D 6.2 cm
Dates: 1911-1930
Contents: ink
Manufacturer: Sanford Manufacturing Company, Chicago, Illinois
Glasshouse: Safety Bottle and Ink Company of New Jersey
Brand name: SANFORD’S/PREMIUM/FLUID
Brand name used since: 1891 (Sanford 1891:2-3)

MNB 1; 6 sherds
Provenience: VI-w
Figure A51. Sanford's Ink bottle.

**SANFORD'S/INK around 39 on base** (Figure A52)

Figure A52. Sanford's Ink bottle base.

**Squat cylinder**

Ring around shoulder and base

ABM modified DCL

1) **Clear, manganese glass** (Figure A53-left)

H 6.5 x D 5.1 cm

Dates: ca. 1916

2) **Pale green** (Figure A53-right)

Dates: post-1916

Contents: ink

Manufacturer: Sanford Ink Corporation, Bellwood, Illinois

Glasshouse: Safety Bottle and Ink Company of New Jersey

Brand name: SANFORD'S/BLACK INK

Brand name used since: 1916 (Sanford 1916:12-13).

MNB 2; 2 bottles

Figure A53. Sanford's Ink bottles.

Provenience: IV-e, II-s

---

**L. H. THOMAS CO./CHICAGO around/598 on base** (Figure A54)

Squat cylinder, ring around shoulder and heel

Tooled, rolled lip

Air vents around shoulder ring

Clear, manganese glass

H 5.3 x D 4.8 cm

Dates: 1895-1917

Contents: ink

Manufacturer: Levi H. Thomas, Chicago, Illinois

Glasshouse: Safety Bottle and Ink Company of New Jersey


MNB 2; 6 sherds, 1 complete bottle

Provenience: IV-s, VI-s, II-c, VI-w

Figure A54. L. H. Thomas Ink bottle.
Unidentified ink bottle

Squat cylinder
Ring around base of neck
ABM rolled lip, ground mouth, rubberized, and metal capped stopper
Base: mould number 3
Clear, flint glass
D 5.0 cm; mouth D 3.6 cm
Dates: 1914-

Glasshouse manufacturers were not licensed to manufacture this type of small mouth, automatic machine-made bottles before 1914 (Scoville 1948:105-108).

MNB 1; 4 sherds
Provenience: VI-w

Unidentified ink bottle

Square
Lip: DCL if present
Arborgast mold seam around base of neck
Base: unknown
Aqua
H x D: unknown
Dates: 1902-1930
Contents: ink
Bottle patented: Design No. 36,656 registered December 1, 1903, A. N. Ritz, Milwaukee, Wisconsin.

MNB 1; 2 sherds
Provenience: VI-s

Unidentified ink bottle

Square
Tooled, tolled lip
Clear, yellowish selenium glass
H x D: unknown
Dates: 1911-1930
LIQUOR

TRADE/UNION/MARK/MADE around AF inside circle (Figure A55)

Pumpkin seed flask
Lip: (DCL) not recovered
Base: not recovered
Clear, manganese glass sherds
H x T x D: unknown
Dates 1897-1917
Contents: Usually whiskey
Manufacturer: Edward A. Power and Company, Pittsburgh, Pennsylvania
Brand name: AF
TM 31,710 registered June 21, 1898.
Brand name used since: September 15, 1897 (U.S. Patent Office 83:1799).

Registrant of this glassware trademark claimed use since September 1897. Manganese, which was used as a decolorizer, was discontinued during World War I.

MNB 1; 6 sherds
Provenience: VI-w

Figure A55. AF Union Made bottle base sherd (tracing).

Six sherds from the three units did not mend together; however, their color, thickness, and technology are exactly the same. These sherds are probably associated, or from the same bottle.

MNB 1; 8 sherds total
Provenience: VI-c, III-w, IV-w

126/C on base (Figure A56)

Cylinder turn mold
Applied brandy finish lip
Base: embossed above (1890s red-amber type)
Pale green
D 7.5 cm
Dates: 1887-1910
Contents: brandy or cognac

MNB 2; 24 sherds
Provenience: VI-s, III-w

Figure A56. Brandy bottle base (tracing).
Case gin, unembossed

Tapered, square Dutch Gin
Shingle mold
Lip: tapered if recovered
Olive green
H X W: unknown
Dates: 1890s

The Illustrated Guide to Collecting Bottles gives an excellent background on the history of gin and the development of case bottles (Munsey 1970:84,85). Dating on these bottles remains general as they are still produced with tapered lip cork closures, although machine-made. A few small scattered sherds were excavated and identified by the characteristic "shingle mold" glass striations. None mended together; however, diagnostic sherds may be helpful in determining strata distribution and/or activities.

MNB 1; 7 sherds
Provenience: I-c, II-c, VI-c, II-w, V-w

Champagne-wine (Figure A57)

Cylinder turn mold
Laid-on band below fire polished lip
High basal kick-up
Olive green
Pint, H 24.3 x D 7.1cm
Quart, H 30.4 x D 9.0 cm
Dates: 1887-1930

MNB 7; 87 sherds, 3 bottles
Provenience: II-s, IV-s VI-s
II-c, III-c, IV-c, V-c, VI-c
II-w, III-w, IV-w, V-w, VI-w, VII-w

Figure A57. Champagne bottles.

Coffin (Shoo-Fly) flask (Figure A58)

Tooled TCL
Air vents on shoulder
Base: six-sided oblong
1) clear, lead glass
2) clear, manganese glass
3) amber
Size: unknown
Dates: ca. 1888-1916 and 1916-1930
Contents: whiskey
Manufacturer: most West Coast bottlers
Glasshouse: Marion Flint Glass Company, Marion, Indiana (1888-1922), and successor, Upland Flint Bottle Company, Upland, Indiana
Trademark: none present

Between 1855 and 1904, Charles Yockel of Philadelphia was the most prolific glass mold maker for the majority of U.S. glasshouses and patentee of bottle molds. He designed the "coffin" (or "shoo-fly") flasks, and was producing a mold for this flask in 1888 for the Marion Flint Glass Company (Tyson
1971:22-23). As these flasks are U.S. glasshouse made, they were probably imported before Alaska Prohibition in 1916 unless they contained culinary flavorings and extracts, in which case they could have been pre-machine blown until 1930. Marion Flint Glass Company, which became the Upland Flint Bottle Company in 1922, did not produce amber glass such as coffin flask number three.

1) MNB 3; 46 sherds  
Provenience: IV-s, VI-w

2) MNB 1; 4 sherds  
Provenience: V-c

3) MNB 1; 5 sherds  
Provenience: III-c

---

Figure A58. Coffin (Shoo-Fly) flask.

Cognac, unembossed

Cylinder turn mold  
Laid on ring below fire polished lip  
Base: High basal kick-up  
1) citron

2) pale citron  
H 30.7 x D 7.8 cm  
Dates: 1887-1930  
Contents: cognac

1) MNB 2; 63 sherds  
Provenience: IV-s, VI-s, II-c, VI-c  
BT-w, V-w, VII-w

2) MNB 1; 6 sherds  
Provenience: II-w, III-w, IV-w

---

Creme de menthe, unembossed (Figure A59)

Cylinder shoulders and heel, square body  
Applied SBCL  
Base: not recovered  
Emerald green  
H x D: undetermined  
Dates: 1894-1910  
Contents: creme de menthe liqueur  
Glasshouse: unknown  
Manufacturer: E. Cusenier Fils Aine and Compagnie, Paris, Orans, Charenton, and Marseilles, France; Mulhouse, Germany; Brussels, Belgium  
Brand name: Five Medals/CREME DE MENTHE GLACIALE inside crescent  
TM 24,624 registered May 1, 1894.  
Brand name used since: 1867 (U.S. Patent Office 67:674).

