THE DAWSON CITY ARCHAEOLOGICAL PROGRAM: STRUCTURAL REPORT FOR 1978 OPERATIONS
by David Burley and Brian D. Ross
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THE NORTH DAWSON HILLSIDE PROJECT: A FINAL REPORT
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Abstract

The 1978 field season marked the third year of archaeological research at the Klondike National Historic Sites. With the Parks Canada research mandate now centred on site specific development in Dawson City, excavation and testing programs were conducted in a number of locales scheduled for future restoration. These include the Red Feather Saloon, the Third Avenue Blacksmith Shop, Brown's Harness Shop, Fort Herchmer Married Officers' Quarters, the stable and jail at Fort Herchmer, the Bank of British North America, Madame Tremblay's Store and the Old Territorial Administration Building. This work, in large part, was oriented towards answering questions posed by other agencies involved in the development process.

The present report provides a summary description of structural features excavated in 1978. In so doing, it fulfills the defined service requirement for archaeological research. The concluding section attempts to relate these data to the larger problem of permafrost construction techniques in historic Dawson.
Introduction

Although the interests of archaeological research at the Klondike National Historic Sites are multifarious, the nature of the excavation program and the mandate under which it operates is conceived, at present, as a service function. Immediate priorities lie with sites or structures slated for Parks Canada development and initial research objectives are framed within the context of questions posed by other research and development sections. This is not to say that contributions beyond the particularistic scope of a "mission oriented agency" (see Swannack 1975) cannot be made. Rather, such contributions must be adjuncts, so to speak, to the defined parameters of the long term development objective (Burley and Ross 1978).

The present report is a working document which, in part, fulfills one aspect of the service requirement. It is a summary description of substructural architectural features excavated and recorded at several Dawson City development sites during the 1978 field season. It is not intended as a final report of 1978 archaeological activities nor should the accompanying commentary be taken as the totality of site specific interpretations which may be offered. A more comprehensive study integrating each component into the total matrix of Klondike history is now being prepared. The present manuscript, therefore, might best be viewed as an appendix to that report.

Excavation programs conducted during the past field season varied in extent from concentrated efforts at a few
sites to small scale testing at a number of others. While the latter, in most cases, constitute preliminary investigation to further research, the former represent a completion of archaeological research objectives and subsequent observations may be incorporated into design team planning submissions. Sites at which archaeological work was conducted in 1978 include the Red Feather Saloon, Third Avenue Blacksmith Shop, Brown's Harness Shop, Madame Tremblay's Store, Fort Herchmer Married Officers' Quarters, the stable and jail at Fort Herchmer, the Bank of British North America and the Old Territorial Administration Building (see Figure 1).

Because the objectives of this report centre on structural description, geographical and historical background information normally associated with archaeological site reports is purposefully limited. Only where such data have a direct bearing on building evolution are they included. Furthermore, structural features are but summarily described with restricted interpretation. It is felt that a detailed account of the myriad of wood remains exposed at each site serves little purpose beyond the filling in of pages. As a reference guide for expedient extraction of site specific data, an index is appended.

Finally, a delineation of foundation patterning for each component leads into the topic of construction techniques in permafrost zones. Several forms are found to be represented in the site sample investigated in 1978 and these, in turn, may have some influence upon eventual site interpretation. This discussion is reserved for the concluding remarks.
Figure 1. Parks Canada development sites at which archaeological research was conducted in 1978 (Drawing by K. Walton).
Red Feather Saloon

The Red Feather Saloon (Figure 2) is located on the corner of Princess Street and Third Avenue. Constructed in 1902, the building was used as a saloon until 1915. During that time it had a number of proprietors and names, the last of which was Red Feather (see Stuart 1977 for historical documentation). At present, the building is an extant one storey frame structure with an appended shed. Having fallen from its original foundation posts, an interior support bracing system had been installed prior to archaeological research.
Figure 3. Excavation units and structural perimeters of the Red Feather Saloon (shaded areas are those which have been excavated) (drawing by K. Walton).
Since the building had toppled from its understructure, a major objective of the 1978 archaeological investigation was a documentation of foundation support systems and associated features. As well, limited excavation was carried out in the back shed and yard area.

**Interior Excavation**

Following floor board removal, the surface area of the interior of the structure was staked in a one metre grid network conforming to that established by the "As-Found" Recording team in 1977. Eighty-eight 1 m² units were subsequently excavated (Figure 3). Although generally following an alternate grid pattern, as features were encountered this sampling strategy was abandoned for more complete block excavation. The contemporary bracing system hindered excavation in several areas, notably those adjacent to extant walls as well as along a central line running the length of the building. Nevertheless, adequate spatial coverage was possible and it is felt that almost all sub-structural architectural detail was documented. These data are supplemented by that recovered from testing operations conducted in 1977 (Minni 1978). For simplicity of presentation, the foundation system is described separately from other structural features.

**Foundation System**

The structural report for the Red Feather building describes the foundations as including "120 x 160 perimeter mud sills" originally laying on "220 diameter posts of undetermined length" which, in turn, may have been "bearing on a second set of sills below grade" (Bardell 1977). Three rows of posts, two of which correspond to the north and south walls
and the third, a central bearing line, were recorded. Of these, it was possible to fully document only those associated with the central line. There, posts were spaced at an average interval of 1.75 m and included 12 individual specimens. With wood decomposition in an advanced state, it was impossible to get an accurate length measurement for any member of this series. Post remnants ranged between ca. 600 and 900 mm. Again because the building had fallen from its foundations and, subsequently, toppled the post supports, it was not possible to estimate the crawl space height aside from suggesting that it must have been minimal. The direction of post incline illustrates that the building shifted on a northwest orientation and that the western section of the structure moved first.

Corresponding to each row of posts, sill remnants were also located. Appearing to have spanned the full east/west building length, sill plate size was found to be ca. 155 x 160 mm. These sills, however, were not deep enough (on the average 100-200 mm below surface) to be considered mud sill plates; in several places, they were superimposed both on cultural materials and utility features. The absence of mud sill plates seems to be somewhat of an anomalous situation given the bog-like matrix found beneath the Red Feather and the knowledge of more suitable permafrost related construction techniques (see concluding chapter). Such being the case, it may be speculated that the building was hurriedly put up to take advantage of the light industrial development in this section of town. Toward this end, it is noteworthy that a 1902 panorama (Figure 4) shows the Red Feather lot to be vacant during the early summer (?) period.

A final feature associated with the foundation system is an exterior skirt enclosing the crawl space from the street and adjoining lots. At least one plank from this skirt (47 x 150 mm) was recorded along the north wall and remnants
from others were found along the south. Moreover, the skirt perimeter, in several areas, is clearly marked by a sudden change in matrix composition. Specifically, there is a shift from the peat/clay/bog soils in the understructure area to a sand/gravel mix of the street macadam and fill from adjacent lots.

Miscellaneous Features
In addition to the recording of foundation patterns for the Red Feather building, an added objective of the excavation program was to look for differential room use through substructural features and artifact distributions. While the artifact analysis is, as yet, incomplete, a few general statements based on utility features may be made.
Beneath the saloon proper (the easternmost room), a series of water pipes (3) was found to enter under the building at a single point along the north wall and, subsequently, fan out towards the south wall. Since each terminates at roughly the same southern extent, as does a fourth east/west oriented pipe, they could have serviced the saloon bar. Cultural materials recovered from beneath a trap door adjacent to these plumbing features also seem indicative of a south wall placement for the bar. Within this artifact sample are a shot glass, numerous corks and bottle caps as well as a variety of bottle glass (see Minni 1978).

A fifth pipe was found slightly to the west of the main saloon although again oriented in a north/south direction. Its termination point was not located and it would appear to continue to run beneath the south wall into the yard of the adjacent blacksmith shop. A 55 mm diameter for this pipe suggests it also may have been used for water service.

Excavation in the shed of the Red Feather unearthed an unusually large collection of artifacts of a diverse nature. While some may be associated with the saloon, the majority seem to relate to secondary activities occurring in the back rooms. Since structural features were not exposed, it is probable that the shed was without a floor and, thus, would have been used only for storage. The artifact analysis should help to date this appendage as well as suggest subsidiary functions for the rear of the Red Feather.

**Exterior Excavation**

A single east/west oriented trench (5.5 x 1 m) with an adjacent 1 x 2 m unit were excavated to the rear of the Red Feather (Figure 3). The west wall of the just described shed served as the eastern perimeter. Although historical
documentation of structures in this area is poor, it is
known that a small north facing cabin had been, at least
partially, coterminous with the Red Feather saloon. Moreover,
the previously mentioned Dawson panorama (Figure 4) illustrates
this cabin post dates 1902.

The area, prior to excavation, was found to have a
densely packed gravelled surface which extended across the
service lane between Third and Second Avenues. Intermittently
protruding from this gravel and bordering the lane
was a relatively lengthy north/south oriented beam. From
surface evidence, it was not possible to determine whether
this member was an in situ structural feature associated
with the former cabin or isolated "junk" thrown in as fill.

Variation in the cultural matrices, as noted on the
trench profile, was marked (see Figure 5). Although varying
in depth, the upper gravel stratum was found to be no more
than 200 mm thick. One exception occurred beneath the
service lane; there it ranged from 150 to 350 mm. Underlying
the gravel was a stratum of humus which also had
notable variation in thickness at differing intervals. This
material, it is assumed, would have constituted the surface
layer prior to the dumping of gravel. For the most part,
this was found to rest upon a thin stratum of silty-sand
which, in turn, overlaid a continuous thick layer of mixed
slag, cinder and coal dust. Finally, a sawdust woodchip
stratum was found directly on top of sterile subsoil and
permafrost; the permafrost occurred at ca. 900 mm below
surface. As will be subsequently discussed, the sawdust,
woodchips and cinders were probably used as insulation.

A large and confusing assortment of structural members
was exposed in the trench at varying depths. Hindered by
the 1 m width, interpretation as to pattern can only be
speculative. However, it does appear that at least two
structures are represented, each differing in foundation
construction.
Figure 5. North face profile of excavation units to the rear of the Red Feather Saloon (see Figure 3 for orientation) (Drawing by K. Walton).
The remains of what is interpreted as the earliest building are but two foundation posts, although several additional board segments may possibly be associated (see Figure 6). These posts are roughly 230 mm in diameter, run east to west, and are separated by approximately 2 metres. Despite the fact that depth below surface elevations for the post tops were not coincidental (500 mm as opposed to 640 mm), they are sufficiently close to have held a single sill plate. Remains of this sill were absent. Excavation did not proceed to a depth sufficient for the delineation of post length. Moreover, it also was not possible to determine whether the posts sat directly in permafrost or were positioned on a mud sill plate.

Figure 6. Floor Plan of Excavation Units to the Rear of the Red Feather Saloon (Photo by B. Ross 1978).
The second structure is represented by a large number of structural members both exposed on the floor of the excavation unit and protruding from trench walls. Most distinctive in construction style, several overlapping beams form what appears to be a "crib-like" network (Figure 6). In the east end of the trench, these abut with the Red Feather shed wall and in the western extension the northwest corner of the structure may have been isolated. It is of significance that the timber protruding from the service lane was also found to be part of the west wall. It documents a length (north/south) for the building in excess of 8 metres.

In terms of specific features, the presence of a 120 x 120 mm north/south oriented squared beam on top of a second piece of identical size illustrates an overlapping crib network 1.6 metres from the east wall. The bottom piece was found to be directly on the sterile clay stratum without intervening supports. An east/west running notched log (120 mm diameter) with a 50 mm diameter drilled hole in the notch was exposed slightly to the east. There is little doubt that, at one time, it had been connected to the stacked beams as was the case for a second east/west oriented board (30 x 150 mm).

Two possible mud sills, both running north to south, were isolated in the main trench. In turn, each had a post-like arrangement on the northern end which supported a major east/west oriented log exposed in the north profile. These presumed sill plates measured 40 x 170 mm and 20 x 210 mm and, respectively, were found at 650 and 700 mm below surface. The supports for the east/west beam amounted to a stacked (50 x 300 mm) plank section on one sill, with a 500 mm wide half log on the other. The east/west oriented log had a 120 mm diameter and extended from the east perimeter of the interior crib already noted up to the west face of the trench. In the north profile, this log separated the sawdust stratum from the mixed forge slag/cinder matrix. A second east/
west running beam (150 x 210 mm) on top of but separated from this log, was also exposed in the north profile. It, however, ran the entire trench length and was superimposed over the possible partition. It was separated from the log by some 300 mm of cinder.

Finally, in the two isolated units on the western end of the trench, remains of the building's northwest corner were uncovered. This was identified by the termination of the east/west beams mentioned previously and the beginning of the north/south member which protruded from the road bed. The two did not appear to be joined. In addition, across the top of the north/south beam was a large squared timber (250 x 250 mm), 1.04 m long. While it first appeared to be a piece of "scrap" lumber out of context, the fact that it was supported on one end by an intentionally placed post suggests otherwise. A length measurement for the post was not determined. The post diameter was found to be approximately 200 mm. The upper end of this post occurred at 230 mm below surface thus precluding an association with supports assigned to the earlier building. A final feature related to the northwest corner of the building is a pair of superimposed 25 mm diameter water pipes. Both protrude from the north profile and neither is continuous across the trench.

What, in a general sense, can be said about this bewildering array of structure features? First of all, it is suggested that the remains from the earliest building, the two posts, probably belonged to Green's Cabin. Moreover, the sawdust stratum would appear to have been used as insulation for the structure. Exactly when the cabin was demolished and the second building erected needs to be determined through further historical research.

The second building, on the other hand, has a foundation type not previously reported for other Dawson City structures. However, Brown (1970: 57) lists it as one of his alternatives for building on permafrost. In form, it consists of the alternate laying down of beams or logs at right angles to
one another. As each level is put in place, a fill insulation layer is spread over and between the supports. The resultant pattern is a crib-like arrangement stabilized with fill. For this particular building, the upper beam may have served as a bottom plate upon which posts were set. The fill, a mixture of cinders, forge slag and coal dust, is a notable deviation from the typical saw dust/wood chip insulation used at other sites. It does, nevertheless, provide adequate insulation and would have superior stabilization qualities. As well, since the material could be easily obtained from either of two blacksmith shops in the site vicinity, it would have been both expedient to use and low in cost.

Given that the north facade of this building measured 6.75 m and had a length in excess of 8 m, it would have been a sizeable structure. This size, taken with the elaborate foundation system described above, seems to be out of line for that of a log cabin. A more specific identification, because of the restricted nature of the excavation program, cannot be offered.

Summary
Excavations at the Red Feather Saloon and in the adjacent back lot have allowed the documentation of substructural detail both for the Red Feather proper and two buildings to the rear. While employing a post and sill construction type for its foundations, the Red Feather understructure would seem to be anomalous by the lack of mud sill plates. It is probable that such an absence was a prime agent in causing the building to fall from its supports. In addition to structural features, a number of utility pipes were recorded which support the interpretation of a south wall placement for the saloon bar.

To the rear of the Red Feather, two buildings appear to have been present at different times. The earliest had a
post and sill foundation system with a sawdust insulation layer beneath. Opposed to this pattern, the more recent structure employed a crib and fill understructure. The estimated size range for this building suggests it may not have been a cabin.
Abutted by the Red Feather Saloon and Third Avenue Machine Shop, the Third Avenue Blacksmith Shop was constructed in 1901 (see Carter n.d. for the historical accountability). Although documented ownership is noted to have changed a number of times since the building was erected, exactly when the building ceased to be used for blacksmith purposes remains to be determined. Currently, but four extant walls, braced for support, remain intact (Figure 7). To the rear

Figure 7. Third Avenue Blacksmith Shop 1976 (center building without roof, Photo by S. Minni).
of the current standing structure is a gravelled yard which extends to the service lane between Second and Third Avenue.

Archaeological excavation was conducted both within the interior of the building and in the back lot. The primary research objectives centered on the delineation of foundation patterning for the building, the collection of a representative sample of artifacts and the investigation of associated features in the vacant yard. Minni (1978) had undertaken preliminary investigation of this complex in 1977.

Interior Excavation
Prior to the excavation of the building interior, the site was cleaned and flooring removed. A one metre grid network was subsequently laid out and excavation of alternate grid squares was undertaken. Where needed, these were supplemented with additional units to further expose specific features. In total, 35 units of 1 m² were excavated in the interior which provided a full complement of data on understructure supports and related features (Figure 8). In addition, a large collection of artifacts was recovered, the analyses of which are presently being completed. The interior foundations are described separately from other features.

Foundation System
The foundation system for the blacksmith shop was of post and sill construction with the addition of notched log sleepers to supplement sill support. Running east/west, three rows, most probably including nine posts each, were used. With post rows corresponding to north and south extant walls and a central bearing line, they were spaced between 2.5 and 3.5 metres apart. Within each row, posts were placed at ca. 1.28 m intervals. Average post size includes a 165 mm
Figure 8. Excavation units and structural perimeters of the Third Avenue Blacksmith Shop (shaded areas are those which have been excavated) (drawing by K. Walton).
diameter and a 543 mm length. The posts were not set on mud sills but sunk down to permafrost. As was the case at the Red Feather Saloon, this situation would appear to be out of line given more suitable permafrost related construction techniques.

Intermediate between foundation post rows were two pairs of notched log sleepers. An east to west distance of 2.85 m separated the front specimens from those to the rear. The sleepers were oriented on a north/south axis and averaged 1.4 m long with a 150 mm diameter. The notches were hewn (averaging 200 x 90 mm) and located in a central position on the logs.

The underlying sill pattern for the Blacksmith Shop was directly visible following floor board and joist removal. Corresponding to the post rows were three east/west continuous sills of 200 mm squared lumber. A fourth 200 mm squared beam was also excavated directly beneath the extant east wall although its relationship to the sill pattern was not determined. Lying on top of the notched sleepers were east/west logs, 200 mm in diameter, which also ran the building length. The upper surface of these logs had not been flattened. At right angles to the sills, floor joist beams were found to be of a 200 x 50 mm size. Given the width of joists, the thickness of the sills and the elevation of the posts above the surface level, the crawl space height below the floor can be estimated at ca. 460 mm.

Interior Features
Protruding through the extant floor, a pair of anvil support posts was recorded prior to excavation (see Figure 8). One, located in the northeast quadrant, was of a hewn squared timber and measured 1280 x 380 x 270 mm. The other was simply a large cross-sectioned log of ca. 400 mm diameter.
It was situated in the southeast corner of the building. During excavation, two additional posts of similar function were found beneath the floor level. These specimens, it can be assumed, predate the former pair and were probably replaced by them. In general form, they are both cross-sectioned logs of 350 and 400 mm diameters. The former is situated in the building's southeast quadrant and the latter was found in the southwest corner near the already described extant post. While heavy metal concentrations and pieces of forge slag were noted to have been present around each of the posts, the two most recent examples were set on top of a stratum of similar composition. This stratum, it would appear, gave the posts both support and increased elevation. Interestingly, both anvil supports in the southwest section of the interior had crib-like bracings around their bases. Whether this characteristic is related to the nature of the activity being carried on or is simply fortuitous cannot, at present, be determined. Perhaps the analyses of associated cultural material will resolve this problem.

The fact that the earliest anvil supports occurred below the extant floor while the more recent specimens protruded through cut holes may have implications for an interpretation of the original building interior. It might be argued, for example, that the original floor was at a much lower elevation which, in turn, would suggest the post/sleeper/sill pattern of foundation remains to also have been altered. In fact, given a slightly below surface elevation for the top of one support post and a 100 mm above surface elevation for the other, it is hard to imagine any kind of crawlspace existing between the floor and ground surface.
Exterior Excavation

Behind the currently standing Blacksmith Shop, a vacant yard extends back to the service lane. The surface, at the time of excavation, had been gravelled and all feature remains were covered. A continuation of the alternate unit excavation strategy was maintained with, again, additional areas opened for feature exposure. In total, 61 units of 1 m² were excavated which exposed the remains of a large annex. This extension ran back to the service lane and, although a west wall was not delimited, seems to have had a length of ca. 11.5 m. An area panorama (see Figure 4) illustrates the presence of this extension in 1902.

Initial evidence for the annex was the remnants of a relatively intact floor (Figure 9). This feature consisted of a network of east/west oriented floorboards of roughly 155 x 20 mm size which were nailed to north/south oriented
joists. Despite the absence of a full joist system, an average spacing interval of 910 mm seems to be characteristic. Joists were of 140 x 50 mm timber. Interestingly, in the southeast corner of the annex, two joists had been directly incorporated into the construction of a scrap metal bin (Figure 10). The bin was 2.0 m long, 0.8 m wide and, at

Figure 10. Scrap Metal Bin in Annex of the Third Avenue Blacksmith Shop. (Photo by B. Ross)

the time of excavation, was full of a large assortment of metal artifacts.

The top sill network, as far as could be determined, was composed of four east/west running members. These correspond to both north and south walls of the standing structure as well as intermediate positions perpendicular to the back wall door jams. Three of these specimens are best described as sawn planks (ca. 140 x 50 mm) while the fourth is a squared timber at 160 mm a side. The latter occurs
along the south perimeter and is continuous for 7.5 m.

Only one identifiable foundation post was uncovered in yard excavations. It occurred in the northwest corner of the extension and was a squared member of 570 x 150 x 150 mm size. This post was sitting directly on top of a mud sill and, since a mud sill was found for each top sill, it seems anomalous that additional specimens were not recorded. Mud sills were of varying lengths and, on the average, consisted of 310 x 50 mm planks. Smaller sections of sawn boards and planks were found, in varying places, beneath the mud sills. They, most probably, served as subsill supports or shims.

Finally, the only other interpretable feature exposed in the yard excavations were two concentrations of sawdust along the north and south building perimeters. Although interpretation is speculative, these may be indicative of insulation boxes or a banking of the foundation with sawdust.

Summary
Excavations at the Third Avenue Blacksmith Shop were undertaken both within the confines of the extant structure and to the rear of the building. Interior excavation exposed the remains of a post and sill construction pattern although posts were not set upon bottom mud sills as might have been anticipated. In addition, two of the central sills or floor beams were simply placed on notched log sleepers which, in turn, were directly laid on the surface. Also recorded within the limits of the extant structure were two pairs of anvil support posts. Although one pair was found to protrude through the existing floor, the other was exposed only after floor board removal. The latter are suspected to have been the precursor of the former and may document a slightly lower floor elevation in early periods of building use.
In the presently vacant yard, foundation remnants for an annex or extension were uncovered. While also of a post and sill construction pattern, mud sill plates were found to be present. This suggests the back portion of the building to be a later addition. However, it was present by at least 1902 as illustrated in a Dawson panorama. Despite a failure to locate the back (west) wall of the annex, its length can be estimated at ca. 11.5 m providing a total east/west dimension for the building of around 22.5 m. With the exception of a scrap metal bin in the southeast corner, nonstructural features were lacking. It may be possible, nevertheless, to speculatively identify the annex function through future analyses of associated artifacts.
Brown's Harness Shop

At present, there has been little research into the history of Brown's Harness Store (Figure 11) and the building is no longer standing. It would appear to have been built ca. 1901 at a time of light industrial development in this section of Dawson City. From the available iconographic evidence, the earliest building is known to have been of two storey frame construction and was abutted on either side (north and south) by similar types of structures.

Figure 11. Brown's Harness Store. (Public Archives of Canada C20068)
However, specific photographs from the rear of the store are absent and its total length cannot be estimated. Moreover, this structure appears to have undergone considerable alterations in later years prior to its being torn down.

Although Brown's Harness Store is not to be reconstructed in total, the site itself is scheduled to include a segment of the Visitor Reception Centre complex and a facsimile of the facade is to be erected along Third Avenue. In line with this development, archaeological research was to document any detail regarding size, construction techniques, intra-building features, streetscape and the like, as well as collect a representative sample of the associated material culture. Toward this end, excavation was started during the 1978 season. This work will be continued at a later date.

Immediately prior to excavation, the site was again tied into the 1977 "As-Found" grid (Figure 12). Subsequently, an intensive surface collection was initiated using 2 m square provenience units and all visible features were mapped. From this preliminary inspection, it was possible to recognize at least two stages in the construction of the former building. The last stage would include the addition of a back annex almost equal in size to the original structure. Because of time limitations, it was possible to investigate only that portion of the site upon which the original harness shop was situated. This was supplemented by the excavation of a trench from the eastern facade across the boardwalk zone and out into Third Avenue. This trench provides excellent detail on former street grade, boardwalk elevation and their relationship to the site under examination.

**Interior Excavation**
Because of time restrictions and the need for adequate spatial coverage of the excavation, units were selected on the basis
of a simple random sample with several pits added to facilitate a complete north/south profile through the building. In total, 28 units of 1 m² were excavated to varying depths and a large assortment of artifacts and features were exposed.

The foundation system for the front segment of the Harness Shop appeared from surface remains to be of post-sill construction. Five rows of north/south oriented posts (diameter = 210 mm) are, more or less, evenly spaced at ca. 3.3 m intervals. Each row includes four separate supports with roughly 1.6 m separating them (see Figure 12). While this foundation system does not seem out of line with what might be expected, it nevertheless proved to be unique in comparison to other permafrost construction styles recorded in 1978. Specifically, the posts are not laid on top of mud sill plates but are themselves sunk into the permafrost. Indeed, in the one case where an attempt was made to get the post length, it was not possible due to its depth. Excavation was stopped at 1.25 metres below surface, approximately 300 mm below the permafrost zone. Because of this, it would seem more appropriate to describe at least the original building as having been set on piles.

In that the flooring had not been taken up when the building was demolished, it is possible to make a relatively accurate assessment of sill, joist and floor patterns. The sills were oriented in an east/west direction and consisted of squared timbers roughly 150 x 150 mm. The north/south joists, on the other hand, measured 150 x 40 mm and were found at intervals of ca. 650 mm. Intact segments of flooring show that the original floor had, at some point, been replaced by simply overlaying it with a second series of floor boards. The underlying floor was oriented in a north/south direction and consisted of butted 104 x 20 mm boards. Contrastingly, the second floor ran east/west and
Figure 12. Excavation units and structural perimeters of Brown's Harness Store (shaded areas are those which have been excavated) (drawing by K. Walton).
was composed of slightly larger timbers of 190 x 32 mm size. They also were butted. Taking into consideration the differences in elevation between the joist tops and ground surface, the crawl space height probably ranged between 480 and 585 mm.

In addition to the structural support system described above, a number of flooring braces and possible sill supports were recorded (Figure 13). These include two on-end squared timber posts, one of which had an underlying board subsupport, as well as several stacked plank sections upon which cross-sectioned log sleepers were set. The latter are oriented

Figure 13. Subsill Supports Exposed at Brown's Harness Store. (Photo by B. Ross).
north/south and have an average length of 1600 mm and diameter of 180 mm. Although it is not certain, these features are thought to be later additions probably added for the stabilization of a deteriorating foundation.

In terms of overall building size, the east facade was found to be 7.14 m with the length of the original structure being 9.1 m. A reliable length estimate for the later addition was not obtained although a guess estimate of 12.4 m based on the western line of extant posts may be accurate.

Next to the south wall of the Harness Shop, a foundation post (length 730 mm, diameter 150 mm) from the adjacent building was also exposed. This post sat on a sawn plank section which served as a mud sill support. If this post is taken to be the building's northern limit, it would be separated from Brown's by less than 500 mm. A similar situation was found to exist between the north abutting extant Machine Shop and the Harness Store.

**Exterior Excavation and Mapping**

Although no concentrated effort was made to excavate areas outside of the boundaries of the original Harness Store, a surface collection of cultural materials and mapping of visible features do allow a few descriptive generalizations. As well, the excavation of a 1 x 4 m trench across the boardwalk zone and into the road bed of Third Avenue provides us with a perspective on the relationship of this building to the early 1900 street scape.

As stated, virtually the entire lot to the rear of the structure was, at some period, covered by an annex. It is notable that a similar foundation and flooring system was employed in the construction of the addition. In particular, in a number of areas, a double floor found in situ and major sill plates seemed to correspond with those of the
front building. However, contrasting the post pattern described previously, only four east/west rows, each including five posts, were present. These were evenly spaced, east to west, at intervals of ca. 2.38 m and, north to south, at roughly the same distance. In diameter, posts were directly comparable to those in the front section (approximately 210 mm) although none were excavated to get a length dimension.

Aside from foundation remains and flooring, two other features were noted at the rear of the building which hold some interest. Although only one of these would be incorporated within the suspected interior limits of the annex, on the basis of appearance, they appear to have had a similar function. Both are rectangular pits framed with wood liner (Figure 14).

![Figure 14. Wood Lined Pit to the Rear of Brown's Harness Store. (Photo by B. Ross).](image)

The interior feature measured 4.25 x 1 m and has a present depth of 352 mm. It was lined with 100 x 32 mm boards
attached to vertical corner studs. The second pit was heavily disturbed and accurate measurements were not obtainable. It, however, did have a comparable 1 m width.

The trench excavated into Third Avenue did not actually border the front (east) facade of the Harness Store but was located slightly to the north of its northeast corner (Figure 12). This position spans the distance between the store and the adjacent Machine Shop as well as covering the southeast corner of the latter structure. While the initial 4 m of the trench was hand excavated, this was extended by backhoe to facilitate further investigation of the original road surface.

Despite the fact that a complete boardwalk was not exposed beneath the surface gravels, enough structural members remained intact such that its dimensions, elevation and construction mode were determined (Figure 15). Abutting the

Figure 15. Excavation Trench Cross Sectioning the Third Avenue Boardwalk and Street Grade (Photo by B. Ross).
northeast corner of the Harness Shop and extending towards the street, a 150 x 150 mm squared beam was exposed. On its eastern end, this rested on three stacked sawn board sections which raised the height by 130 mm. This piece is taken to be the support sill for the boardwalk. Its length of 2.1 m provides a minimum boardwalk width which, with overhang, probably ranged between 2.14 and 2.45 m or 7 to 8 feet. On top of this sill, a north to south running joist (?) measuring 210 x 100 mm was also uncovered. It was not continuous and evidence for other joists was lacking. Assuming the latter to be a joist and the boardwalk planks to be ca. 50 mm thick, it can be estimated that its former elevation was roughly 360 mm below the present ground surface level.

South of the boardwalk sill but also running east/west was a four sided wood gutter box. This drain is probably an extension of a three sided example found intermediate between Brown's and the Machine Shop. The box measured 160 x 120 mm and extended 2.67 m into the street prior to its intersection with a second gutter. With this feature ranging between 470 and 700 mm below surface, there can be little doubt that it ran beneath the boardwalk. The second gutter is oriented north/south although it does not continue across the entire trench width. It connects to the east/west running drain by means of a simple butt joint. The east/west box was of a simple construction of four abutted boards; the north/south feature was more complex consisting of three abutted boards sitting inside a second four-sided box. Outside perimeters of the latter box were ca. 400 x 400 mm with the upper elevation at approximately 800 mm below the current road surface.