Unless this unusual bottle came through Canada, it was registered for import into the United States in 1894. Glass manufacturing technology in France lagged behind that of the U.S. after 1890, and this applied lip bottle may have been made later than 1910.

MNB 1; 26 sherds  
Provenience: IV-s, VI-s
C. S. & CO. LTD./3738 on base (Figure A60)

Cylinder
Applied brandy finish
Base: embossed above, kick-up
Pale green
H ? x D 7.5 cm
Dates: 1875-1913
Glasshouse: Cannington-Shaw and Company, Ltd., Helens, Lancaster, England

The C. S. & Co. Ltd. trademark is identified as an English trademark used by Cannington-Shaw and Company glasshouse (Creswick 1987:38).

MNB 3; 59 sherds
Provenience: IV-s, VI-s, VI-c, BT-w, III-w

J. H. CUTTER/BOTTLED BY A. P. HOTALING around/OLD/BOURBON/crown.
(A NO 1 on reverse shoulder)

Cylinder
Tooled TCL
Single air vent above U in Cutter
Honey Amber
H 30.3 x D 7.6 cm
Dates: 1890-1919
Contents: Whiskey
Manufacturer: A. P. Hotaling Company, San Francisco, California
Brand name: A NO. 1/J. H. CUTTER/Crown/C. P. MOORMAN
Brand name used since: August 1, 1885.


MNB 1; complete (mended from 47 sherds)
Provenience: VI-w

DALLEMAND & CO./CREAM PURE RYE around heel

Rectangular sample bottle (Figure A61)
Diagonally fluted shoulders
Tooled DCL
Base: not recovered (DALLEMAND & CO. on base if complete)
H x W x T: unknown
Dates: 1892-1918
Contents: whiskey
Manufacturer: Dallemand & Company, Incorporated, Chicago, Illinois
Brand name: D & Co. Monogram
TM 21,237 registered May 31, 1892.
Brand name used since: January 1, 1892 (U.S. Patent Office 50:1430).

Dallemand and Company, whose headquarters were in Chicago, succeeded Bothin and Dallemand (1882-1887) in 1887 and operated until Prohibition (Wilson and Wilson 1968:59). The Old San Francisco Directory lists Dallemand and Company as West Coast whiskey distributors from 1888-1900 (McGuire 1967:9). The standard sized cylinder bottle with fluted shoulders was designed by Max Oberfelder of Chicago (Design 21,509) and registered on April 26, 1892 (U.S. Patent Office 59:625). This sample-sized bottle is most likely a turn of the century give-away item.

MNB 1; 4 sherds
Provenience: III-e, VI-e

Figure A61. Dallemand Sample Whiskey bottle neck.

DEWARS/PERTH/WHISKEY on base

Cylinder
Lip: brandy finish
Base: embossed above
Pale green
D 6.2 cm
Dates: after 1890
Contents: whiskey
Manufacturer: John Dewar and Sons Ltd., Perth, Glasgow, and Edinburgh, Scotland; Manchester, Bristol, and London, England; New York and Chicago, U.S.A., and Sydney, Australia,
Brand name: Dewars; bust portrait of Robert Burns, Egyptian panel of dogs, swans, and goat, or Scottish gent seated at table.
Brand name used since: 1890
Trademark Nos. 33,389-33,591 registered October 17, 1899 (U.S. Patent Office 89:518).

One-half of a cylinder base bearing Dewars embossing on the base was excavated; no other sherds were associated nor mended with this base. John Dewar and Sons received registrations of their whiskey trademarks in 1899, apparently having been in business since 1890.

MNB 1; 1 sherd
Provenience: IV-w

**Eagle flask, unembossed** (Figure A62)

Rectangular
1) tooled TCL
2) tooled screw threads, ground lip
Air vents around shoulders
Clear, manganese glass

Dates: 1890-1917

1) MNB 1; 6 sherds
Provenience: IV-s
2) MNB 1; 13 sherds
Provenience: VI-w

Figure A62. Eagle flask (example).
FEDERAL LAW FORBID(S) SALE OR RE(USE) OF THIS BOTTLE

Rectangular
Lip: not recovered
Base: not recovered
Clear and frosted flint
H x W x T: unknown
Dates: after 1935

Government legislation requiring the embossing of Federal Law Prohibits Sale or Reuse of this Bottle on all liquor bottles went into effect on January 1, 1935. No other identifying manufacturer or glasshouse marked fragments of this bottle were located.

MNB 1; 14 sherds
Provenience: III-s, II-c, IV-c, IV-w

GLA—in Old English script around neck

Cylinder
ABM ghost mold seam
Lip: not recovered
Base: 24/0 around I inside Diamond/6
Emerald green
D 8.5 cm
Date: 1936
Contents: wine
Glasshouse: Owens-Illinois Glass Company, Toledo, Ohio (1929-present)
Trademark: O around I inside diamond
TM 269,225 registered April 1, 1930
Trademark used since: April 20, 1929.

The base of this distinctive emerald green bottle is dated 1936. The numeral 6 following the trademark indicates sixth year of use of this trademark by Owens-Illinois. The full identifying brand name is embossed around the neck. The lip finish was not recovered. The base, found at the bottom of the foundation pier hole in Unit 71, appears to indicate that either installation, or removal of this structure took place about this time.

MNB 1; 60 sherds
Provenience: II-w, III-w, IV-w, V-w, VI-w, I-c

Liquor, unembossed

Cylinder turn mold
Applied, tapered lip
Base: series of four rings (turn mold rings)
Pale green
D 7.9 cm
Dates: 1870-1910

MNB 2; 77 sherds
Provenience: VI-s, VII-s

M inside circle on base

Cylinder
Fire polished sheared lip
Base: embossed above
Clear, SCA manganese glass
D 7.0 cm
Dates: after 1921
Contents: liquor (or olive oil?)
Glasshouse: Maryland Glass Company
(Corporation), Baltimore, Maryland (1907-1971)
Trademark: M inside circle
TM 225,523 registered March 22, 1927 (renewed 22 March 1947)
Trademark used since: January 1921 (U. S. Patent Office, Thomas F. Murphy, Assistant Commissioner of Patents).

Several bottles with this trademark have been excavated in Skagway (see section under Inks, Rhodes 1988:171-174) that are non-machine made. This bottle is unusual in that it contains manganese and has turned a sun-colored amethyst, a mineral not in use after World War II. Maryland Glass Company, however, did not begin using the M inside a Circle trademark on the bases of their glassware until January 1921 (U.S. Patent Office, March 6, 1962). This slightly different sheared lip finish liquor-type bottle may have contained olive oil.

MNB 1; 27 sherds
Provenience: IV-e, VI-e
M inside circle on base

Rectangular eagle flask
Lip finish: TCL if complete
Base: embossed above
Clear, manganese glass
T 5.1 cm
Dates: after 1921

Contents: whiskey, Jamaica ginger, flavoring extracts
Manufacturer: various bottlers
Glasshouse: Maryland Glass Company, Baltimore, Maryland (1907-1971)
Trademark: M inside circle
TM 225,523 registered March 22, 1927
(renewed March 22, 1947).
Trademark used since: January 1921 (U. S. Patent Office, Thomas F. Murphy, Assistant Commissioner of Patents).

See previous description on Maryland Glass Company.

MNB 1; 1 sherd
Provenience: VII-w

(MAGNOLIA arched)/ (STRAIGHT BLEN)D inside semi-circle/ (Rose)/ (OL)D/ BOURBON)/ (ROTHCHILD B)RO(S) in script/(PO)RTLAND, O(REGON) (Figure A63)

Shot glass
Acid etched
Clear, flint glass
H 4.5 cm (if complete)
Dates: ca. 1899-1914

One small sherd of this shot glass was identified as belonging to a Magnolia Whiskey registered by W. W. Johnson of Cincinnati, Ohio in 1906. Rothchild Brothers of Portland, Oregon, operated the West Coast distributorship of Magnolia Bourbon from 1899 until it was purchased by the Fleishmann Company in 1914 (Edmonson 1985:107).