During excavation, a number of what may be more recent water pipes was exposed. This includes a pair of 20 mm diameter pipes oriented north/south, a 40 mm diameter line
which seems to have been connected to at least one of the above, and an east/west 30 mm diameter example which appears to have serviced Brown's. Of the former, one includes an end fitting for attachment to the larger specimen. In the case of the latter a fitting was also found midway along the length which, at one time, connected the sections.

The final feature is associated with the earliest road surface for Third Avenue. In a matrix of sawdust, clay and peat, a series of east/west running sawn half log sections was exposed. These were laid down side by side with the flat surfaces up. Assuming these pieces to be part of a corduroy road, it is possible to infer the spatial relationship of Brown's Harness Store, the Machine Shop and the front running boardwalk to the 1900 road bed. Specifically, this road would have been situated between 3.2 and 3.4 m from the building facades. With a 960 mm depth below surface elevation for the log sections, it can also be estimated that the boardwalk was raised approximately 600 mm above the road surface. However, since the road matrix was bog-like in character, it is probable that this feature would have immediately settled below the dried street grade. Log sections had a mean width of 114 mm and extended into the east trench wall. From the backhoe excavations, they were found to be over 2 m in length.

Summary
Excavation and surface mapping of structural features associated with Brown's Harness Store provided documentation of foundation construction and the relationship of this building to the former Third Avenue streetscape. From surface indications, the store appears to have been erected in two stages; the latter included an annex equal in size to the original structure. Excavation proceeded only in
the front portion, however.

The foundation system for Brown's was found to be of a pile/sill construction with the piles sunk well into the permafrost. These underpinnings were supported in later years with additional posts and sleepers. From extant structural members, the more recent addition appears to have followed a similar pattern although excavation is needed to verify this interpretation. The east facade of the building extended 7.14 m along Third Avenue and was approximately 3.2 to 3.4 m from the road surface. A 2.14 to 2.45 m boardwalk elevated 600 mm from the road bed would have been present along the front. In length, the original structure was ca. 9.1 m with a guess estimate of 21.5 m for the complete building. This store was separated by less than a half metre from buildings to the south and north.
Originating in 1897, the structural history of Fort Herchmer has been somewhat dynamic (see Bush 1972). Similar to the remainder of the Dawson townsite, subsoil conditions, bog, seasonal flooding and the like necessitated continuous modification and building maintenance. Combined with the immediate Dawson City population rise and decline, the functional nature of the Fort changed drastically over a relatively short period between 1897 and 1920. Presently, all but four structures related to the former Fort Herchmer complex are gone. The physical site is now split between the Parks Canada Storage Compound and properties of the Royal Canadian Mounted Police and Yukon Territorial Government.

Archaeological research conducted at Fort Herchmer in 1978 was to fully investigate one structure slated for development, the Married Officers' Quarters, as well as to test other possible development sites and areas. Subsequently, excavations were undertaken in both interior and exterior areas of the Married Officers' Quarters; in an adjacent yard area intersecting the foundation remains of a large two storey building; along the western end of the still existent stable, and in front of the north door of the hospital cum jail. With the exception of the first, each was limited to either a few test pits or a dissecting trench.

Married Officers' Quarters Excavation

Originally designed to be the Officers' Mess, this log
structure has been dated to the 1898 period of Fort Herchmer (Bush 1972) and, thus, falls among the earliest extant buildings in Dawson (Figure 16). In conjunction with

Figure 16. Fort Herchmer 1900, Married Officers' Quarters Second Building From Right (Public Archives of Canada C1339).

restoration, archaeological research at the Married Officers' Quarters was to document subsurface architectural detail, exterior ground features and collect an associated assemblage of artifacts. Preliminary investigations were conducted in 1977 by S. Minni (1978) and, subsequently, were continued in 1978.

The 1978 project undertook excavation in three areas. These included: subfloor zones of the building interior; areas adjacent to the west exterior facade, and a north/south trench abutting the north wall and transecting the adjacent north lot (Figure 17). Since the latter intersected the foundation and basement remains of a second larger
Figure 17. Excavation units - Married Officers' Quarters, Fort Herchmer
(Drawing by K. Walton).
structure, a description of features associated with that building is left for later discussion.

Following floor board removal, interior rooms were gridded into a north/south oriented one metre grid system. Several alternate excavation units (1 m²) were opened (Figure 17) in the main east room and excavated to a depth of between 500 and 900 mm. Cultural materials were found in the top 100 mm or so although these amounted to but a few building related artifacts. Furthermore, the majority of these items would appear to have been deposited following floor board removal. Since the floor was independent of the building (G. Duguay, personal communication) and had been built over when the foundations shifted, it is not surprising to find few materials below the flooring. Consequently, it was decided to continue interior excavations in only those areas where architectural information might be derived. This consisted of excavation units along the north, south and east wall of the kitchen, along the east wall of the main room, at the foot of the furnace room stairs and in the southeastern corner of the attached shed.

With the floor being independent of the wall, two sets of support posts, each underlain by a mud sill plate or block, were employed. In one unit located in the northwest corner, these were fully exposed and recorded (Figure 18). Here, the floor post was found to be 550 mm in length, 150 mm in diameter and set on a board subsupport (ca. 280 x 190 x 23 mm). Adjacent to this post was the wall support stud. As it still bore the extant wall, it was difficult to gain its proper perspective. Roughly squared, this member was approximately 610 mm in length and 180 mm across. The upper elevation of the post was raised slightly (ca. 260 mm) above that of the floor. Wall and floor posts were partially exposed in two other units in the dining/kitchen areas and tops of the floor supports were found protruding from the
subfloor matrix and paralleling floor joist patterns.

The only other architecturally related feature excavated within the building interior was a wooden floor found at the foot of the stairs leading to the cellar and furnace room. Covered by approximately 50 mm of debris, this floor was found to extend only to the furnace room entranceway. The floor and stairs were joined by a section of tin sheeting running under the stair casing.

Excavations in areas outside of the structure concentrated in the west and north lots with other areas having been tested
in 1977 by Minni (1978). In both lots, the defined objective was to relate the Married Officers' Quarters to previously adjacent buildings and record associated ground features.

Alternate test units (1 m$^2$) on the western exposure covered a section abutting the west door jamb and running across an approximately four meter square area. This zone should have revealed features associated with the north entrance and intercepted foundation remains of an adjacent building torn down in 1899 (see Figure 16). In neither case was this the situation. However, by exposing the basal segment of the west wall, some insight into the construction of the Married Officers' Quarters building was gained. Specifically, a trench was dug 1 m from the present surface into the silt/clay/sand deltaic matrix. Although the original ground surface was not located in the profile, from evidence in adjacent units, it seems to have been 300 to 400 mm below that currently observed. Following trench excavation, foundation supports were positioned and wall construction began. The foundations and lower wall logs were then covered with tin sheeting and the trench refilled to the surface level. At some unknown date, the west wall was banked with further topsoil so that a garden planter was created (see Minni 1978 for full description). A pair of bricks, stacked on top of each other, were found on the surface below the garden box and are assumed to have been supports for a step platform. Thus, it is probable that the topsoil buildup on the west wall post dates the construction period. As well, there is some historic documentation for foundation repairs and it is possible that the tin sheeting is more recent than the period alluded to.

As noted above, the excavations along the west wall were expected to intercept the foundations of a log building torn down in the 1899 period. In fact, at least two of the units
Figure 19. West face profile of main trench in lot north of Married Officers' Quarters, Fort Herchmer (drawing by K. Walton).
fell inside the assumed building perimeters. Nevertheless, structural features were not encountered and few artifacts were retrieved. At least two possibilities could explain this situation. First, it may well be that, at the time of demolition, any trace of the building which may have existed was removed. This would be in accord with "appearance" standards set for a military post. Yet, it seems improbable that post moulds and the like would have been totally obliterated. Therefore, an alternative interpretation may be suggested. Specifically, this building may have been hastily constructed, without flooring or foundations. Such a building would be easily removed and few signs of its former presence would remain.

Excavations in the north yard consisted solely of a 1 x 17 m trench (Figure 17) which cut across the foundation system of a large frame structure. With the southernmost unit bordered by the Married Officers' Quarters, some perspective on the spatial association of the two buildings was gained. Architectural detail for each was also gathered.

Dealing only with the Married Officers' Quarters, the foundation system was again found to correspond to that previously described for the west wall. That is, a trench was excavated, the foundation system and bottom logs laid in and covered with tin sheeting, and the trench refilled. As added insulation, the north wall had been banked with 300 to 350 mm of sandy silt. The original ground surface north of the Married Officers' Quarters would also appear to be covered by approximately 200 to 300 mm of flood derived (?) silts and sands.

Between the foundations of the adjacent building and Married Officers' Quarters, a corridor of approximately 7.5 m existed. Intervening was a boardwalk, traces of which are found on the north/south profile (Figure 19). At 1.9 m from the Married Officers' foundation and ca. 250 mm below
surface, a gravel lens was encountered. This lens is thought to have been a basal pad for the walkway or, alternatively, debris which may have filtered through boardwalk planks. The full north/south extent of the gravel lens is absent, having been cut by an east/west trench dug for subsequent installation of sewage pipes. Aside from the boardwalk, no further grounds features were found.

North Lot Excavation

Historical information on the lot north of the Married Officers' Quarters is, at present, scanty. It is known that two structures consecutively occupied the site. The first of these, built in the early years of Fort Herchmer, was a two storey, 26 foot square log (?) building without a full basement (see Figure 16). By 1904 the structure had deteriorated beyond repair (Bush 1972: 40) despite repeated attempts to correct faltering foundation systems. This building originally served as the Sargents Mess. Although slated for destruction in 1903, demolition does not appear to have proceeded immediately and it is not known whether a period of time elapsed between its removal and the building of the second structure.

The second structure, labelled the "Main Barrack Building" on a 1912 ground plan (see Bush 1972: Figure 23), has yet to undergo historical investigation. However, from available iconographic evidence and the archaeological remains encountered in 1978, it would appear that the ground plan is a false representation. In particular, foundation remains from both the north and south wall reveal a structure no more than 9.20 m wide yet the barracks appear to be approximately 27.5 m. Moreover, historic photographs show the building to be a two storey well built frame structure nowhere near the estimated size on the 1912 ground plan. The photos
(for example see Figure 20) in fact illustrate a building

Figure 20. Fort Herchmer 1905 - Note Married Officers' Quarters and Two Storey North Lot Building To The Left. Stables Are On The Right (University of Washington - 63).

similar to the Officers' Quarters constructed in 1903 (Bush 1972: 54-59), a structure for which a building site has yet to be documented.

As has been previously noted, archaeological excavations on this lot amounted to a 1 x 17 metre trench, the southern extent bounded by the Married Officers' Quarters. This trench intersected the foundation walls and full basement of the adjacent north structure. Since the fill used to level the site after building demolition can be related by artifact association to the 1940s period, these features represent the most recent building on the site. No evidence for the earlier structure was encountered.

From the profile (Figure 19) the type of foundation
system employed in the construction of the later structure is not apparent; nor was it so during excavation. Moreover, because of the extent of the basement, it was also impossible to determine whether or not it constitutes a later addition. The basement had been excavated down to roughly 1.5 metres below the ground surface. Plank flooring (25 x 254 mm) attached to joists laying directly on top of the ground surface was enclosed with studded plank walls (see Figure 21). Along

Figure 21. Exposed Flooring in Trench North of Married Officers' Quarters Fort Herchmer (Photo by B. Ross).

the external walls, sawdust was employed as a fill, probably to serve as added insulation, while sawdust-filled wooden
boxes were also found along both north and south walls. Towards the north end, cross cutting the trench, a large metal heating duct(?) was exposed. Since general upgrading to hot air coal furnaces occurred at the post in 1912 along with basement excavations at a number of buildings (Bush 1972) it is probable that the basement dates to at least that year.

Aside from structural detail of this building, a most interesting aspect of the excavation project was the nature of the fill used to level the basement after building demolition. Included here are a variety of batteries, radio tubes, acid containers and other artifacts associated with the Royal Canadian Signal Corps' use of the Married Officers' Quarters. This was supplemented with an extensive selection of alcoholic beverage bottles. It is suspected that confiscated liquor was being thrown into the basement for intentional breakage by the R.C.M.P. With the basement virtually levelled, the upper surface was then capped with large boulders. An exception here was found in the northern-most unit, it being covered with a dense packed gravel. The density of the gravel stratum seems indicative of a drive, roadway or heavily used parking area.

Miscellaneous Test Excavations
On a more reduced scale, two other testing operations were undertaken at Fort Herchmer in 1978. These consisted of two (1 x 1 m) excavation units at the guard house and three (1 x 1 m) more at the stable (see Figure 22). Both were centered on extant structures which have been slated for future restoration.

The original guard house was built in 1898 to serve as the post hospital. Between its construction date and 1910, the year it was converted to a guard room/jail, at least one
Figure 22. Structure locations and Excavation units for extant Fort Herchmer buildings in the Parks Canada compound (drawing by K. Walton).
extension had been added, a cellar was excavated for the installation of a furnace, and a large variety of interior modifications had been undertaken. Following its conversion, almost an equal number of changes were made. Although the abandonment date is not known, by 1916 the building is recorded as being in an advanced stage of deterioration (Bush 1972: 116).

Excavation units at this hospital cum jail were placed directly in front of the north exposed door. The intent of these excavations was to simply assess the degree of disturbance outside of the building and, hence, potential for future work. The results were not promising. Both units were excavated to approximately 500 mm below present ground surface and into sterile subsoil. The stratigraphic make up consisted of a light upper stratum of gravel underlain by a darker gravel matrix bottoming out with a dark humic mixture. Both gravel strata are fill, presumably associated with building construction. Concomitantly, few artifacts were recovered. It must be noted, however, that the extension around which the excavations took place is one of the later additions and further testing is needed to fully review the archaeological context. A shallow wooden wall(?) feature, enclosed by sheet tin, was the only structural feature found in the excavated units. It, most probably, served as support for a door step or landing.

The still standing Fort Herchmer stable is a large imposing building slightly to the northeast of the Married Officers' Quarters. It was constructed in 1903 to replace a smaller log stable adjacent to the hospital. Of the 1978 testing operation, two units were located directly in front of the west entrance while a third was a short distance to the northeast. After excavating 400 mm into a dense gravel matrix, work at the latter unit was abandoned. On the other hand, excavation in front of the west door revealed a ramp
walkway formerly supported by short stubby posts (Figure 23).

![Ramp Feature, Fort Herchmer Stable](image)

Figure 23. Ramp Feature, Fort Herchmer Stable (Photo by D. Burley).

This ramp consisted of ca. 150 to 200 mm planks and at least one support joist (50 x 101 mm) was exposed. Interestingly, this feature was encapsulated by a cinder and charcoal layer.

**Summary**

The 1978 excavation program at Fort Herchmer was directly related to future restoration plans for the remaining extant structures. As such, major operations were conducted at the Married Officers' Quarters in both interior and exterior areas. Combined with the latter, a two storey frame building in the north lot was also cross cut by an excavated trench. Finally, test excavations around the stable and hospital *cum* jail were undertaken.