MNB 1; 1 sherd

Provenience: Unit 35, Level 4

TRADE MARK inside antlers on shoulder/JESSE MOORE & CO. LOUISVILLE, KY. around/C. H. MOORE-OLD-BOURBON & RYE inside circle. JESSE MOORE HUNT CO./SAN FRANCISCO, CAL. horizontally

Cylinder
Tooled TCL
Air vents around shoulder
Amber
H: unknown
Dates: 1896-1918
Contents: whiskey
Manufacturer: Jesse Moore, Hunt Company, San Francisco, California, and Louisville, Kentucky
Brand name: antler representation
TM 30,090 registered May 25, 1897.
Brand name used since: 1860 (U.S. Patent Office 79:1359).

Jesse Moore-Hunt Company is listed in the Old San Francisco Directory (McGuire 1967:18) on Front Street, and on Davis Street between 1896-1906. Following the San Francisco earthquake on April 18, 1906, Jesse Moore-Hunt moved to a Second Street location until Prohibition in 1918. The Antler trademark is claimed to have been used since 1860 (originally in Louisville, Kentucky). This company was located in San Francisco as Moore, Hunt and Company from 1876-1896 (McGuire 1967:Z5) and
was Incorporated as Jesse Moore Hunt Company in 1896 (Fountain and Colcleaser 1971:22).

MNB 2; 38 sherds
Provenience: VI-s, VI-c, III-w, IV-w, VI

PACIFIC CLUB/CINCINNATI, 0. in circle around/DISTILLING CO. (Figure A64)

Cylinder
Tooled, TCL
Base: mld number 505/cup mold
Clear, manganese glass
H 28.5 x D 7.5 cm (fifth)
Dates: 1889-1917
Contents: bourbon whiskey
Manufacturer: Elias Block and Sons, Cincinnati, Ohio, and Prestonville, Kentucky
Distributors: M & K Gottstein, Seattle, Washington, and Hudson’s Bay Company, Winnipeg, Canada
Brand name: PACIFIC CLUB
Brand name used since: March 1, 1888 (U.S. Patent Office 47:1224)

Elias Block and Sons began bottling whiskey in 1857 according to their trademarks. Pacific Club, with a trademark showing an Indian seated in a canoe, was registered by M & K Gottstein of Seattle, Washington Territory in 1889 (the Indian was dropped by Gottsteins when Washington became a state in 1889). There are at least five variants of Pacific Club distributed by M & K Gottstein 1888-1916 with the Seattle location, and this one variant is from Cincinnati. M & K Gottstein were the West Coast distributors of whiskey for Elias Block and Sons until Washington State Prohibition in 1916 (Hurst 1987). Gottsteins were leaders in the fight against Prohibition. In 1914 they obtained a restraining order against the State of Washington on the grounds that Prohibition was unconstitutional and also illegal because it was improperly submitted to the voters (The Daily Alaskan, December 3, 1914). Hudson’s Bay Company of Winnipeg was also distributor of five brands of Pacific Club: Pacific Club Martin, Pacific Club Manhattan, Pacific Club Whiskey, Pacific Club Vermouth, and Pacific Club Gin (Hudson’s Bay Company 1977:220).

MNB 1; 39 sherds
Provenience: VI-c, VII-w
containers. Quarter-pint pumpkin seeds evidently held essences of Jamaica ginger or flavoring extracts, according to the labeled flasks found, while the pale green quarter-pints appear to be medicinal containers. These clear flasks are U.S. glasshouse blown, whereas the amber bottles with tapered collar lip finishes are considered to be Canadian made.

1) MNB 3; 10 sherds
   Provenience: VI-s, VII-c, VI-w

2) MNB 2; 7 sherds
   Provenience: VI-s, VI-w

3) MNB 1; complete
   Provenience: Surface

Figure A65. Pumpkin seed flask (amber).

RED TOP/Top/FERDINAND WESTHEIMER/&
SONS/CINCINNATI, OHIO/ST. JOSEPH, MO.

Tapered cylinder sample whiskey
Lip: tooled band below sheared lip (if complete)
Base: not found
Amber
H: unknown
Date: ca. 1900
Contents: whiskey
Manufacturer: Ferdinand Westheimer and Sons, Cincinnati, Ohio
Brand name: RED TOP RYE

Label 7,755 registered August 28, 1900.
Brand name used since: not stated (U.S. Patent Office 92:1623).

MNB 1; 1 sherd
Provenience: II-w

TBM 33 on base

Cylinder, three-section mold (Figure A66)
Brandy neck, applied tapered lip
Base: embossed above, kick-up
Aqua
H 29.5 x D 7.6 cm
Dates: 1870-1910
Contents: brandy or gin

MNB 2; 15 sherds, 1 bottle (mended complete)
Provenience: IV-s, VI-w

Figure A66. Three-mold brandy bottle.
1) **1894/Crown/W inside Shield/PRODUCE OF CANADA** (Figure A67)

2) **1895/Crown/W inside Shield/PRODUCE OF CANADA** on yellow and blue printed lead neck seal (Figure A68)

Cylinder turnmold
Tooled TCL
Convex base
Red-Amber
H 28.2 x D 7.8 cm
Dates: 1894 and 1895

3) **HIRAM WALKER & SONS, LTD. in circle on yellow printed lead bottle lip seal**

Contents: whiskey
Manufacturer: Hiram Walker and Sons, Ltd., Walkerville, Canada
Glasshouse: unknown
Brand name: crown/W inside shield
TM 19,652 registered June 2, 1891.
Brand name used since: June 14, 1887 (U.S. Patent Office 55:1147).

1) MNB 1; 73 sherds
Provenience: VI-w

2) MNB 1; 11 sherds
Provenience VI-w

3) 3 seals
Provenience: VII-w

---

**Sample whiskey** (Figure A69)

Cylinder
ABM screw threads, black enameled metal screw cap
Base: 2/Monument (or Beehive)/8930 Amber
H: 11.3 x D 3.3 cm
Dates: unknown

MNB 1; complete
Provenience: VI-s

---

**1890s Red-Amber Whiskey, unembossed**

Cylinder turn mold
Tooled TCL
Convex base
Red-amber
D 7.9 cm
Dates: 1890s
Contents: whiskey
Manufacturer: possibly Hiram Walker and Sons, Walkerville, Canada.
Brand name: possibly Hiram Walker's Crown/W inside shield
Brand name used since: June 14, 1887.

Red amber turn mold whiskey bottles are a product of the 1890s era (Thomas 1977:Foreword). Glasshouses having the iron oxide sand source to produce red-amber bottles are definitely identified with Stoddard, New Hampshire, glasshouses. However, these glasshouses were defunct by the mid-1880s, a result of gas furnace competition and the demand for clear glass, which they could not produce (Field 1975:19). To date, the glasshouse producing these red-amber turn mold bottles has not been identified. These bottle fragments did not mend with the Hiram Walker red-amber whiskey turn mold, although they may have been filled and labeled by this company as well.