The importance of Fort Herchmer, both to the history of
the Klondike and the Royal Canadian Mounted Police, cannot be understated. Correspondingly, it is recommended that, prior to future development including landscaping, archaeological research be given sufficient lead time for more extensive excavation.
Archaeological investigation of the Bank of British North America (Figure 24) was limited during the 1978 field season to a one week testing program. Efforts were concentrated in two areas, the west corridor between the bank and present day Cassiar Building and a gardened area in the south yard. It is strongly recommended that boardwalk areas to the north and east of the bank, as well as substructure zones, undergo at least minimal test excavation prior to the stabilization program.
The objectives of this preliminary research were exploratory. The areas surrounding the bank, from surface indications, appeared to be heavily disturbed. Thus, the initial objective was to assess the potential for more extensive investigation. Secondly, an attempt was made to locate architectural and/or ground features associated with the extant bank, the Cassiar Building, or structures previously located on either site. Finally, a representative sample of artifacts was sought.

South Yard Excavation

With its original offices having been destroyed by fire in 1898, the Bank of British North America had the present structure erected on the same site. Bush has described this building as:

The new bank which rose from the ashes of the old was a substantial 2-storey frame structure, 40 feet square, insulated with asbestos and iron. The brick vault, cone-shaped, was sheathed [sic] in steel. A 10 by 35 foot assay office was attached to the main building (1973: 76).

The assay office was a south extension with entrance through the main (south wall) building. Iconographic evidence shows a shed appendage to this annex (R. Stuart 1978, personal communication). Immediately south of the annex, a second frame structure of unknown function was also present.

With the assay office having been torn down, the test excavation program was to 1) gather specific information on its foundation system, 2) verify its size as reported by Bush and 3) gain a measure of its spatial relationship with the south structure. Four excavation units based along an east/west axis were opened (Figure 25).

The stratigraphic composition for each of the units tended to be similar. It was composed of an upper topsoil zone ranging in depth from 100 to 150 mm, a second stratum
Figure 25. Excavation units - Bank of British North America (Drawing by K. Walton).
of dense packed gravel (ca. 100 mm thick) and a final undisturbed cultural zone of varied composition. From this makeup, it would appear that, following the assay office removal, the area had been gravelled over for possible use as a parking lot. Eventually, the topsoil was added to facilitate either a garden or lawn.

Assay office foundation members were exposed in the three easternmost units. While the southern extent of the substructure was found to be approximately 3.05 m as suggested by Bush, the western edge, contrary to the 35 foot suggested length, measured only 6.1 m. The latter dimension is supported by extant wall tracings along the south facade. Bush's measurement, however, may be a combined length for both the assay office and adjoining shed. From the lack of definite evidence for an understructure, it appears this shed was probably without a floor.

The foundation system for the assay office, on the basis of uncovered features, is difficult to interpret. Along the east wall, a sleeper (150 x 200 mm) and possible sill (200 x 250 mm), both running in an east/west direction, were exposed. The sleeper appeared to have joist remains adhering to the upper surface while short subsupports were found beneath. At a slightly lower elevation and further south (300 mm) (Figure 26), the possible sill plate lies directly on an original peat loam surface. Whether or not it is a mud sill is open for question. The difference in elevation between its upper surface and that of the sleeper is small (ca. 280 mm). Thus, should a post and sill construction style have been used, as was the case in the bank, the posts would have approximated small stubby blocks. Moreover, the east end of the sill(?) does not extend far enough to match the supposed joist remains noted on the sleeper. The fact that the sill had been covered with a sawdust insulation layer while the sleeper was laid on top is also out of line with what might be expected.
Figure 26. West face profile of excavation units in the southeast yard of the Bank of British North America (drawing by K. Walton).
West wall foundation remains add further confusion. Again, a possible east/west running sill (200 x 200 mm) has been identified (Figure 27). It roughly lines up with that already described for the east wall and is at a coincidental elevation. It is not, however, the same member. On a slightly raised elevation, a second plank (300 x 250 mm) was found to run north/south. What function it had or its relationship to the west wall is unknown. Nevertheless, its upper surface is at an elevation approximate to the upper side of the eastern sleeper and one must hypothesize some form of parallel employment. Again, the lower plank rests on sterile loam with a total covering of sawdust while the upper is laid on top of the sawdust stratum.

While no architectural remains for the adjacent (south) structure could be definitely located, a floor-like series of thin boarding was uncovered in the associated area. We suspect, nevertheless, it may be refuse associated with the demolition of either that building or the assay office. Similarly, a tin covered roof section (?) was partially exposed as fill along the annex west wall.

West Wall Excavation
At present, a narrow lane approximately 2.5 m in width separates the west wall of the bank from the adjacent Cassiar Building. Historic photographs taken prior to a positioning of the Cassiar Building show this lot to have been occupied by a structure known as the "Dental Works" (see Figure 24). Since its exact spatial relationship to the bank was not known, this problem formed the basis for research along the west facade. To be specific, the program was to document foundation remains for the "Dental Works" and any features (architectural or otherwise) intervening between it and the bank. Accordingly, after establishing a main north/south baseline and using the bank as an eastern perimeter, three
Figure 27. East face profile of excavation unit in south yard of Bank of British North America (drawing by K. Walton).
$1 \times 2$ m units were excavated at $3$ m intervals (Figure 25). Although each unit varied slightly in profile, all had undergone considerable disturbance due to the provision and maintenance of water and sewer lines in the more recent Cassiar building.

The foundation system of the bank is that of a post and mud sill variety as outlined in the structural report by Levesque (n.d.). The mud sill plate (ca. $150 \times 205$ mm), in turn, was found to be supported in at least a few places by rough cut subsill supports. The crawl space was enclosed by a skirt $840$ mm high with $20$ mm thick boards. The frost zone is coincidental with the mud sill plate at an elevation of approximately $800$ to $900$ mm below grade.

Definite structural features relating to the "Dental Works" were absent. It is possible that the excavation unit length of $2$ m was insufficient to intercept architectural remains of the foundation. If such a situation were the case then at least a narrow corridor allowing for an alley or walkway was present between the buildings. It is also possible, however, that any features which may have been present were destroyed with the positioning of the Cassiar Building and the installation of plumbing services.

With one exception, the cultural matrices encountered in this area of the site were homogeneous. Simply described, they were of a water laden silty clay littered with board sections, wood chips and charcoal fragments. No clearcut discernable strata were recorded. The exception to the above was found in the most southerly excavation unit opposite the southwest corner of the bank. Here, disturbance was not complete and at least some indications of the former stratigraphic profile were present (Figure 28). This consisted of an upper stratum of dark silty clay overlying a mixed gravel and ash layer which in turn covered a dense strata of wood chips. Beneath these were layers of mixed fill, clay and,
Figure 28. North face profile of excavation units west of the Bank of British North America (drawing by K. Walton).
again, wood chips. The wood chips probably served as an insulation zone for the "Dental Works" building.

Summary
Archaeological investigations of the Bank of British North America were limited to the west and south facades during the 1978 season. Work in these areas suggests that, although considerable disturbance has occurred, information relevant both to site restoration and interpretation may be gained. To the south, foundation remains of the former assay office were exposed. While a definite determination of foundation construction was not obtained, it seems probable that it did not conform to the post and mud sill pattern as was the case for the adjoining bank. To the west, foundation systems for the bank were excavated and recorded. Moreover, since structural features for the "Dental Works", a previously adjacent building, were not encountered within a 2 m distance from the bank, it may be possible that at least a narrow alley existed between the buildings. Further testing along the north and east street facades as well as in understructure areas should help to document architectural detail for this building.
Madame Tremblay's Store

Located on the corner of King Street and Third Avenue, Madame Tremblay's store (Figure 29) is a two storey frame structure which, in recent years, had been used as a seasonal residence. The structural history for the early period of this building has been summarized by Stuart (1978). Contrary to a position that the store had been the original structure on its present site, from historic photographs and data collected by the "As Found" recorders, Stuart has made a strong case for its initial construction one block to the east. Sometime between

Figure 29. Madame Tremblay's Store, 1943 (photo by M. Cole).
April 1904 and June 1905, it was moved to the King and Third locale replacing a building similar in construction style and size. The rationale for this move and the fate of the previous building are not currently known. In 1915, the Tremblays had acquired the property and, subsequently, established their business. This usage continued until the 1940s.

With the Tremblay building undergoing foundation stabilization in 1978, archaeological research was conducted in two stages. Prior to a physical removal of the building from the site, excavation was concentrated in areas adjacent to the east, west and north facades. This work was supplemented by excavation beneath the structure once it had been moved. As research guidelines, the initial objectives were to document foundation patterns, associated boardwalks, external grounds features and the spatial relationship of the store to a building once located immediately to the east. An attempt was also made to isolate remains of the pre-1904 structure in an effort to explain its removal.

External Excavation
At the time of excavation, construction work at Tremblays had already begun. The west and north boardwalks had been cordoned with fencing and second story staircasings and porches on the east wall had been removed. During the excavation, the adjacent log structure on Third Avenue was also moved further to the south. To a limited extent, these activities affected the nature of the exterior sampling design. Still, all questions asked for this phase of the work were able to be answered.

Initial work concentrated along the west and north facades with the understructure skirt serving as a base line. Four excavation units, 1 x 2 m, along the west periphery and
a single 1 x 0.7 meter unit along the north wall were excavated (Figure 30). The cultural matrix, for the most part, consisted of a dark humic clay mixture with artifacts recovered down to the top of the mud sill plate. Because the water table was coincidental with the mud sill, it was not possible to excavate to either sterile subsoil or permafrost. The single unit along the north facade was capped by a gravel stratum varying between 200 and 300 mm in thickness.

While both west and north excavations showed heavy disturbance along the building perimeters, remnants of at least one former boardwalk were exposed on the Third Avenue frontage. This was evidenced by several cross members running east/west in a number of units. Depth below surface (the top of the understructure skirt) for this feature varied between 140 and 270 mm. A single 50 x 150 mm plank running east/west and at an elevation of 30 mm below surface, may also have been associated with a more recent walkway. Further remains were lacking. In addition to boardwalk remnants, isolated and fragmentary timbers and a variety of pipes were uncovered along the west exposure. Of the latter, all were directly related to the Tremblay building. The north wall excavation lacked associated features. In both areas, the foundation posts had a protective skirt running the length and width of the building. This skirt ranged between 360 and 390 mm in height.

Excavation in the vacant lot to the east of Madame Tremblay's was the most concentrated effort at the site. Prior to 1946, a two storey frame building of unknown use had occupied this lot. From a 1920s panorama and additional historic photographs (R. Stuart 1979, personal communication) the structure can be positioned within a metre or so of Tremblay's east wall and shown to run the length of the entire building. However, the southern extent was but a "lean to" type of appendage and may not have been permanent. At the
Figure 30. Structural Perimeters and excavation units at Madame Tremblay's Store (drawing by K. Walton).
time of excavation, the yard had a gravel surface and, for the most part, was level. One exception was the surface area beneath the former second storey stair casing. There, a mixed humic, clay and sawdust matrix had been exposed by the removal of the stairs and associated boardwalk.

Along a north/south base line, five units (1 m²) were dug at varying intervals. To further expose structural features, these were supplemented by additional pits on the southern terminus. Two additional units, part of an east/west transect, were also excavated as part of the later interior operation after building removal.

The four northernmost pits along the base line were without significant structural features. Cultural remains, consisting primarily of building related artifacts (nails, brick fragments, metal scraps) and isolated pieces of wood had no discernable pattern. Since, prior to 1946, this area would have been beneath the previously mentioned building, these results were expected. However, it is somewhat surprising that foundation features, be they post, sill, or the like, were not uncovered.

The fifth unit within the north/south transect uncovered what appeared to be a boardwalk or ramp immediately below surface (Figure 31). Subsequently, surrounding pits were opened. While the boardwalk structure proved to be but a remnant of a former feature, its spatial context did not appear suspect. Running east/west, it included a pair of decomposing sills with cross planking of various sizes. This walkway would have been approximately 1.1 to 1.2 meters wide with roughly a 1.75 metre lengthwise segment remaining intact. No structural remains were found below the feature and the matrix was predominantly of sawdust.

In the gravelled lot area immediately to the east of the above described excavation, four adjacent 1 x 1 m units revealed a stratigraphic profile including a dense upper layer of light gravel (100 to 200 mm) underlain by a darker
Figure 31. Boardwalk Remains East of Madame Tremblay's Store (Photo by D. Burley).

gravel (50 to 150 mm) followed by a mixed gravel and humic matrix encompassing virtually the total of recovered artifacts and structural features. Along the southern face, a burned layer of ash, molten glass and clinkers was found to intervene between the gravel and cultural deposits.

A single feature, the remains of what is presently interpreted as some form of roller conveyor, extended throughout the 2 m square unit (Figure 32). Whether or not this frame is in an in situ context is open for question. Since its alignment is on an east/west axis, it could have an association with the adjacent boardwalk segment. On the
Figure 32. Frame for roller conveyor east of Madame Tremblay's Store (drawing by K. Walton).
other hand, its position in the east yard may underlie a relationship with the building adjacent to Mme. Tremblay's. If the former, it is possible to suggest that this area of the building was being used for shipment and/or reception of goods during the Tremblay period. Of course, this would also argue for a lack of contemporaneity between this function and the "lean to" attached to the back of the pre-1946 structure.

Interior Excavation
Following building removal, several 1 x 1 m excavation units were dug in the understructure area of the store. This consisted of one unit in each of the corners as well as six alternate units along an east/west transect. The western facade excavation grid was extended through the interior site area.

Since Tremblay's Store had replaced an earlier building, one might anticipate heavy disturbance of the understructure area and a mixture of cultural materials related to both buildings. To the contrary, this was found not to be the case. Covered by a layer of sawdust, the original surface level within the boundaries of the Tremblay building appeared relatively intact. In fact, beyond the excavation of trenches to accommodate mud sill plates for the present structure, modification was not apparent. Mud sills were standard in size (ca. 400 x 150 mm) and laid upon short horizontal (east/west) rough cut boards (Figure 33). From the available evidence, it might be hypothesized that the Tremblay building utilized at least some of the mud sill plates from the earlier structure. Moreover, the almost total lack of cultural materials suggests the lot to have been vacant for only a short period of time between the replacement of buildings. The reason for a movement of
structures and the fate of the former building were not apparent from the archaeological record.

Summary
Few details may be added to the structural evolution of Tremblay's store from the 1978 archaeological program. Boardwalk remnants were located along the west facade illustrating a configuration not unlike the present context. Additional features specifically associated with the pre-Tremblay building were lacking.

In the east yard of the extant structure, isolated features were found only in the southern area. It is speculated that, at some point in the early store utilization of the building, the southeastern corner may have been used as a loading area with ramp (boardwalk?) and conveyor frame
in association. Adjacent areas would have been beneath a major structure and it seems noteworthy that undisturbed archaeological deposits were lacking in these areas.

Finally, the excavated units within the understructure boundaries of Madame Tremblay's illustrated a lack of natural soils disturbance and were relatively sterile of cultural materials. Given the history of this site, such a situation must be viewed as anomalous. In addition, it has been hypothesized that mud sill plates from the earlier period were re-used in the foundation systems of the extant building.
The Old Territorial Administration Building

Constructed during the summer of 1901 along Fifth Avenue, the Territorial Administration Building (Figure 34) was to serve as a central pivot for a majority of government services in Dawson City until 1953 when the Yukon capital was transferred to Whitehorse. It is a large wood frame structure of neoclassical design and constitutes one of the major undertakings of the government architect, T.W. Fuller.