MNB 3; 25 sherds
Provenience: VI-s, VI-c VII-w

Cylinder Liquor Bottle Sherds

<table>
<thead>
<tr>
<th>Strat.</th>
<th>Description</th>
<th>No.</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV-s</td>
<td>Flint</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>III-s</td>
<td>Turn mold, olive amber</td>
<td>1</td>
<td>1887-1930</td>
</tr>
<tr>
<td>IV-s</td>
<td>SCA Manganese</td>
<td>1</td>
<td>1880-1917</td>
</tr>
<tr>
<td>U.35</td>
<td>Light olive green</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>L.1*</td>
<td>Turn mold, honey amber</td>
<td>6</td>
<td>1887-1930</td>
</tr>
<tr>
<td>VI-s</td>
<td>Turn mold, amber</td>
<td>11</td>
<td>1887-1930</td>
</tr>
<tr>
<td>VI-s</td>
<td>Olive amber</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>VI-s</td>
<td>Manganese</td>
<td>1</td>
<td>1880-1917</td>
</tr>
<tr>
<td>III-c</td>
<td>Amber, applied TCL &amp; 1 lip</td>
<td>3</td>
<td>1840-1910</td>
</tr>
<tr>
<td>II-c</td>
<td>Light olive green</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>VII-c</td>
<td>Olive amber</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>II-w</td>
<td>Turn mold, light amber</td>
<td>5</td>
<td>1887-1930</td>
</tr>
<tr>
<td>VII-w</td>
<td>Turn mold, light amber</td>
<td>1</td>
<td>1887-1930</td>
</tr>
<tr>
<td>VI-w</td>
<td>Turn mold, honey amber</td>
<td>1</td>
<td>1887-1930</td>
</tr>
<tr>
<td>II-w</td>
<td>Honey amber</td>
<td>7</td>
<td>After 1930</td>
</tr>
<tr>
<td>II-w</td>
<td>Pale olive green</td>
<td>4</td>
<td>-</td>
</tr>
</tbody>
</table>

* Unit 35, Level 1; unexcavated area under mission building

Clear, lead glass oval or rectangular flasks

<table>
<thead>
<tr>
<th>Strat. Description</th>
<th>No.</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI-e</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>IV-s</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>VI-s</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>VI-s air vented shoulders</td>
<td>3</td>
<td>1930</td>
</tr>
<tr>
<td>U.35, L. 2*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>II-w</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>VI-w</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>II-w</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

* Unit 35, Level 2; unexcavated area under mission building

Amber Flask sherds

<table>
<thead>
<tr>
<th>Strat.</th>
<th>Description</th>
<th>No.</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>BT-w*</td>
<td>Oval, ¼ stippled base</td>
<td>6</td>
<td>After 1944</td>
</tr>
<tr>
<td>BT-w*</td>
<td>Oval</td>
<td>1</td>
<td>After 1944</td>
</tr>
<tr>
<td>VI-w</td>
<td></td>
<td>12</td>
<td>-</td>
</tr>
</tbody>
</table>

* Both units above associated/mended.

Shot glass sherds

Clear, lead glass
H x D: unknown
Dates: unknown

MNB 1; 5 sherds
Provenience: II-s, VI-s

Glass liquor bottle stopper

Aqua
H 2.7 cm
Dates: unknown

1 stopper, incomplete
Provenience: VI-s
MEDICINAL

BROMO SELTZER/EMERSON/DRUG CO./BALTIMORE, MD. horizontally (Figure A70, Figure A71)

Cylinder
Tooled, rolled lip
Air vent on reverse shoulder
Base: plain
Cobalt
H 10.1 x D 4.0 cm
Dates: 1889-1913
Contents: Granular effervescent salts
Manufacturer: Isaac E. Emerson, Baltimore, Maryland
Glasshouse: Maryland Glass Company, Baltimore, Maryland (1907-1971)
Brand name: BROMO SELTZER
TM 16,599 registered May 21, 1889.
Brand name used since: January 15, 1889 (U.S. Patent Office 47:952).

MNB 1; complete
Provenience: II-w

Figure A70. Bromo Seltzer bottle.

Figure A71. Bromo Seltzer advertisement.

2 on shoulder/C on base

Oval
Tooled, rolled lip
No air vents
Base: embossed above
Clear, selenium glass
H 11.5 x W 4.6 x T 2.8 cm
Dates: 1917-1925
Contents: prescription medicine
Glasshouse: Consumers Glass Company, Montreal and Toronto, Canada (1917-1925)

MNB 2; 9 sherds, 1 complete bottle
Provenience: II-c, VI-w
CALIFORNIA/FIG SYRUP vertically.  (SYRUP OF FIGS in indented side panel) (Figure A72)

Rectangular
Tooled SBCL
Air vents on shoulder
Base: mold number 23
Clear, lead glass
H 17.6 x W 5.5 x T 3.5 cm
Dates: 1884-1914
Contents: liquid purgative compound
Manufacturer: California Fig Syrup Company, San Francisco, California
Brand name: SYRUP OF FIGS
Label 2,060 registered September 9, 1879 by William Pinniger and Richard E. Queen of Reno, Nevada
TM 10,974 registered March 4, 1884, California Fig Syrup Company, San Francisco, California (U.S. Patent Office 16:462; 26:2).
Brand name used since: not stated

Syrup of Figs was first registered as a brand name in 1879. The company was renamed the California Fig Syrup Company and moved from Reno, Nevada, to San Francisco in 1883 (Wilson and Wilson 1968:140), as confirmed by the trademark records. Comparative labeled California Fig Syrup bottles (Tibbets 1988, personal communication) show that following the pre-machine-made variety recovered from the Peniel, California Fig Syrup bottles were machine-made by an Owens automatic bottle machine. An “I” inside a diamond trademark of the Illinois Glass Company (Alton, Illinois, 1873-1929) appears on the bases of these machine-made bottles, a trademark first used in 1915 (Peterson 1973:41). Illinois Glass Company installed automatic bottle machines in 1914 (Scoville 1948:105-108), which dates this bottle before 1914.

MNB 1; 12 sherds
Provenience: II-s, VI-s

---

WE RECOMMEND and GUARANTEE IT

Figure A72.  California Fig Syrup advertisement.

---

C. G./CO. on base

Rectangular
Tooled SBCL
Air vents on shoulders
Clear, flint glass
W 3.6 x T 2.0 cm
Dates: 1907-1915

Contents: prescription medicine
Manufacturer: unknown
Glasshouse: Choshocton Glass Company, Choshocton, Ohio

Lehner (1978:38) gives the dates of use of the C. G. Co. trademark used by Choshocton Glass Company as between 1907 and 1915.

MNB 1; 3 sherds
Provenience: VI-w

---

CHAMBERLAIN'S/COUGHREMEDY vertically.
(CHAMBERLAIN MED. CO./DES MOINES, IA. U.S.A. on sides)
Rectangular
Indented front and side panels
Tooled, tapered lip
Base: unknown
Aqua
H x W x T: unknown
Dates: 1892-1930
Contents: medicine
Manufacturer: Chamberlain Medicine Company, Des Moines, Iowa
Glasshouse: unknown
Brand name: CHAMBERLAIN'S COUGH REMEDY
Label 2,760 registered September 19, 1882, by Chamberlain and Company
Brand name used since: not stated (U.S. Patent Office 22:948)

Chamberlain Company became the Chamberlain Medicine Company in 1892, and the Pfeiffer Chemical Company in 1930 (Fike 1987:205-206), which gives a date range between 1892 and 1930 for this cough remedy. Chamberlain's Cough Syrup, available through the Canadian Woodward's Catalogue (Watt 1977:139) sold for 25 to 50 cents a bottle in 1898.