A relatively complete structural history of the Administration Building has been prepared by Margaret...
Archibald (1977). This synthesis is further supplemented by the engineering report of Robert (1978). Of the data relevant to archaeological interpretation, it is notable that several major exterior structural changes have been undertaken between 1902 and 1961. Thus, it was anticipated that areas directly adjacent to building walls would be heavily disturbed with few materials in a direct in situ context. The foundation system for this building is of a mud sill-post-mud sill variety (Robert 1978; Brown 1970). It encloses a relatively high crawl space or basement which is accessible from the interior. This basement would appear to have been a relatively deep excavation.

Because of the original context of the structure, the expected degree of disturbance and the detail of structural documentation, the prime goal of archaeological research was to simply assess the nature of the archaeological resources about to be impacted through intended stabilization procedures. This assessment, more or less, was to serve as a guideline for further investigation. Toward this end, limited excavation was undertaken in both exterior and understructure areas (Figure 35).

**Exterior Excavation**

Three 1.5 m² units along the east rear facade and a single 2 x 1 m unit at the building front were situated so as to test for the presence of structural features, the degree of cultural disturbance and the nature and quantity of cultural items. Of the test pits at the building rear, all illustrate heavily disturbed deposits. Two of these, one located along the east wall of the furnace alcove and the other adjacent to the smoke stack footing, were not taken to sterile subsoil. In both, a solid matrix of fragmented brick was encountered to a depth of 600 mm. Subsequent backhoe
Figure 35. Structural perimeters and excavation units at the Old Territorial Administration Building (shaded areas are those which have been excavated) (drawing by K. Walton).
operations revealed this stratum to be over 1.5 m in depth. With the exception of a few pieces of window glass and ceramics in the surface zone, cultural materials were restricted to nails and other construction related artifacts.

The third unit was positioned on the northwestern corner of the south vault using the east wall of the main building as a boundary. While a brick stratum was again found present, it proved to be of much less magnitude (to 400 mm below surface). However, fragmentary brick remains did continue down to permafrost, a point some 1.1 m below grade. Again cultural materials were totally oriented towards construction related artifacts.

The single unit on the Fifth Avenue frontage was situated north of the main door along the foundation perimeter. Although extensive disturbance was not apparent, some alteration due to foundation repairs was expected. At any rate, few artifacts and no structural features were excavated. Cultural materials again were of the construction variety including tar paper, sheet metal and nails.

Understructure Excavation
A 2 x 1 m unit along the western basement foundation was excavated to a depth of 400 mm below surface. No structural features were exposed with artifact recovery limited to one piece of wire, a light bulb socket and a ceramic insulator. The cultural matrix was homogeneous throughout consisting of water laden silty clay.

Excavated in 1977 by S. Minni (1978), a 2.3 m² unit north of the basement stairs landing produced identical results. Few materials were collected and the understructure area was deemed to have little archaeological importance. Permafrost was encountered at 470 mm from surface.
Summary
Archibald (1977), in outlining major exterior structural changes to the Administration Building between the periods 1902 and 1961, describes the bricks used in vault construction as of "inferior quality". Consequently, vault repairs and even replacement were frequent projects. From test excavations, this activity would appear to have heavily disturbed areas to the rear of the structure. Moreover, the concentrated brick stratum suggests the replaced materials were used as fill to raise the grade level.

In the understructure area, due to water levels and permafrost conditions, few activities were undertaken. In fact, beyond storage and/or foundation repairs, little else is anticipated. Correspondent to this situation, testing of the area produced negative results.

In assessment, it is suggested that the archaeological resources of the Administration Building have minimal research potential. Further archaeological work should therefore concentrate on the delineation of grounds features and associated outbuildings.
Concluding Remarks - Building on Permafrost

The preceding descriptions outline the major architectural features exposed at Parks Canada development sites excavated during 1978. In that preliminary testing was conducted at several of these components, the quality and quantity of available data vary. Many of these sites, however, will be returned to at a later date and a more complete picture should be gained. In addition, the interpretive basis for each structure will be considerably expanded following a completion of the material culture analyses. A more comprehensive report synthesizing field work programs from 1976 to 1978 is now in preparation.

The major orientation of this report has been the presentation of general data for use in design and predesign team planning. In particular, attempts have been made to supplement available information for each site in three areas: internal and external structural features; building size and original context, and foundation patterning. While the importance of the former topic differs from site to site, the latter formed a major research objective at virtually every component where extensive excavations were undertaken. In this light, it is notable that several varied construction techniques were recorded in the small sample of sites examined during 1978. In fact, not only was there intersite variation but also, in at least two cases, intrasite distinctions (Third Avenue Blacksmith, B.N.A. Bank and Assay Office). Each variation, it might be stated, constitutes one specific attempt to deal with the potential
problems of building on permafrost. These problems are not simple and are, even today, a major concern for northern construction.

Permafrost, as a concept, refers to a steady state condition of earth materials where the temperature remains below freezing over a multiyear period (Brown 1970; Muller 1945). Brown (1970: 6) has suggested a minimum defining criterion for permafrost as "ground that freezes in one winter, and remains frozen through the following summer and into the next winter." Above the permafrost zone is a seasonally active layer which, dependent upon shade conditions, temperature, etc., will be frozen over the winter period and undergo a gradual thaw through the summer. The extension and maintenance of the threshold between the base of this layer and the upper limits of permafrost are important considerations in the construction of buildings within permafrost regions.

Of all factors influencing engineering design in permafrost, three are singled out by Brown (1970: 31) as being dominant and must therefore be accommodated. These include sensitivity to thermal change, drainage and ice content. Given the bog-like conditions underlying the Dawson City townsite, the latter remains as a standard in all but a few cases. The former, however, tend to be site dependent requiring individual consideration.

Sensitivity to thermal change is, of course, dependent upon the depth of the permafrost zone and the matrix composition of the active layer. Gutsell (1953: 25), describing permafrost levels in Dawson City, has stated:

Permafrost underlies the site of Dawson and comes quite close to the surface in most sections, except in the south where the Klondike has deposited sand for a distance of about 600 feet from its present bank. Here, the sand remains unfrozen on top of a layer of frozen muck.

Brown (1970: 90-91), on the other hand, has implied there to
be considerable variability in the thickness of the active layer ranging between four feet and six inches. This variability may prove to be important in interpreting site specific differences in construction styles at different points across the town scape.

To restrict thermal change and differential thawing rates in the active zone, two strategies, or a combination thereof, may be employed. Specifically, these include insulation and ventilation (Brown 1970: 40). Insulation simply consists of putting down a surface layer of some protective medium or removing a portion of the active zone and infilling the excavation. While the best suited fill is now considered to be gravels with low silt content, saw dust, wood chips, and forge slag were the substitutes employed at sites investigated in 1978. Understructure ventilation is particularly important in heated buildings to minimize heat flow to the frozen ground. To provide adequate ventilation, the building must be raised off the surface thus creating a relatively high crawl space. In this context, it might be argued that enclosed building skirts, as found on a number of Dawson structures, serve to hamper this ventilation requirement. However, while this may be the case in winter, in summer they protect the active zone from direct sunlight thus prolonging seasonal frost.

The second major factor which must be considered when building on permafrost is that of drainage. Natural water absorption is low and water will collect in the active zone and on the surface. In the case of Dawson, this problem was and presently remains acute. Building sites on higher elevations, therefore, have a considerable natural advantage over those in low lying areas although gutters along building sides running into street drains would partially alleviate this difficulty.

Turning to actual construction practises, as previously illustrated, several varieties of foundation systems were found to exist in the sample of sites examined in 1978. In
fact, with a few exceptions, almost the total range of accepted standards as outlined by Brown (1970: 56-58) are present. In summary, a minimum of five forms are represented including post, bottom sill and post, pile, crib and fill, and post with independent floor. There is also one example of a foundation built around a full basement and possibly another where short blocks and sleepers were set directly on the surface (B.N.A. Bank annex). The qualities of each construction style are briefly reviewed in their contextual association at Dawson sites.

Probably the most typical form of foundation utilized in Dawson City is that of a post and (mud) bottom sill construction. In its most "classic" form, large planks would be laid directly on top of the permafrost zone which, in turn, would support posts of varying lengths. Top plates are then positioned on the posts (see Figure 36). Ideally, an insulation layer would be spread over the site and posts would be of sufficient length to provide a crawlspace for ventilation. Of the 1978 sample, this foundation pattern was found to exist at Mme. Tremblay's Store, the Bank of British North America and the annex to the Third Avenue Blacksmith Shop. All buildings had some form of crawlspace beneath although ventilation in the former pair may have been restricted by skirt enclosures. As well, only Mme. Tremblay's had an insulation zone applied, it being of saw dust and wood chips. Given the construction dates for the above buildings (1899 to 1905), it is apparent that this form of foundation was being employed during the earliest building phases in Dawson.

A variant of this post and bottom sill pattern was found to have been used in building the Married Officers' Quarters at Fort Herchmer. While major walls were supported in this manner, the floor was built independent of the main structure. This allowed for differential movement of the floor and building. When such movement occurred, levelling was
Figure 36. Idealized Post and Bottom (mud) Sill Foundation Pattern (Drawing by K. Walton).

Figure 37. Idealized Pile Foundation Pattern (drawing by K. Walton).
accomplished by simply building upon the existing floor rather than realigning subfloor supports. The latter also consisted of posts supported by mud sills or blocks. It is notable that the Married Officers' Quarters is situated in an area supposedly free of permafrost yet employed foundations adapted to it. However, beneath the building, seasonal frost was being maintained even into August as encountered during excavation.

Pile construction, as used in the front half of Brown's Harness Store, is a suitable foundation for buildings with heavy floor loads or for building sites which are low and poorly drained (Brown 1970: 57). However, because the piles are sunk well into the permafrost zone (see Figure 37), it is a more difficult and time consuming operation. Either steaming or drilling is required to excavate holes for the piles and understructure framing tends to be more complex. Brown's Harness Store lacked an insulation layer although the addition of a second set of floorboards may have limited heat transfer beneath the building. The crawlspace of ca. 500 mm should have provided adequate ventilation. A wood gutter running between the store and adjacent structure would also have aided in site drainage. Given the above considerations, Brown's would appear to have been one of the best planned foundation systems examined during 1978. It is ironic that it also was one of the few sites without a standing structure.

A rather unique approach to the problems of Dawson City permafrost is illustrated in the foundation of a structure previously located immediately to the west of the Red Feather Saloon and excavated this past season. Such a style has been employed elsewhere, however, and is described by Brown (1970: 57). Basically, it is composed of heavy timber pads laid at right angles and upon one another with intervening spaces filled with an insulation material (Figure 38). In the Dawson City example, this consisted of at least two
Figure 38. Idealized Crib and Insulation Foundation Pattern (drawing by K. Walton).

Figure 39. Idealized Shallow Post Foundation Pattern (drawing by K. Walton).
layers with forge waste and coal dust being used as fill. This had been deposited on top of a sawdust stratum which had underlain a previous post and sill building. Short posts may have been placed on top of the top beam in this foundation system although only one was exposed in the structural remains. Since it was impossible to determine whether a crawl space existed between the upper surface level and the floor bottom, questions of ventilation adequacy cannot be addressed.

The final foundation type represented in sites examined in 1978 consists of posts sunk into the active layer but not far enough to penetrate the permafrost zone (Figure 39). This pattern was found at two sites, the Red Feather Saloon and Third Avenue Blacksmith Shop. Such a construction style is ineffective for buildings with heavy loads and is particularly susceptible to movement from frost action in the active zone. Thus, it may be considered anomalous for the buildings at hand if the buildings were intended for any degree of permanence. Moreover, in neither the Blacksmith Shop nor the saloon was an insulation layer deposited on the site prior to the start of superstructure raising. In the Blacksmith Shop, added support to the floor beams was provided by notched log sleepers, and it may be possible that the extant floor actually represents a more recent addition. The Red Feather Saloon, however, has undergone no recent modifications and would seem to have been poorly planned or simply used the most expedient and less expensive form of foundation that was available. If the latter, it may indicate a lack of long term intentions for the building.

In summary, several types of foundation patterns are notable in the sample of sites excavated in 1978. This variation ranged from an elaborate crib and fill form to simple posts laid into the active frost zone. Each has been
roughly assessed as to effectiveness in protecting subsurface permafrost from heat transfer and subsequent thawing. Since the sample crosscuts a period between 1899 and 1905, it has not been possible to document changing construction styles across time. It is feasible, nevertheless, that such an evolution does exist and may be delineated with a larger sample of components.
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Abstract

In cooperation with the Yukon Territorial Government a brief archaeological research project was undertaken in a section of the north Dawson hillside. Scheduled for disturbance through borrow pit expansion, the presence of several archaeological sites dating to the early period of Dawson City justified this work. Limited by time and manpower, project goals centered on a documentation and mapping of existent archaeological resources. A sample of surface artifacts was also collected. The present report details the methodological and substantive aspects of the archaeological program. The impact area is analysed in terms of its chronology and the lifestyle of its inhabitants. An analysis of the collected assemblage is appended.
Acknowledgements

The research upon which this report is based was funded through the Department of Public Works, Yukon Territorial Government. We would like to extend our appreciation to that agency and, in particular, Mr. John Cormie the highway engineer. As well, Randy Mitchell, project manager of the Klondike National Historic Sites, Dawson City, was instrumental in the initiation of the project and provided constant support while the field work was being conducted. Sharon Keen lent her expertise to the analysis of metal containers while Jennifer Hamilton and Kevin Lunn respectively helped with the ceramic and glass analysis. Finally, we would like to acknowledge the third member of our field crew, Linda Christiansen of Dawson City.
Introduction

As part of a cooperative venture between the Yukon Territorial Government and Parks Canada, Klondike National Historic Sites, archaeological research was conducted in an area of the north Dawson City hillside scheduled for destruction by a borrow pit operation. In an initial impact assessment of this development (Burley 1979a), several resources were identified and recommendations were tendered for subsequent mitigation. The recommendations were accepted by the developing agency, the Yukon Department of Public Works, and a salvage project was initiated. This research was to be conducted by archaeological staff of Parks Canada, Prairie Regional Office over a nine day period. Although time constraints were clearly a factor in the determination of project goals and priorities, it was possible to record and collect a substantial quantity of data. These data provide several insights into the occupation and settlement history of a little known section of Dawson City, particularly with regards to the Klondike gold rush period of 1897 to 1903.

The present report is primarily a description and interpretation of the data collected during the salvage program. In that a preliminary statement, including recommendations to lessen secondary impacts on adjacent areas, has previously been submitted (Burley 1979b), the concentration here will lie in an outline of the more substantive aspects of the research. An analysis of the recovered artifact assemblage is also appended.
Project Terms of Reference
The area proposed for development is situated immediately to the east of an existing borrow pit on Fifth Avenue in Dawson City (Figure 1). Including lots 4 to 13, Block U, as well as associated right-of-ways, the area roughly measures 55 metres east/west and 83 metres north/south. Because the existent pit had already encroached into the proposed zone both by use and erosion, this section did not completely conform to the spatial configuration outlined in the development prospectus (Figure 2). Moreover, the placement of a bulldozer road along the eastern edge of the present borrow pit had sectioned the area to be impacted. Since the initial stage in pit expansion called for a total surface stripping, archaeological resources within the defined perimeters would be destroyed even should the full expansion not be needed.