MNB 2; 6 sherds
Provenience: II-s, IV-s VI-s

DR. HEN(RY'S)/(SARS)AP(ARILLA) vertically

Rectangular
Indented panels all four sides
Lip: not recovered (SBCL if complete)
Base: not recovered
Aqua
Dimensions: if complete 9½ in. H x 2 3/4 in. W x 1 3/4 in. T
Dates: ca. 1880-1930
Contents: "Remedy for scrofula or King's Evil, rheumatism, salt rheum, ringworm and all diseases arising from impurity of the blood."
Manufacturer: Renz & Henry, Louisville, Kentucky

MNB 1; 1 sherd
Provenience: III-w

I. G. Co. inside diamond on base

Oval
Tooled, flared lip
Air vents on front and reverse shoulder/mid-way down side seams
Base: embossed above
Clear, lead glass
H 11.5 x W 4.7 x T 2.5 cm
Dates: ca. 1902-1915
Contents: prescription medicine
Manufacturer: unknown
Trademark: I.G. CO.
Brand name used since: unknown

MNB 1; complete
Provenience: VI-w

3ii on front shoulder/I inside diamond on base

Rectangular
Fluted neck and shoulders
Graduated scale on side
ABM DCL
Pale green
H 11.4 x W 4.0 x T 2.6 cm
Dates: 1915-1929
Contents: unknown
Manufacturer: unknown

MNB 2; 4 sherds, 1 bottle
Provenience: VI-w

ST. JAKOBS OEL/ VOGELER CO./ BALTIMORE, MD U.S.A. vertically (Figure A73)

Cylinder vial
Tooled DCL
Two air vents - front and reverse shoulder
Base: HC C0/84
Pale green
H 12.7 x D 2.7 cm
Dates: 1895-
Contents: liniment
Manufacturer: Charles A. Vogeler Company, Baltimore, Maryland
Glasshouse: Henry C. Dilworth, New York, New York
Brand name: ST. JACOB’S (JAKOB’S OIL (OEL) TM 14,086 registered February 22, 1887
Brand name used since: 1878 (U.S. Patent Office 38:786)
MNB 1; 4 sherds
Provenience: VI-w

Figure A73. St. Jacob's Oel bottle (mended).

**LACTOPEPTINE/SOLUBLE/FOOD/FOR/INFANTS AND/INVALIDS horizontally. (REED & CARNRICK/NY in circle on base)**

Square
Lip: not recovered
Base: embossed above
Amber
8.4 cm square
Date: ca. 1880
Contents: digestion aid compound and dyspepsia cure
Manufacturer: New York Pharmacal Association (Reed Carnrick), Yonkers, New York
Brand name: LACTOPEPTINE
TM 1,595 registered January 13, 1874 (U.S. Patent Office 5:35). TM 15,368 registered April 17, 1888.
Brand name used since: January 1873 (U.S. Patent Office, 44:254).
MNB 1; 10 sherds
Provenience: IV-s, VI-s

LIQUOZONE/MANUFACTURED ONLY BY/LIQUID OZONE CO./CHICAGO U.S.A. horizontally

Cylinder
Tooled, rolled lip
Air vents around shoulder
Base: not recovered
Amber
H 20.6 x D 7.6 cm
Dates: undetermined
Contents: medicinal Cure
Manufacturer: Liquozone Company, Chicago, Illinois
Brand name: (originally) Powley’s Liquified Ozone, Manufactured in Canada.
U. S. trademark records were not located for this specific brand of medicine. Liquozone was first marketed in the middle of the 1890s in Canada and was advertised as a "Cure for everything from dysentery to dandruff, containing 99% water and 1% acid" (Fike 1987:68).
MNB 1; 10 sherds
Provenience: IV-s, VI-s

**MC on base**

Cylinder
Ground lip, screw threads
Base: embossed above
Clear, lead glass
H 13.8 x D 5.3 cm
Dates: undetermined
MNB 1; complete
Provenience: VI-s
MENTHOLATUM/REG./TRADEMARK on base
(Figure A74, Figure A75)

Squat cylinder Wide mouth jar
Screw threads
Semi-automatic mold seam around shoulder
White milk glass
H 5.0 x D 3.9 cm
Dates: 1917-ca. 1938
Contents: salves and liniments
Manufacturer: Yucca Company, Wichita, Kansas
Brand name: MENTHOLATUM
TM 21,612 registered June 7, 1892.
Brand name used since: December 1894 (U.S. Patent Office 73:1280).

MNB 1; complete jar
Provenience: VI-s

Figure A74. Mentholatum jar.

DR. MILES/NEW/HEART CURE vertically

Rectangular
Lip: DCL if recovered
Indented front and side panels
Base: hinge mold
Aqua
W 6.0 x T 3.7 cm
Dates: 1887-1906 and 1906-1920
Contents: heart disease remedy
Manufacturer: Dr. Miles Medical Company, Elkhart, Indiana
Brand name: NEW CURE
Label 5,289 registered July 12, 1887
Brand name used since: not stated (U.S. Patent Office 40:122).

MNB 1; 8 sherds
Provenience: VI-s

Figure A75. Mentholatum advertisement.

JNO. T. MILKEN & CO./ST. LOUIS. MO./U.S.A. horizontally

Cylinder
SBCL
Air vents around shoulder
Base: plain
Clear, lead glass
Dates: 1893-ca. 1923
Contents: antiseptic
Manufacturer: John T. Milken, St. Louis, Missouri
Brand name: PASTEURINE
TM 27,964 registered March 17, 1896.
Brand name used since: February 1, 1893 (U.S. Patent Office 74:1585).

MNB 1; 17 sherds
Provenience: VI-w, VII-w

---

**NYAL/QUALITY/banner inside circle on shoulder. (2 [0] 82 on base)**

Rectangular
ABM rolled lip
Ghost mold seams
Base: embossed above, Owen's suction scar
Honey amber
H 13.4 x W 4.5 x T 2.4 cm
Dates: 1916-1929
Contents: "Convenient lotion for destroying parasites which infest the hair"
Manufacturer: Nyal Company Distributors, Detroit, Michigan for Frederick Sterns and Company of Detroit
Glasshouse: Owens Bottle Machine Company (1903-1919) and Owens Bottle Company (1919-1929), Toledo, Ohio
Brand name: NYAL'S COMPOUND LARKSPUR LOTION
Brand name used since: not located

MNB 1; 9 sherds
Provenience: VI-s

---

**0 inside square on base**

Rectangular
Lip: not recovered
Base: embossed, above
Aqua
H x W x T: unknown
Dates: 1914-1929

Glasshouse: Owens Bottle Machine Company (1903-1919) and Owens Bottle Company (1919-1929), Toledo, Ohio
Trademark: 0 inside square
TM 13,000 registered March 16, 1920
Trademark used since: April 14, 1914

MNB 1; 2 sherds
Provenience: VI-s

---

**20/0 around I inside diamond/2/091A 3 on base**

Squat rectangular
ABM screw threads
Base: embossed above
Amber
H 10.0 x W 2.3 cm
Date: 1932
Contents: Medicinal
Glasshouse: Owens-Illinois Glass Company, Toledo, Ohio (1929-present)
Trademark: O around I inside diamond
TM 269,225 registered April 1, 1930
Trademark used since: April 20, 1929 (U.S. Patent Office 393:43)

MNB 1; complete
Provenience: II-s

---

**0. G./CO. on base**

Rectangular
Tooled, SBCL
Air vents on shoulders
Clear, flint glass
H x W 3.6 x T 2.0 cm
Dates: unknown

MNB 1; 3 sherds
Provenience: VI-w
PEPTONOIDS/THE ARLINGTON CHEMICAL CO./YONKERS, N.Y., vertically in slug plate

Square
Tooled SBCL
Base: plain with air vents on corners
Air vents around shoulder
Amber
H 19.5 x W 6.5 x 6.5 cm
Dates: ca. 1885 -
Contents: Medicinal food product
Manufacturer: Reed and Carnrick (The Arlington Chemical Company) New York (Yonkers), New York
Brand name: PEPTONOIDSTM 12,048 registered March 24, 1885.
Brand name used since: not stated (U.S. Patent Office 30:1098).

MNB 1; 12 sherds
Provenience: VI-s

S on base

Cylinder
Tooled DCL
Air vents around shoulder
Base: embossed above
Amber
H 14.3 x D 5.7 cm
Dates: undetermined

MNB 2; 2 complete bottles
Provenience: VI-w

3½ OZ. on shoulder (S inside square on base)
(Figure A76)

Oval
Tooled, flared lip
Air vents on shoulder
Base: embossed above
H 7.8 x W 3.0 cm
Dates: undetermined

Contents: oil of cloves
MNB 1; complete bottle
Provenience: VI-s

Figure A76. Oil of cloves bottle.