A brief two day "walk over" survey of this area was conducted in July of 1979 (Burley 1979a). At that time, what appeared to be three former structures and a variety of surface refuse deposits were isolated. However, because the boundaries of the impact zone had yet to be delineated on the ground, it was uncertain that the survey had completely covered the proposed expansion or, for that matter, whether the identified resources actually fell within its limits. Subsequent recommendations to the Yukon government first suggested the acquisition of an alternative site. Should that have proven unfeasible, it was argued that at least a minimal level of archaeological research be undertaken for the purpose of salvaging whatever data might be present. The latter proposal was justified in light of the dwindling pool of undisturbed historic sites in Dawson City.

Lacking an acceptable site for relocation, the Yukon government made funding available for a joint archaeological project with Parks Canada. The crew consisted of three
Figure 1. Dawson City, Yukon. Fifth Avenue gravel pit location and area to be impacted (darkened on map) (drawing by Kathie Walton).
Figure 2. Perimeters of the Fifth Avenue gravel pit in relation to Dawson City block designations (drawing by Kathie Walton).
individuals, two of whom are research archaeologists of the Klondike National Historic Sites. With time of the utmost urgency for the developing agency, the project took place over a nine day period between August 23 and September 1, 1979.

Given the preceding limitations of crew size and project duration, as well as dense undergrowth, research objectives were to focus on a thorough survey and documentation of resources about to be disturbed. Three immediate goals were set. In order of their priority, they were:

1. to locate and map all visible surface features and refuse concentrations within the perimeters of the impact zone;
2. to collect a representative sample of artifacts from the area and, in particular, to collect materials directly associated with any structure that might be discovered, and
3. to test excavate any assumed structure where its identification as a structure might be in question.

Each of the above objectives was fulfilled, albeit to varying degrees. These data serve as the basis for the following report.
Geographical and Historical Context

Situated on the northeastern periphery of Dawson City proper, the area under investigation is located on a gradual slope which drops off sharply to the lower alluvial plain upon which the town is built. It forms part of the eastern hillside of Dawson City which itself abuts the Moosehide rock slide on the north. Although largely covered with secondary growth and scrub, the current vegetative cover, at least in terms of species represented, most likely approximates that present prior to the Klondike gold rush. Included are spruce, balsam fir, aspen, poplar, dwarf birch, willow and alder. Hillside soils tend to be podzolic in nature and, generally, poorly developed. In turn, these overlie glacial tills and bedrock.

Historic occupation of the hillside areas surrounding Dawson City was initially related to the early population boom of the Klondike gold rush. With the 1896 discovery of gold and the ensuing influx of would-be miners, Dawson City was quickly established as the regional supply and entertainment centre (see Guest 1978 for an historical overview). Indeed, in an almost overnight time framework, the town rose from a few scattered tents and structures along the edge of a "moose pasture" to what Pierre Berton (1972) has labelled a "San Francisco of the north". While a host of factors could be outlined for the subsequent evolution of the townscape, two of these can be singled out as integral to the development of hillside areas.
First, and of immediate concern, large portions of the Dawson City townsite were bog and marsh. In itself, this forced much of the early development to the higher and/or better drained elevations surrounding the alluvial flood plain. Such a situation is most aptly illustrated in an 1898 panoramic view of Dawson where virtually the entire flat behind Second Avenue to the hillside base is vacant (Figure 3). Contrastingly, dense concentrations of tents and makeshift cabins are found along the perimeters with major business enterprises established on the waterfront. Commenting on this section of town in 1897, one Klondike mining guide described the terrain as "...a muck bed, and during summer [it] is covered with stagnant water to a depth of a foot in many places" (Dunham 1898:332). A number of additional correspondents and authors directly relate these conditions to the outbreak of typhoid during the summer of 1898 (Shaw 1898; Down 1898; Adney 1968; Black 1976).

The second factor is basically one of population pressure. The areal extent of Dawson City proper amounted to little more than 200 acres of which a tenth had been placed under government reserve (Ladue 1897). With an instant population in the range of 15 to 20,000 people in 1898 and 1899, land availability was acute. This problem was even more compounded by the voluminous number of businesses being established in the commercial sector along the river. Land prices were astronomical and few of the newcomers had either the money or long term settlement commitment to Dawson City to purchase surveyed lots. Wintering over in tents, the majority of this intinerant population squatted on whatever sites might be found. The hillside areas proved a choice locale. The resultant scene left a visual impact on Dawson that has been described by one visitor in 1897 as "...but a bundle of white dots on the side of the hill..." (Armstrong 1951:44).
Figure 3. Dawson City, ca. 1898; "a bonanza town of a few score cabins and innumerable tents". (Photograph courtesy of University of Washington Archives).
As the Dawson City population stabilized around the turn of the century, the tents were quickly replaced by cabins and assorted other structures. Quickly, however, Dawson fell into decline. With this situation, the town began to recede such that the more remote and unserviced sections were abandoned (Gutsell 1953). Although the population density of the hillside diminished, the area was not totally vacated. Indeed, if we are to accept Laura Berton's reminiscences (1954:37), the hillside became a reclave quarter for a number of the town's more curious individuals. It could also be suggested that, as a neighborhood, it was viewed as less than fitting for those deemed socially acceptable.

The specific area under examination had been originally surveyed as part of the Dawson City grid plan by James Gibbons in 1897 and 1898 (Northwest Highways System 1950). Despite Gibbons' efforts, it does not appear that city lot boundaries were being adhered to, a situation probably fostered by the absence of a road system. A Dawson City panorama (Figure 4), possibly dating to 1901, shows both the gravel pit and concentration of structures around its perimeters. Although it is difficult to estimate the present day pit limits on this photograph, it would seem that the adjacent hillside trail roughly approximates the lower portion of the current bulldozer road. This being the case, it is possible that as many as nine to ten buildings fell within the zone about to be destroyed. A second panorama (Figure 5) from the late 1930s or early 1940s again shows the gravel pit. It does not appear to have expanded to any considerable degree. Its peripheral occupation, nevertheless, is reduced to but a few structures of which only one may fall in the currently defined impact zone.
Figure 4. Partial segment of a 1901 Dawson City panorama (Photograph courtesy of the Public Archives of Canada).
Figure 5. Partial segment of a Dawson City panorama, late 1930s or early 1940s (courtesy of Joan White, Victoria, B.C.).
The fact that the gravel pit is itself an historic feature is an interesting point vis-a-vis current objections to its visual impact on Dawson City. With the townsite being in large part a bog, the importance of adequate fill material cannot be understated. As late as the summer of 1905 the pit continued to be heavily worked (Canada. Public Archives, Yukon Territorial Records, RG-91, Vol. 28, File 11,780) although how long this use continued is not known. It is known, however, that by 1909 pit expansion was causing serious concern to at least one adjacent property owner who claimed to have lost as much as 30 feet of his lot (ibid).

It is unfortunate that a more detailed historical account of the area under investigation cannot be given. The plethora of Dawson City historical studies (Guest 1978) for the most part provide vivid pictures of specific personalities and events. They deal little with the plight of the common man and his day to day existence. It might well be possible to flesh out the preceding summary through a land records search. Nevertheless, such a study is beyond the scope of the present report. As well, the knowledge of who held title to a particular property is of negligible worth to understanding the individual concerned and, specifically, his context in the larger historical framework. As a result, it is argued that the archaeological resources may eventually prove to be a key factor in the writing of a complete Dawson City history. Once the resources are destroyed, particular insights into that history will also be destroyed.
Field Strategy and Data Description

With the primary objective being a thorough survey and documentation of resources, the immediate field concern was to establish the limits of the impact zone. Using a datum point along the edge of the existent pit, both the north and east boundary lines were surveyed and bush lines cut. Since the east line intercepted the pit edge prior to its full proposed length (see Figure 2), the southern as well as western perimeters were formed by the gravel pit. Subsequently, to facilitate mapping and surface collection, the area was overlaid with a ten metre grid.

Once the grid had been established, each of the resultant 43 quadrats or partial quadrats was closely inspected for cultural materials and visible surface features. In turn, each was mapped with particular emphasis placed on the location and extent of artifact concentrations. The grid maps were then collated and a complete map of the area to be impacted was produced (Figure 6). This map illustrates the location of five possible structures, four of which fall completely within the proposed pit extension. It also shows both isolated occurrences and dense concentrations of surface refuse.

Given the necessity to obtain at least a minimal sample of artifacts, 10 grid squares were chosen for surface collection (Figure 7). The choice of collection areas was not random but, rather, related to the presence of structural features, artifact concentration density and spatial coverage. Once the collection activity was complete, each of the
Figure 6. Area features and artifact concentrations in proposed Fifth Avenue borrow pit expansion (drawing by K. Walton).
Figure 7. Collection units and grid system with proposed development zone (drawing by Kathie Walton).
quadrats omitted from the collected sample was reinspected. Artifacts considered to be chronologically diagnostic or in some sense unique were also recovered from those units. All surface collected materials were processed and quantified in an archaeological laboratory established at Bear Creek and a type collection was sorted for more intensive analyses.

Finally, a single 1 x 1 metre test unit was excavated into the presumed foundation of structure 4 (see Figure 6). From visible surface features, it was not possible to positively identify this site as that of a building. The test unit, however, substantiated the initial impression by intersecting a foundation feature.

In brief summary, the field strategy was totally oriented towards the identification, mapping and surface collecting of features and artifacts within the defined perimeters of the area to be destroyed. Although major excavation did not take place due to time limitations, the recovered data provide at least some documentation from which interpretations might be drawn.

Structural Features
A large array of features was documented within the development area (Figure 6). The majority of these, habitation sites excluded, were shallow depressions for which a function could not be identified. At least two are directly in association with artifact concentrations and may possibly represent a feeble attempt to excavate refuse pits. The remainder could be indicative of similar activities or, possibly, the initial preparatory stages for house construction.
As previously noted, five habitation sites were isolated and mapped. With the exception of one example, all conformed to a site preparation style typical in other areas of the Dawson hillside. Simply described, each site was excavated into the up-slope such that a level building platform was constructed (see Minni 1978). The specifics for each of these sites are individually described.

Structure 1, roughly situated in the northwest corner of the proposed expansion, is the largest of the habitation features. The building platform was excavated into the upward (north) slope of the hillside with dry stone retaining walls built along the southern and eastern perimeters. The northern cut into the slope was left unattended. The resultant level platform measured 6.3 by 7.6 metres, the longer dimension corresponding to the north/south axis. The southern stone retaining wall, the larger of the two, ranged in height between 0.45 and 0.65 metres. Although it is impossible to estimate the actual building size without excavation, the specific lack of foundation features (i.e., sill logs or posts) may suggest that the structure covered the entire platform. Correspondent with the proposal, few artifacts were collected from the platform surface. The size of this site also seems indicative of a frame structure as opposed to a log building.

Structure 2 was located immediately to the south of that just described. Although partially disturbed by a bulldozer swath, it again had a level platform prepared through excavation into the upward slope. In this case, however, none of the cut faces were stabilized with a stone retaining wall. The levelled platform measured 5.5 by 4 metres, the longer axis being east to west. Along the south wall, a long narrow depression had been dug. The function of this trench is in question although the occurrence of several large rocks on the western end may tie it
into building construction. To the southeast of this plat­
form was a dense concentration of surface refuse undoubtedly
in direct association with the site. Assorted tin can styles
formed the bulk of this assemblage.

Across the recently established bulldozer road and to
the east of structure 2 were the remains of structure 4.
Although again some form of site levelling was undertaken
in preparation for building, this was not so pronounced
as in other habitation sites within the impact zone. In
fact, the perimeters of the site were marked only through
the presence of intersecting low mounds roughly square in
pattern. These were presumed to be overgrown sill logs.
To verify this identification, a 1 metre square test unit
was excavated into the south wall. Although this excavation
did illustrate that the site was that of a building, no
evidence of the former sills was located. The mounds, pri­
marily consisting of loose gravels and silty clay, had been
prepared, it would seem, as a base platform on which the
sills were laid. In size, this building would have measured
roughly 5 by 5 metres. A large refuse dump was located both
to the north and east of the site. This refuse locale may
also have been used by the inhabitants of structure 3.

Structure 3 was clearly visible, again by its levelled
platform. This had been scooped into the northward slope
and, as at other sites, the north cut lacked a stabilizing
feature. The site's location was slightly to the northeast
of the previously described structure. Measuring 6.1 metres
east to west and 5.0 metres north to south, few artifacts
were found on the platform surface. This might suggest,
as at structure 1, that the building covered the entire site.
As noted above, it is probable that a refuse dump south of
the platform may have been used by site occupants.

The final site, structure 5, was located in the north­
east corner of the impact zone. It is a most difficult feature
to interpret and only a portion of it actually occurs within the defined perimeters. Running north to south is a series of posts connected to each other by an on-end plank. At the southern extent is a depression probably indicative of some form of structure. The current interpretation of this feature is that of a habitation or out-building with adjoining shed and possible fence. Barrel hoops in association with a small wooden trough in the northern quarter are strongly suggestive of a water catch.

Despite the fact that virtually no excavation was undertaken, the presence of surface features does provide data on structural locations within the area to be disturbed. These data, in combination with the surface collected materials, allow at least minimal inference on area chronology and land use.

Material Culture Assemblage
During the course of the investigation 1,194 artifacts were collected from the survey area. As already mentioned the bulk of these materials came from a systematic surface collection of 10 selected quadrats. As well, however, assorted other items considered to be unique were retrieved from quadrats outside of the chosen sample. These artifacts included either specific characteristics which could be used to identify function or chronology (i.e., tin cans with labels) or were judged to be significantly important for the eventual interpretation of the hillside occupation (i.e., Klondike stoves). Thus, while only 10 quadrats were singled out for intensive analysis of surface materials, the total artifact assemblage comes from a greater area.

Although not totally the case, a good majority of the assemblage was derived from scattered refuse dumps located at various locales across the survey zone. The size of many
of these dumps strongly argues for use over a continuous time span possibly ranging from a few months to a number of years. Because much of the assemblage is what might be labelled "planned" refuse, some question arises as to its representativeness particularly with regard to settlement reconstructions. To counter this problem, all but one of the habitation sites were included in the sample of collected quadrats as also were two quadrats without refuse heaps. Aside from differences in relative frequencies of specific artifact categories, there appears to be no major variation. The assemblage, therefore, is taken to be an accurate reflection of the surviving archaeological record of the impact zone.

Within the artifact collection are a broad range of material culture categories. By far the largest category of items accounting for roughly 86 percent of the total is that of metal containers. This collection was sorted into seven distinct classes each of which was further subdivided into specific types. Because the tin can industry has undergone a rather rapid evolution within the past hundred years (see May 1938), several morphological attributes are highly sensitive to chronological change. For example, for each of the 128 types identified in the small metal container class, it was possible to give either a specific date range for its construction or, at the least, a terminus post/ante quem date. As subsequently illustrated, these data are most useful in establishing a chronological framework for the deposits.

Metal containers are also valuable in looking at the subsistence base of the area residents. Although some degree of overlap does exist, on the basis of shape, size and the infrequent specimen with a label remnant or producer's mark, it has been possible to assign individual types to content categories. By comparing the relative frequencies of each of these categories both for the sample as a whole and across
time, it is possible to identify both the culinary base and any change which might have occurred in it due to the shifting character of the Dawson City mercantile trade. In combination with data from other artifact categories, some perspective on the general life style of the hillside occupation may be extracted.

Metal containers aside, the remainder of the artifact assemblage includes a variety of other metal artifacts (utensils, stoves, barrel hoops, etc.), ceramic tableware and hollowware, sheet glass, glass bottles and jars, faunal remains and several miscellaneous specimens (shoes, leather fragments and plastic). Although not as prolific as the metal container assemblage, a small number of specimens within these categories is dateable and helps to refine the area chronology. They also provide additional information on subsistence practises.

In terms of the specifics of artifact analysis, it has already been mentioned that the major portion of the work was undertaken simultaneously with the field program. Type collections were isolated from the total assemblage and these have undergone later, more intensive examination. The results of this analysis are reported in Appendix A. A general breakdown of the artifact assemblage by collection unit is given in Table 1.
Table 1. Total material culture assemblage by collection unit.

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<th>Metal Utensils</th>
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Data Interpretation

This section reviews the data, both material culture and structural features, from the perspectives of chronology, subsistence base and area life style. Such an interpretation is basically an attempt to view the area's population within the historical context of Dawson City. Each of the preceding perspectives is treated independently.

Chronology
There can be little doubt that the earliest historic occupation of the impact zone relates directly to the gold rush "boom" period of Dawson City between 1897 and 1899. Early panoramic photographs of Dawson lack the detail to specifically outline the intensity or the nature of this occupation. It is probable, however, that the majority of this population was residing in tents as in other sections of the town. Despite the absence of structural features which could be identified as a tent site, a number of portable barrel and "Klondike" stoves support this argument. The latter type are lightweight, collapsible and were an integral element of most outfitting companies' merchandise inventory (Archibald and Carter 1972/1973). Although advertised as a suitable appliance for use in log cabins their most appropriate employment, particularly as a heating source, would be in a tent. Given that five of these stoves were recovered from various points across the survey area (Figure 6), it could correspondingly be suggested that a minimum of five tent sites also existed. It also is
probable that a substantial portion of the surface refuse belongs to this period although the exact proportion cannot be estimated. While a small number of metal container types definitely predates 1900, a much larger sample ranges between the time of initial settlement and 1908.

Sometime between 1898 and 1901, the north Dawson hillside underwent a transition from an impermanent tent community to that of a more stable residential district with frame and log structures. How this transition progressed and how building lots were apportioned is difficult to ascertain from either the photographic record or historic documentation. Nevertheless, this small community was firmly established by 1901 and as many as nine to ten structures may have been present in the general area of the presently proposed pit expansion. Up to at least 1903, little change is evident in the hillside residency (see Archibald and Carter 1972/1973: Figure 31). After 1903, the area was gradually abandoned as Dawson City itself declined and by the 1930s there remained but a single intact structure as previously mentioned. How rapidly this abandonment took place and the relationship to this process of sites documented in 1979 are problems which must be addressed.

Within the artifact analysis, an attempt was made to date as accurately as possible all individual specimens. While this proved to be highly successful within the category of small metal containers, most other artifact types did not exhibit time sensitive attributes which could be related to a narrow chronology. Since small metal containers constitute a large segment of the collection (n=840), a firm basis does exist for relative dating of structures and refuse locales within the area.

The sample, as a whole, illustrates a temporal span between 1897/1898 as already noted up to recent times as evidenced by one bottle type (post 1964) and several tin
cans. The largest frequencies of dated materials fall into a pre 1916 time range (n=606) although the number postdating that year (n=188) seems surprisingly high. In fact, one is left with the general impression that the area occupation must have persisted for a considerable period after the immediate withdrawal of Dawson City's itinerant body of stampeders.

Using the small metal container sample, an attempt was made to estimate the minimal time span of occupation for each of the collected quadrats. These data have been tabulated in Table 2 and the results are illustrated in Figure 8. It must be emphasized that the presented range is a minimal set of figures which would account for the total sample of dates. For example, it is highly probable that the earliest date presented in each of the quadrats is inaccurate and that 1897/1898 could be substituted as the initial reference point. It is also interesting that, with a few exceptions, each of the quadrats appears to have two component assemblages. However, since a majority of the later assemblage is spatially isolated to one quadrat (No. 24), the more recent components tend to be small and possibly attributable to a single disposal activity.

In relating this analysis to the structural features previously described, several problems must be pointed out. First, it is an untenable assumption that artifacts lying within a particular quadrat provide an accurate date for a structure also lying within that quadrat. Given that the dates have been taken primarily from tin cans, their disposal on top of a habitation site would probably have occurred after that site was abandoned or dismantled. To date a structure, therefore, it seems more feasible to look at adjacent refuse disposal locales. This procedure is also not without its faults since there is no way of monitoring whether disposal areas were individually used or were accessible.
Table 2. Dates of small metal containers by collection units.

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Figure 8. Minimum date range for individual collection units in proposed development area (drawing by K. Walton).
by persons from more than one habitation locale. This situ­
ation could be compounded by the lack of data on sites out­side of the survey zone or those which may have been immedi­ately adjacent but have been destroyed through previous borrow pit expansion or erosion. These problems aside, the following discussion serves to provide at least a relative framework in which to view site chronology.

Structure 1 (Quad. 12 and 13) cannot readily be associ­ated with an adjacent refuse disposal area. Since its location was on the edge of the current gravel pit, this activity may have taken place in an area already disturbed. A number of small clusters of metal containers did occur outside of the actual site area and these could relate to the structure per se. These are indicative of two date ranges, 1907 to 1909 and post 1916. Since a number of metal containers also date between 1907 and 1916, the site may have had a continuous occupation. Twelve specimens post-date 1926 thus expanding the possible occupation into the late 1920s.

Structure 2 is adjacent to a relatively large refuse deposit from which a sample was collected in two quadrats (Nos. 24 and 26). The site itself again had few specimens scattered over the surface. The associated refuse deposit includes a great deal of chronological variation which differs between the two collection quadrats. In that section closest to the site surface (Quad. 24) the majority of specimens post-date 1916 (27 actually post-date 1926) although a pre 1908 period is also represented. To the contrary, the oppo­site situation exists in the second assemblage where the bulk of the materials are pre 1908. If one assumes a contin­uous occupation over the minimal time estimate presented for the two samples (1903 to 1931), then concentrated disposal of refuse would appear to be moving closer to the structure over time. An alternative hypothesis is that the earliest
occupation span relates to structure 2 and the later materials were deposited after its abandonment. Indeed, if structure 1 was inhabited into the 1920s, the later assemblage might relate to that site. The refuse deposit would be downslope from Structure 1 and easily accessible.

Lacking a sizeable assemblage of associated materials, it is difficult to estimate a date for structure 3. Of the three dated specimens (2 metal containers, 1 bottle), all are known to occur after 1916. Structure 3 has been tentatively related to a large refuse deposit to the south (Quad. 15) and a smaller concentration to the southeast (Quad. 17). Minimum ranges for the latter (1907 to 1908 and post 1916) seem to support a relatively later occupation for this site. An analogous case could be made for the former concentration although a somewhat earlier assemblage is also present (1904 to 1907). Since the materials in this deposit are most definitely associated with structure 4, the earlier items could be so related.

Structure 4 is situated between two quadrats both of which were collected. To the north and east are relatively dense concentrations of materials. These refuse locales are the largest within the survey area and, as noted above, may have been partially deposited by occupants of structure 3. The materials can be broken down into what may be two periods of discard with associated minimal dates of 1904 to 1907 and post 1916 to circa the early 1930s. The later collection, while profuse in number of types, has a small number of specimens within each type. Such diversity seems indicative of a single or small number of dumping activities as opposed to continued usage over a lengthy period. The earlier range, therefore, is taken to be characteristic of the site with the more recent assemblage possibly representing a post abandonment usage by occupants of structure 3. Structure 4 is downslope from structure 3.
Because only a small segment of structure 5 was actually encountered in the survey zone and few dateable artifacts were present, it is not possible to provide a minimal chronological range for the occupation. The fact that a number of wooden posts and boards remained intact seems to suggest a somewhat later abandonment date. Since it is also adjacent to the small refuse deposits in Quadrat 17 in which a recent period is represented, such a postulation may not be without support.

Two major refuse concentrations seemingly without associated sites were at least partially collected. One of these (Quad. 32) in the southeast corner of the area includes a relatively large assemblage in which only one specimen postdates 1916. The minimal time range for this quadrat is estimated to be circa 1904 to 1907 although it seems possible that deposition may have taken place as early as 1898. In fact, the lack of an associated site might suggest this refuse locale to have been a very early dumping station for a tent occupation. The other concentration (Quad. 36) is located in the southwest corner of the survey zone along the current gravel pit edge. In terms of the total assemblage, more artifacts were retrieved from this collection unit than any other. Again, two date ranges are present: 1903 and 1907 and post 1916. Since the more recent period includes but nine specimens distributed among seven types, there is little problem in assigning this collection to a pre 1907 time frame. In this regard it could be associated with structure 2, the closest habitation site, or perhaps be related to the initial tent occupation as suggested for the previous refuse concentration.

To summarize the survey zone chronology, the artifact collection shows an occupation beginning shortly after the beginnings of the Klondike gold rush up to at least the early 1930s. Relating individual collection units and refuse
concentrations to structural features, it is hypothesized that structures 2 and 4 may have been abandoned sometime in the early 1900s while occupation at structures 1 and 3 persisted after 1916 and, quite possibly, up to the 1930s. At least one isolated refuse area is tentatively assigned to the initial tent occupation and it is possible that one other may also be so related.

Subsistence

...to look out across the flat toward the mountains was to see scattered cabins and piles of tin cans, which at once let one into the culinary secrets of an isolated community composed largely of men (Palmer 1899:479).

Seasonally isolated from the southern centres of supply and lacking a farming base to support its population, Dawson City during the early gold rush years was almost totally dependent on preserved foods (see Archibald and Carter 1972/1973). This is not to suggest that fresh produce or meat could not be obtained. Such items were available in limited quantities although usually at a price well beyond the means of all but the wealthiest of Klondike residents. Tinned foods played a central role in the maintenance of this northern community and for some they formed almost the total diet. At least one Dawson resident had noted that "...the poorer inhabitants appear to live exclusively on canned food and there is surely here a great field open for an enterprising inventor who can put the masses of empty tins, which are thrown away in such quantities, to any practical use" (PAC, MG 27 II, B1 as cited in Archibald and Carter 1972/1973:145).

While it is somewhat pretentious to suggest that the data collected within the survey zone could be used to reconstruct the total diet of its population, they do provide
a basis for insight into that diet. When these data are compared through time one would hope to be able to monitor not only changes in individual preferences but also changes on a more abstract level. For example, less reliance on a particular canned commodity over time could relate to the changing economic status of an individual (the ability to purchase that commodity in another form). Alternatively, it could be indicative of the evolving position of Dawson City in a long range market network. Finally, it might also be reflective of the establishment of a local producer thereby lessening the necessity of imported tinned forms.

As was the case in dating metal container types, assigning a content is not without its difficulties. While some container types by virtue of their shape and size were used for specific products (e.g., meat) others were more or less institutionalized and may have packaged any number of related items (e.g., fruits/vegetables). In a similar light, a few metal container specimens had manufacturers' marks or remnant labels which not only identified the contents but also the producer while other types could have had such a diverse range of items that even a general inclusive content category could not be identified. Given the variable nature of the quality of these data, container types were assigned to gross classes indicative of general food or nonfood types.

To look at the sample over time, the assemblage was split into two chronological periods, pre 1908 and post 1908. The year 1908 proved to be a convenient reference point from the perspective of dated specimens (only 55 could not be allocated to either period) and also seems important from an overall historical framework in relation to alternative period groupings (for example pre and post 1916, pre and post 1904). The latter factor recognizes that by 1908 the "boom" period of Dawson City had eclipsed and both the population and importance of the town were in decline.
In a general sense the sample as a whole does show a considerable variation of commodities (Table 3). Despite this diversity, however, one item in particular stands out as dominant. Accounting for over 32 percent of the total container assemblage, condensed milk would appear to have been a mainstay in the diet of area residents. Since Dawson lacked a dairy throughout its history, this discovery is not overly startling. The other major component of the assemblage is a general form of metal container which could have packaged a variety of items including fruits, vegetables, soups, juices, seafoods and small meat products such as sausages. Vegetables and fruits, nevertheless, were probably the major foods within this class. Using frequencies as a relative measure of a commodity's abundance is slightly misleading particularly for the beverage category which includes tea, coffee and cocoa. These products were obtained, for the most part, in large volumes which is reflected in the general size of associated containers. Thus, the volume equivalent of 33 beverage containers is far superior to that of other classes with the exception of petroleum products. On a reduced scale, this bias also may be found in the meat and lard categories.

From a cursory inspection of Table 3, there appear to be few anomalies in either the list of foods being purchased or their relative abundance. Two nonfood categories, tobacco and liquor/pharmaceutical, are surprisingly scarce, however. Since together they form but 3.25 percent of the collection, one must surmise that few personal indulgences were being practised in the "home". The early period of Dawson history was renowned for its saloons and dance halls and it might be suggested that such activities were concentrated in the town proper. Although this factor is a consideration, it should have no effect on tobacco and is not a totally adequate explanation for the absence of alcoholic beverages. It seems
Table 3. Container assemblage grouped by product for total collection.

<table>
<thead>
<tr>
<th>Product</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td>79</td>
<td>8.85%</td>
</tr>
<tr>
<td>Seafood</td>
<td>40</td>
<td>4.48%</td>
</tr>
<tr>
<td>Meat/Seafood</td>
<td>19</td>
<td>2.13%</td>
</tr>
<tr>
<td>Vegetables/Fruits</td>
<td>21</td>
<td>2.35%</td>
</tr>
<tr>
<td>General Container (soup, juice, vegetables, fruits, meats, seafoods, etc.)</td>
<td>280</td>
<td>31.35%</td>
</tr>
<tr>
<td>Condensed Milk</td>
<td>288</td>
<td>32.25%</td>
</tr>
<tr>
<td>Butter</td>
<td>16</td>
<td>1.79%</td>
</tr>
<tr>
<td>Lard</td>
<td>16</td>
<td>1.79%</td>
</tr>
<tr>
<td>Beverages (tea, coffee, cocoa)</td>
<td>33</td>
<td>3.70%</td>
</tr>
<tr>
<td>Spice/Dry Foods (baking powder, yeast, starch, etc.)</td>
<td>10</td>
<td>1.12%</td>
</tr>
<tr>
<td>General Container (beverages, spice, dry foods, etc.)</td>
<td>13</td>
<td>1.46%</td>
</tr>
<tr>
<td>Food Spreads/Condiments</td>
<td>15</td>
<td>1.68%</td>
</tr>
<tr>
<td>Cleansers/Petroleum Products</td>
<td>23</td>
<td>2.58%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>19</td>
<td>2.13%</td>
</tr>
<tr>
<td>Liquor/Pharmaceutical</td>
<td>10</td>
<td>1.12%</td>
</tr>
<tr>
<td>Miscellaneous/Unidentified</td>
<td>11</td>
<td>1.23%</td>
</tr>
<tr>
<td>Total</td>
<td>893</td>
<td>100.01%</td>
</tr>
</tbody>
</table>
more probable that, due either to their economic status or personal abstentions, the former inhabitants of the survey area did little drinking and smoking.

When the sample is split into period groups of pre and post 1908, the assemblage size is much reduced. In fact, with the exception of small metal containers, few other artifacts could be assigned. The resultant breakdown, nevertheless, includes virtually all of the major food classes, the categories most affected being beverages and petroleum products. Table 4 provides the frequency and percentage distribution for each group.