S inside diamond on base

Square
Tooled SBCL
Base: embossed above
Clear, selenium glass
D 2.6 cm
Dates: undetermined

MNB 1; 6 sherds
Provenience: VI-w

Vaseline jars (Figure A77)

1) VASELINE/CHESEBROUGH/NEW YORK

Squat wide mouth cylinder
Pre-machine-made screw threads
Arbogast mold seam around shoulder
Base: mold number 2
la) Clear, manganese glass
lb) Clear, lead glass
H 6.0 x D 4.5 cm
Dates: 1893-1917 and 1893-1930

2) CHESEBROUGH/Vaseline/MANFACT. CO.
Squat wide mouth cylinder
Tooled SBCL
Arborgast mold seam around shoulder; air vent on front shoulder
Base: plain
Clear, selenium glass
H 8.5 x D 5.9 cm
Dates: 1911-1930

3) CHESEBROUGH MFG. CO. arched/ VASELINE

Squawwide mouth cylinder
Tooled SBCL
Arborgast mold seam around shoulder
Clear, lead glass
H 6.9 x D 4.5 cm
Dates: 1893-1930

Contents: emollient and remedial preparation of petroleum
Manufacturer: Robert Chesebrough, New York and Brooklyn, New York
Glasshouse: unknown
Brand name: Vaseline
TM 6,041 registered May 14, 1878 (reregistered 14 June 1881, TM 8,359).
Brand name used since: Before 1872 (U.S. Patent Office 1:464).

Vaseline, a distillation of crude petroleum, was discovered/invented by Robert A. Chesebrough in the late 1860s (U.S. Patent Office 1:464). Originally distributed in tin cans, the first glass jars, made on an Arborgast semi-automatic machine, were Vaseline jars made by the Enterprise Glass Company of Beaver Falls, Pennsylvania (Scoville 1948:324). Three variations of embossed Vaseline jars were recovered from the Peniel excavations. These variations, with either screw threads, or a single band collar lip finish, had the crude Arborgast mold seam around the shoulders, with, or without air venting.

1) MNB 2; 11 sherds, 1 complete jar
Provenience IV-s, VI-c, V-w

2) MNB 1; complete jar
Provenience: VI-c

Figure A77. Vaseline jars.

Homeopathic vials (Figure A78, Figure A79)

Cylinder turn-mold
1) SBCL, red and white rubber stopper
2) screw threads
Clear, borosilicate glass
H 7.7 x D 0.90 cm
Dates: 1926-1937
Contents: medicinal tablets
Manufacturer: Dr. Miles Medical Company, Elkhart, Indiana, and others
Glasshouse: T. C. Wheaton Company, Millville, New Jersey (1888-present)
Brand name: LITTLE LIVER PILLS (and others)

Medicinal vials such as these were either a part of a physician's kit packed in individual, small wooden boxes, or were labeled containing pills. For home or office visits, these vials contained tablets described as..."pellets, discs or cones" (Somlo and Somlo 1970: Plate 10). Dr. Miles Medical Company also used these vials for their Little Liver Pills (a laxative). Glass composition of these vials is a borosilicate laboratory glass ware of which the T. C. Wheaton Company was the primary manufacturer between 1926 and 1937 (Wheaton Industries 1987(1):1; 1988(2):1,(2):2).
1) MNB 3; 9 sherds, 2 complete vials
Provenience: II-s, III-s, II-c, II-w

2) MNB 1; 1 sherd
Provenience: II-c

W. T. CO./Z/U.S.A. on base
Square
Tooled, rolled lip
Air vents on shoulder corners
Base: embossed above
Honey amber
H 12.1 x 4.0 x 4.0 cm
Contents: medicine
Glasshouse: Whitall-Tatum and Company, Millville, New Jersey (1857-1938)
Trademark: W. T. CO.

MNB 1; 5 sherds
Provenience: II-c, BT-w

JOHN WYETH & BRO. vertically/TAKE NEXT DOSE around base of neck. (THIS CUP HOLDS A DOSE * around rim of Dose Cap/Numbers 1-12 around rim of Dose Cap) (Figure A80)

Figure A78. Homeopathic vial.

Figure A79. Dr. Miles advertisement.

Figure A80.

MNB 1; complete bottle
Provenience: VI-w

Figure A80. John Wyeth Laxative bottle.

Figure A81. Flared lip medicine bottle.

WYETH & BRO./PHILADELPHIA horizontally

Oval
Toole, flared lip
Air vents around shoulders
Base: mold number 226
Clear, lead glass
H 18.5 x D 7.5 cm oval
Dates: 1892-
Contents: liquid malt
Manufacturer: John Wyeth and Brother, Philadelphia, Pennsylvania
Brand name: WYETH'S/JOHN WYETH & BRO.
TM 24,667 registered May 8, 1894.
Brand name used since: November 2, 1892 (U.S. Patent Office 67:808).

MNB 1; 12 sherds
Provenience: IV-s, VI-s

Unembossed medicinal/pharmacy (complete bottles)

1) Cylinder (Figure A81)

Toole, flared lip
Air vents around shoulder
Honey amber
H 10.0 x D 3.6 cm
Dates: 1890-1930
Provenience: IV-s

2) Rectangular (Figure A82)

Toole, rolled lip
Air vents on shoulders and down side
Clear, lead glass
H 12.3 x W 4.7 x T 2.7 cm
Dates: 1890-1930
Provenience: VI-s

Figure A82. Clear medicine bottle.
3) Cylinder (two complete bottles)

Tooled DCL
Air vents around shoulder
Amber
H 14.9 x D 5.7 cm
Dates: 1890-1930
Provenience: VI-s

4) Oval, label panel on front (Figure A83)

Tooled, flared lip
Air vents around shoulder
Clear, lead glass
Two complete bottles
H 10.0 x W 4.8 x T 2.7 cm
H 7.5 x W 2.8 x T 1.6 cm
Dates: 1890-1930
Provenience: VI-w

Figure A83. Clear oval medicine bottle.

5) Square (Figure A84)

Tooled, flared lip
Air vents around shoulder
Clear, lead glass
H 9.9 x W x T 3.3 cm
Dates: 1890-1930
Provenience: VI-w

6) Oval, label panel on front

Tooled, rolled lip
Air vents on shoulder and base corners
Clear, lead glass
H 7.5 x W 2.8 x T 1.6 cm
Dates: 1890-1930
Provenience: VI-w

7) Rectangular, label panel on front

Tooled, slightly flared SBCL
Air vents around shoulder
Base: pressed, rayed pattern
Clear, lead glass
H. 12.5 x W 5.0 x T 2.7 cm
Dates: 1890-1930
Provenience: VI-w

Soda Pop

HIRES on base

Cylinder
Tooled, crown top
Base: embossed above, semi-rounded
Aqua
H 24.3 X W 6.1 cm
Dates: 1895/97-1930
Contents: root beer
Glasshouse: unknown
Brand name: HIRES ROOT BEER
TM 24,058 registered January 19, 1894.
Brand name used since: 1878 (U.S. Patent Office 64:454).

MNB 1; 7 sherds
Provenience: VI-s

Nesbitt's around heel

Cylinder
Lip: (crown top finish - not recovered)
Clear, stippled Glass
H x D 5.5 cm
Dates: 1950s

Contents: Orange Crush beverage
Manufacturer: Orange Crush Company of Chicago, Illinois

MNB 1; 1 sherd
Provenience: Unit 150, Level 5

Non-A------ in circle around T------

Cylinder
Honey amber

MNB 1; 2 sherds
Provenience: IV-w

Tableware

American Sweetheart berry bowl

Pressed glass
Scalloped rim

Opalescent white milk glass
H x D: unknown
Dates: 1930-1936

MNB 1; 23 sherds
Provenience: III-e, VI-s, II-w, BT-w, III-w

Double Arch bowl

Pressed glass
Scalloped rim
Clear, lead glass
H 12.3 cm
Dates: 1892-1930

MNB 1; 11 sherds
Provenience: III-w, IV-w, V-w

Noonday Sun berry bowl

Pressed glass
Clear, manganese glass
H 3.5 x D 11.4 (rim), 10.8 cm (base)
Dates: before 1917

MNB 2; 5 sherds, 1 complete bowl
Provenience: VI-w, Unit 64, Level 3

Ribbed bowl

Vertically ribbed pressed glass
Beaded points around heel
Clear, flint glass
H 4.5 x D 16.5 cm
Dates: unknown

MNB 1; 1 sherd
Provenience: VI-w

Snowflake berry bowl

Unidentified pattern pressed glass
Clear, manganese glass
H 4.5 x D 5.7 (base) x D 11.9 cm (rim)
Dates: ca. 1894-1917
MNB 1; 12 sherds
Provenience: VI-e, II-c, V-c, VI-c, BT-w

Star/Dot bowl

Unidentified pattern pressed glass
Clear, yellowish selenium glass
H 2.9 x D 6.6 (base) x D 11.0 cm (rim)
Dates: 1911-1930
MNB 1; 6 sherds
Provenience: II-c

Triple thumbprint bowl

Pressed glass
Clear, lead glass
H 3.9 x D 8.3 cm
Dates: 1890s
MNB 1; 5 sherds
Provenience: VI-w

WAVECREST inside banner/THE C.F.M. CO.
Flanked by TRADEMARK on base (bowl)

Pressed floral pattern
Red printed base trademark
Ground lip
White milk glass
H 6.8 x D 6.5 (Base) x D 8.0 cm (lip)
Dates: 1892-1904
Manufacturer: C. F. Monroe Company, Meriden, Connecticut
Glasshouse: unknown French glasshouse
Trademark: WAVE CREST
TM 31,627 registered May 31, 1898.
Trademark used since: October 1, 1892 (U.S. Patent Office 83:1343).
MNB 1; 17 sherds

Provenience: V-s, II-c

Bowl lid, plain (Figure A85)

Domed with knobbed handle
Knob pressed in two section mold; dome turn-molded
Clear, lead glass
H 9.4 x D 18.6 cm
Dates: unknown
MNB 1; complete lid
Provenience: IV-s

Fine Cut and Feather butter dish cover (Figure A86)

Pressed pattern
Clear, lead glass
H 9.9 x D 13.5 cm
Dates: 1879-1920
MNB 1; 4 sherds
Provenience: V-s, II-c, surface

Figure A86. Pressed glass butter dish cover.

"Thumbprint" candy jar stopper

Pressed glass
Ground stopper
Clear, lead glass
H 4.8 x D 6.0 cm
Dates: 1880-1925

MNB 1; complete
Provenience: IV-s

Figure A87. "Thumbprint" candy jar lid.

Freeblown decanter

Bulbous
Hand painted horizontal gold lines, white enameled dots, flared lip, applied handle
Base: rough pontil
D 5.6 cm
Dates: unknown

MNB 1; 21 sherds

Provenience: VI-w

Glass ring

Clear, flint glass
W 2.1 x T 0.20 x D 10.0 cm
Dates: unknown

Function of this glass ring is unknown. The edges are fire polished, suggesting a lamp fitting. Three mended fragments from the following units provided one-half of the ring.

MNB 1; 3 sherds
Provenience: III-w, VI-w, VII-w

Late Block salt (or pepper) shaker

Pressed glass
Square
Screw threads, Arborgast mold seam around shoulder
Clear, lead glass
H 6.7 x D 4.0 cm
Dates: 1893-1940s

MNB 1; complete
Provenience: VI-s

Figure A88. Salt or pepper shaker.

Satin finish milk glass tray
White milk glass, satin finish
W 9.5 cm
Dates: After 1886
MNB 1; 7 sherds
Provenience: II-s, VI-s, VII-s

Circle/diamond tumbler
Convex circle inside diamond quilting pressed glass
Clear, selenium glass
H x D 5.5 cm (base)
Dates: 1911-1930
MNB 1; 6 sherds
Provenience: II-w, III-w

Plain Punch bar tumbler
Clear, lead glass
H x D 4.0 cm (base) x D 5.4 cm (rim)
Dates: unknown
MNB 2; 19 sherds
Provenience: III-e, IV-w, VI-w, VII-w, II-c, III-c

Plain mug
Heavy, clear, selenium glass
H x D: undetermined
Dates: 1911-1930
MNB 2; 6 sherds
Provenience: II-c, BT-w, VI-w

Juice glass
Tapered toward heel, heel indented
Clear, lead glass
H x D 4.2 cm (base)
MNB 1; 4 sherds
Provenience: VI-w

Stemmed goblet
Fluted bowl and stem
Clear, manganese glass
H x D: unknown
Dates: before 1917
MNB 1; 4 sherds
Provenience: II-c, III-w, IV-w

Fluted heel tumbler
1) arched flutes around heel
2) wide arches around heel
Clear, lead glass
H 9.5 x D 7.8 cm (rim)
Dates: unknown
1) MNB 1; 6 sherds
Provenience: IV-s, VI-c, V-w
2) MNB 1; 1 sherd
Provenience: IV-s

Plain tumbler
1) clear, lead glass
2) clear, manganese glass (dates before 1917)
H x D 6.0 (base) x D 7.1 cm (rim)
1) MNB 1; 3 sherds
   Provenience: VI-w
2) MNB 1; 6 sherds
   Provenience: V-c, VI-c

Deep robin's egg blue milk glass (sherd)
L 1.4 x W 1.4 cm
MNB 1; 1 sherd
Provenience: II-w

Burmese glass fragment
L 4.2 x W 0.6 x 2.4 cm
Dates: after 1885
MNB 1; 1 sherd
Provenience: IV-s

White milk glass
L 4.5 x W 1.5-3.4 cm
Deeply ruffled rim
MNB 1; 1 sherd
Provenience: II-c

Satin glass bowl(?)
L 5.7 x W 4.5 cm
Aqua, acid etched feathered leaf design
Ruffled rim
Dates: 1886 -
MNB 1; 1 sherd
Provenience: II-s

White milk glass
L 3.7 x W 3.2 cm
Adhering glue or paint base (flower and tulip type leaf?)
MNB 1; 1 sherd
Provenience: IV-s

Custard glass
L 1.3, 1.7, 2.5 cm
MNB 1; 3 sherds
Provenience: III-w, IV-w

Clear, flint cut glass
L 3.3 x W 2.0 cm
Rayed, or floral design
MNB 1; 1 sherd
Provenience: IV-w

Amber bottle (sherd)
H 1.5 x W 1.9 cm
Sheared lip, gold painted rim around lip
Dates: unknown
MNB 1; 1 sherd
Provenience: VI-w
**Beaded rim lamp chimney (Figure A89)**

38 beads around rim  
Clear, flint glass  
D. 7.0 cm (rim)  
Dates: 1891-1900  

MNB 1; 5 sherds  
Provenience: VI-s

![Figure A89. Beaded rim lamp chimney.](image)

**Crimped rim lamp chimney (Figure A90)**

40 crimps (pearls) around rim  
Paste turn mold  
Clear, lead glass  
D. 7.4 cm (rim)  
Dates: 1893-1919  

MNB 6; 124 sherds  
Provenience: II-s, III-s, IV-s, VI-s, VI-w  
Unit 39, Level 1; Unit 64, Level 3

![Figure A90. Crimped lamp chimney rims.](image)

**Maple leaf and vine lamp chimney**

Bulbous shape  
Frosted and etched  
Fire polished rim and base  
Clear, manganese glass  
H x D: unknown  
Dates: 1897-1917  

MNB 3; 83 sherds  
Provenience: IV-s, V-w, VI-w, Unit 64, Level 3

**Lamp chimney bases, rims, shoulders**

Fire polished rim/base  
Clear, manganese glass  
(2 sherds - shoulder)  
Provenience: VI-s

Sheared rim/base  
Clear, lead glass  
(21 sherds - 1/3 rim/base)  
Provenience: IV-s

Fire polished rim base  
Clear, selenium glass  
(1 sherd - 1/3 rim/base)  
Provenience: II-s  

Clear, lead glass  
(1 sherd - shoulder)  
Provenience: VI-s  
Provenience: II-s
<table>
<thead>
<tr>
<th>Provenience</th>
<th>Clear, lead glass</th>
<th>Fire polished rim/base</th>
<th>Clear, lead glass</th>
<th>H 15.8 x D 12.2 (base), D 14.5 cm (font)</th>
<th>Dates: 1900-1925</th>
<th>MNB 2; 35 sherds</th>
<th>Provenience: III-e, II-s, IV-s, VI-s</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI-s</td>
<td>(8 sherds - shoulder)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II-w</td>
<td>Fire polished rim/base</td>
<td>Clear, lead glass</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lamp shade**

<table>
<thead>
<tr>
<th>Provenience</th>
<th>Fire polished rim/base</th>
<th>Clear, manganese glass</th>
<th>Clear, lead glass</th>
<th>H x D (Base D. 9.8 cm)</th>
<th>MNB 1; 2 sherds</th>
<th>Provenience: VI-w</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-w</td>
<td>Clear, selenium glass</td>
<td>Fire polished rim/base</td>
<td>Clear, lead glass</td>
<td>H x D (Base D. 9.8 cm)</td>
<td>MNB 1; 2 sherds</td>
<td>Provenience: VI-w</td>
</tr>
<tr>
<td>IV-s</td>
<td>(3 sherds - ½ rim/base)</td>
<td>Clear, selenium glass</td>
<td>Clear, lead glass</td>
<td>H x D (Base D. 9.8 cm)</td>
<td>MNB 1; 2 sherds</td>
<td>Provenience: VI-w</td>
</tr>
<tr>
<td>VII-c</td>
<td>Ground rim/base</td>
<td>Fire polished rim/base</td>
<td>Clear, lead glass</td>
<td>H x D (Base D. 9.8 cm)</td>
<td>MNB 1; 2 sherds</td>
<td>Provenience: VI-w</td>
</tr>
<tr>
<td>IV-s</td>
<td>Clear, yellowish selenium glass</td>
<td>Fire polished rim/base</td>
<td>Clear, lead glass</td>
<td>H x D (Base D. 9.8 cm)</td>
<td>MNB 1; 2 sherds</td>
<td>Provenience: VI-w</td>
</tr>
<tr>
<td>VII-c</td>
<td>(2 sherds - 1/8 rim/base)</td>
<td>Fire polished rim/base</td>
<td>Clear, lead glass</td>
<td>H x D (Base D. 9.8 cm)</td>
<td>MNB 1; 2 sherds</td>
<td>Provenience: VI-w</td>
</tr>
</tbody>
</table>

**Footed hand lamp**

<table>
<thead>
<tr>
<th>Provenience</th>
<th>Fire polished rim/base</th>
<th>Clear, lead glass</th>
<th>Clear, lead glass</th>
<th>H x D 25.5 cm (rim) x D 9.0 cm (base)</th>
<th>MNB 1; 106 sherds</th>
<th>Provenience: II-s, VI-s, II-c, V-c, VI-c, VII-c</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI-s</td>
<td>(1 sherd - ¼ rim/base)</td>
<td>Fire polished rim/base</td>
<td>Clear, lead glass</td>
<td>H x D 25.5 cm (rim) x D 9.0 cm (base)</td>
<td>MNB 1; 106 sherds</td>
<td>Provenience: II-s, VI-s, II-c, V-c, VI-c, VII-c</td>
</tr>
</tbody>
</table>

Press molded, six-sided base, ribbed heel
Applied fount with four alternating clear and clear-frosted zippered panels
Ground lip
Handled between base and font
Clear, lead glass
**APPENDIX B: INDEX TO CERAMIC MAKER'S MARKS FOUND IN PENIEL MISSION EXCAVATIONS.**

<table>
<thead>
<tr>
<th>MANUFACTURER/Shape/Color</th>
<th>VESSEL SHAPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDWARD CLARK/Double shield/Black</td>
<td>unknown</td>
</tr>
<tr>
<td>JOHN EDWARDS/Shield/Brown</td>
<td>plate</td>
</tr>
<tr>
<td>GREENWOOD CHINA/Indented</td>
<td>platters, bowls</td>
</tr>
<tr>
<td>W. H. GRINDLEY &amp; CO./Ship, banner, globe/Dark blue (Milan pattern)</td>
<td>teapot, oval platter</td>
</tr>
<tr>
<td>W. H. GRINDLEY &amp; CO./Wreath/Dark green</td>
<td>unknown</td>
</tr>
<tr>
<td>H(avidland) &amp; CO./Red (Limoges)</td>
<td>platter</td>
</tr>
<tr>
<td>THOMAS HUGHES/Rampart Lion inside shield/Black</td>
<td>saucer</td>
</tr>
<tr>
<td>JOHNSON BROS./Lion and Griffin flanking crowned shield/Black</td>
<td>pitcher</td>
</tr>
<tr>
<td>JOHNSON BROS./Crown/Brown</td>
<td>unknown</td>
</tr>
<tr>
<td>JOHNSON BROS./Crown/Light green</td>
<td>teacups, saucers</td>
</tr>
<tr>
<td>EDWIN M. KNOWLES CHINA CO./Sailing ship/Black</td>
<td>saucer, bowl</td>
</tr>
<tr>
<td>KT&amp;K (Knowles, Taylor and Knowles)/Red</td>
<td>saucers</td>
</tr>
<tr>
<td>HL monogram (Homer Laughlin)/THE ANGELUS (pattern)</td>
<td>teacups, saucers, plates</td>
</tr>
<tr>
<td>LAUGHLIN Pottery Co./Eagle holding inverted lion/Dark green</td>
<td>plate</td>
</tr>
<tr>
<td>LIMOGES CHINA CO./Green</td>
<td>serving bowl</td>
</tr>
<tr>
<td>MADE IN GERMANY/Rampart lion/Black</td>
<td>unknown</td>
</tr>
<tr>
<td>CHARLES MEAKIN/Lion and unicorn flanking crowned shield/black</td>
<td>saucer or plate</td>
</tr>
<tr>
<td>J&amp;G MEAKIN/Lion and unicorn flanking crowned shield/Green</td>
<td>bowl, teacup, plate, butter dish</td>
</tr>
<tr>
<td>Z/DOVEDALL___/SEMI-Porcelain MELLOR, TAYLOR &amp; CO.(Cleveland Works?)/Crown/Black</td>
<td>teacup</td>
</tr>
<tr>
<td>NIPPON JAPAN MADE/Bird/Dark green</td>
<td>saucer</td>
</tr>
<tr>
<td>-------/RD. NO. 163083/brown (maker unknown)</td>
<td>plate</td>
</tr>
<tr>
<td>ROYAL IRONSTONE CHINA (Vodrey Pottery Co.)/Lion and unicorn flanking crowned shield/Black</td>
<td>bowl</td>
</tr>
<tr>
<td>PARIS WHITE/ANTHONY SHAW &amp; CO./Globe/black</td>
<td>plate</td>
</tr>
<tr>
<td>STERLING/Crown/Green</td>
<td>plate</td>
</tr>
<tr>
<td>WEDGEWOOD/Lion/black</td>
<td>unknown</td>
</tr>
<tr>
<td>WARE/Banner/Black (maker unknown)</td>
<td>plate</td>
</tr>
<tr>
<td>WHEELOCK/Crown</td>
<td>bowl or saucer</td>
</tr>
</tbody>
</table>
As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to assure that their development is in the best interests of all. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.