Differences between the two samples are predominantly isolated to a few distinct categories. Possibly most notable is the substantial decrease in the percentage of condensed milk containers during the later period. Since, as I have noted, Dawson never had a substantial dairy producer and Laura Berton (1954) frequently has emphasized the importance of condensed milk well into the 1920s, it is difficult to offer an explanation. This decreasing emphasis, nevertheless, does roughly parallel the development of a "good keeping" milk powder which made available an alternative substitute (Hunziker 1914:182; May 1938:45). At least one post 1908 metal container, a "KLIM" brand can, formerly contained this product.

A second rather interesting difference between the two assemblages is the inverse relationship of meat and seafood items over time. While meat constitutes almost 13 percent of the pre 1908 sample and seafood is roughly 1 percent, seafood accounts for more than 11 percent of the post 1908 collection and meat falls off to less than 3 percent. Undoubtedly the shift in meat relates to a better supply of fresh and frozen varieties and probably a relative decrease in price related to a more efficient supply network for Dawson City. It is also noteworthy to mention that although
Table 4. Container assemblage grouped by product and time period.

<table>
<thead>
<tr>
<th>Product</th>
<th>Pre 1908 *</th>
<th>Post 1908 **</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Meat</td>
<td>72</td>
<td>12.79</td>
</tr>
<tr>
<td>Seafood</td>
<td>6</td>
<td>1.07</td>
</tr>
<tr>
<td>Meat/Seafood</td>
<td>16</td>
<td>2.84</td>
</tr>
<tr>
<td>Vegetables/Fruits</td>
<td>3</td>
<td>0.53</td>
</tr>
<tr>
<td>General Container (soup, juice, vegetables, fruits, meat, seafood, etc.)</td>
<td>189</td>
<td>33.57</td>
</tr>
<tr>
<td>Condensed Milk</td>
<td>250</td>
<td>44.40</td>
</tr>
<tr>
<td>Butter</td>
<td>9</td>
<td>1.60</td>
</tr>
<tr>
<td>Lard</td>
<td>4</td>
<td>0.71</td>
</tr>
<tr>
<td>Beverages (tea, coffee, cocoa)</td>
<td>1</td>
<td>0.18</td>
</tr>
<tr>
<td>Spice/Dry foods (baking powder, yeast, starch, etc.)</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>General Container (beverages, spice, dry foods, etc.)</td>
<td>5</td>
<td>0.89</td>
</tr>
<tr>
<td>Food Spreads/Condiments</td>
<td>2</td>
<td>0.36</td>
</tr>
<tr>
<td>Cleansers/Petroleum Products</td>
<td>1</td>
<td>0.18</td>
</tr>
<tr>
<td>Tobacco</td>
<td>2</td>
<td>0.36</td>
</tr>
<tr>
<td>Miscellaneous/Identified</td>
<td>3</td>
<td>0.53</td>
</tr>
<tr>
<td>TOTAL</td>
<td>563</td>
<td>100.01</td>
</tr>
</tbody>
</table>

* Pre 1908 includes specimens with a terminus ante quern date of 1909.
** Post 1908 includes specimens with a terminus post quern date of 1907.
wild game provided a possible meat source for the Dawson population (see Cartmel 1950) the survey collection includes a minimal sample of faunal remains. It is extremely difficult to account for the increased consumption of seafood after 1908. Since the larger volumes of seafood (salmon in particular) are packaged in a tin type falling within the generalized fruits/vegetables/meats/seafood category, the difference may simply be a lack of refinement in the analysis. There is, however, virtually no difference between the relative percentages of this general type between the period assemblages.

An attempt was made to compare the contents of individual collection units with each other where the sample size warranted such a treatment. When looking at the distribution of the pre 1908 collection (Table 5) notable variation occurs in only three categories: meat, condensed milk and the general vegetable to meat container types. In both of the latter cases, while the relative percentages differ, the significance appears to be tied to sampling error and sample size. With meat, however, one quadrat (No. 36) has a much higher frequency than all others and it seems that the individuals responsible for this refuse collection were relying heavily on tinned foods as their protein source. In fact, 25.9 percent of the assemblage includes either meat or seafood. This quadrat has been associated with either the inhabitants of structure 2 or an early tent occupation.

The post 1908 sample (Table 6), on a quadrat by quadrat basis, has an insufficient assemblage for intra-areal assessment. Only one collection unit (No. 24) shows any major variation and it is typical of the entire period assemblage with increased frequencies of seafood and a high preponderance of the generalized vegetable to meat tin types. These materials have been tentatively related to structure 1.
Table 5. Pre 1908 container assemblage by product and collection unit (percentage in brackets).

<table>
<thead>
<tr>
<th>Product</th>
<th>POST 1908</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quad. 24</td>
</tr>
<tr>
<td></td>
<td>Quad. 15/22</td>
</tr>
<tr>
<td></td>
<td>Quad. 12</td>
</tr>
<tr>
<td></td>
<td>Quad. 17</td>
</tr>
<tr>
<td>Meat</td>
<td>3 (2.63)</td>
</tr>
<tr>
<td></td>
<td>2 (8.00)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Seafood</td>
<td>16 (14.04)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Meat/Seafood</td>
<td>2 (1.75)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Vegetables/Fruits</td>
<td>8 (7.01)</td>
</tr>
<tr>
<td></td>
<td>1 (4.00)</td>
</tr>
<tr>
<td></td>
<td>1 (4.17)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>General Container (soup, juice, vegetables, fruits, meat, seafood, etc.)</td>
<td>61 (53.51)</td>
</tr>
<tr>
<td></td>
<td>10 (40.00)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1 (5.88)</td>
</tr>
<tr>
<td>Condensed Milk</td>
<td>19 (16.67)</td>
</tr>
<tr>
<td></td>
<td>4 (16.00)</td>
</tr>
<tr>
<td></td>
<td>12 (50.00)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Butter</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Lard</td>
<td>1 (0.88)</td>
</tr>
<tr>
<td></td>
<td>3 (12.00)</td>
</tr>
<tr>
<td></td>
<td>2 (8.33)</td>
</tr>
<tr>
<td></td>
<td>3 (17.65)</td>
</tr>
<tr>
<td>Beverages (tea, coffee, cocoa)</td>
<td>1 (0.88)</td>
</tr>
<tr>
<td></td>
<td>3 (12.00)</td>
</tr>
<tr>
<td></td>
<td>2 (8.33)</td>
</tr>
<tr>
<td></td>
<td>4 (23.53)</td>
</tr>
<tr>
<td>Spice/Dry foods (baking powder, yeast, starch, etc.)</td>
<td>2 (1.75)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1 (4.17)</td>
</tr>
<tr>
<td></td>
<td>2 (11.76)</td>
</tr>
<tr>
<td>General Container (beverages, spice, dry foods, etc.)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2 (8.33)</td>
</tr>
<tr>
<td></td>
<td>2 (11.76)</td>
</tr>
<tr>
<td>Food Spreads/Condiments</td>
<td>1 (0.88)</td>
</tr>
<tr>
<td></td>
<td>1 (4.00)</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2 (11.76)</td>
</tr>
<tr>
<td>Cleansers/Petroleum Products</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Tobacco</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1 (4.00)</td>
</tr>
<tr>
<td></td>
<td>4 (16.66)</td>
</tr>
<tr>
<td></td>
<td>2 (11.76)</td>
</tr>
<tr>
<td>Miscellaneous/Unidentified</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1 (5.88)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>
Table 6. Post 1908 container assemblage by product and collection unit (percentage in brackets).

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>QUAD. 36</th>
<th>QUAD. 32</th>
<th>QUAD. 26</th>
<th>QUAD.15/22</th>
<th>QUAD. 24</th>
<th>QUAD. 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td>48 (21.43)</td>
<td>6 ( 8.96)</td>
<td>7 ( 5.34)</td>
<td>5 (10.20)</td>
<td>3 (10.00)</td>
<td>0</td>
</tr>
<tr>
<td>Seafood</td>
<td>3 ( 1.34)</td>
<td>2 ( 2.99)</td>
<td>0</td>
<td>1 ( 2.04)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Meat/Seafood</td>
<td>7 ( 3.13)</td>
<td>1 ( 1.49)</td>
<td>4 ( 3.05)</td>
<td>0</td>
<td>2 ( 6.67)</td>
<td>0</td>
</tr>
<tr>
<td>Vegetables/Fruits</td>
<td>2 ( 0.89)</td>
<td>0</td>
<td>1 ( 0.76)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>General Container (soup, juice, vegetables, fruits, meat, seafood, etc.)</td>
<td>53 (23.66)</td>
<td>35 (52.24)</td>
<td>55 (41.98)</td>
<td>21 (42.86)</td>
<td>18 (60.00)</td>
<td>4 (12.90)</td>
</tr>
<tr>
<td>Condensed Milk</td>
<td>102 (45.54)</td>
<td>21 (31.34)</td>
<td>53 (40.46)</td>
<td>20 (40.82)</td>
<td>7 (23.33)</td>
<td>24 (77.42)</td>
</tr>
<tr>
<td>Butter</td>
<td>3 ( 1.34)</td>
<td>2 ( 2.99)</td>
<td>2 ( 1.53)</td>
<td>1 ( 2.04)</td>
<td>0</td>
<td>1 ( 3.23)</td>
</tr>
<tr>
<td>Lard</td>
<td>1 ( 0.45)</td>
<td>0</td>
<td>2 ( 1.53)</td>
<td>0</td>
<td>0</td>
<td>1 ( 3.23)</td>
</tr>
<tr>
<td>Beverages (tea, coffee, cocoa)</td>
<td>1 ( 0.45)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Spice/dry foods(baking powder, yeast, starch, etc.)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>General Container (beverages spice, dry foods, etc.)</td>
<td>1 ( 0.45)</td>
<td>0</td>
<td>3 ( 2.29)</td>
<td>1 ( 2.04)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Food Spreads/Condiments</td>
<td>0</td>
<td>0</td>
<td>2 (1.53)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cleansers/Petroleum Products</td>
<td>0</td>
<td>0</td>
<td>1 ( 0.76)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tobacco</td>
<td>2 ( 0.89)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous/Unidentified</td>
<td>1 ( 0.45)</td>
<td>0</td>
<td>1 ( 0.76)</td>
<td>0</td>
<td>0</td>
<td>1 ( 3.23)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>224</td>
<td>67</td>
<td>131</td>
<td>49</td>
<td>30</td>
<td>31</td>
</tr>
</tbody>
</table>
Generally speaking, the analysis of container contents has provided a broad insight into the subsistence staples of north Dawson hillside residents. In the early period, considerable reliance was placed upon condensed milk, tinned meats and, possibly, tinned vegetables. Over time, only the latter appears to have been maintained. This change is probably best explained in terms of the increasing availability of viable alternatives. Also of note within the preceding discussion is the relative absence of personal indulgence items such as liquor bottles and tobacco containers. This situation is contrary to the frontier mining town image of Dawson City, particularly in the 1898 to 1899 period.

**Beyond Subsistence**

As yet, little has been said of data which reflect or might be used to interpret the day to day activities of the hillside community. The assemblage of materials bearing on these problems is surprisingly small which, in itself, may be a statement of the nature of the population. With the exception of a few household utensils, a small number of ceramic fragments, several shoes and a number of miscellaneous artifacts, the collection is totally related to subsistence products.

Despite the fact that the assemblage is a surface collection and hence may be skewed towards the larger types of artifacts, a number of general artifact classes are lacking which are not easily explained. Building hardware is one category where this situation is most notable. With the presence of at least four structures and possibly five, an abundance of nails, hinges, door locks and the like should be expected. Several large sheets of corrugated tin (see Figure 6) are the only materials within this grouping to be documented. In a similar manner, window glass could be
expected to be more abundantly represented in the assemblage. The recovery of but five fragments seems somewhat out of line in relation to other material.

The few artifacts which may be associated with other activities cannot, with any degree of accuracy, be dated thus compounding the problem even further. Household utensils and the ceramic specimens generally reflect the preparation and consumption of food. One example, a flour sifter made from a tin can, does illustrate recycling albeit on a minimal level. As well, the single occurrence of a gold separator is the only artifact indicative of mining related activities. Again this is surprising given that the original occupation had supposedly come to Dawson for that purpose.

There is minimal evidence to suggest that the hillside residency was not totally male. This evidence is in the form of a pair of women's leather shoes. However, the presence of these shoes could be accounted for by any number of other explanations and further artifacts to support the hypothesis of a mixed population (i.e., perfume bottles, apparel, etc.) is lacking.

As has been stated, it is difficult to offer any one explanation for the relative lack of materials which can be used to infer activities beyond subsistence. It is possible that the assemblage is nonrepresentative and that such items were present but missed during the surface collection. It is also possible that many of these items may have been taken by individuals as the hillside population declined. Neither consideration, however, could be expected to produce the totally skewed distribution without the original material culture assemblage having been poor in those items to begin with. This latter factor is consistent with the hypothesis
of a makeshift community of transient and lower class individuals who initially came to Dawson as part of the Klondike stampede. Although many would have left following 1898 and 1899, at least a small number remained to form the core of the hillside occupation until circa 1908.
Summary and Conclusions

A brief archaeological research project, in cooperation with the Yukon Territorial Government, was undertaken in an area of the north Dawson City hillside scheduled for destruction by a borrow pit expansion. Somewhat limited in time and manpower, the immediate goals of the project were to document existent archaeological resources and to collect a representative sample of surface artifacts. The area under examination was initially populated in 1898 and had a subsequent occupation into the 1930s. Although the general history of Dawson City provides a broad background to the research, specific particulars of sites or individuals within the impact zone were absent.

Four and possibly five habitation sites were located and, along with a number of large refuse deposits, were mapped. In total, slightly less than 1200 artifacts were collected and analysed. This analysis has been used to infer area chronology and the subsistence base of its residents over time.

In integrating the various types of data, a general picture of the occupation has emerged. Contrary to the promulgated "gold and glitter" mythology of Dawson City, one sees a small population of rather poor individuals who relied heavily on tinned foods, had few material items beyond that needed to survive and who, probably of necessity, abstained from the personal indulgences so common to "frontier" life.

The initial habitation was undoubtedly part of the massive influx of Klondike Stampeders. Supplied with what they had brought into the Yukon themselves, this occupation
was one of itinerant would-be miners who wintered over in tents. Klondike stoves and massive accumulations of early tin cans attest to this form of residence. Lacking a view towards long term settlement, the inhabitants simply deposited refuse materials in adjacent areas. A semi-permanent community did develop, however. From historic photographs and assorted artifact types, this was known to have lasted well into the 1920s although its population had declined by 1908. It would also appear that the nature of the later occupation changed little from its predecessor. Virtually the entire collection of material culture remains from both periods is totally oriented towards day to day subsistence.

From the artifact analysis, it is possible to single out those commodities which, by virtue of their relative frequency, must have been considered primary staples. In this regard, condensed milk and tinned meats and seafoods appear to have been all important.

In viewing the project in retrospect, a number of considerations must be brought up. First and foremost, it would have been most desirable to have undertaken at least a minimal excavation program. This would have provided both structural details for the dwelling sites and a directly associated artifact assemblage which could subsequently have refined site chronology. As well, a comparison of excavated materials to those collected from the surface would have allowed an assessment of the representativeness of the sample upon which the preceding report has been based. As it stands, with certain qualifications, the collected assemblage has been argued to be reflective of the surviving archaeological record in the area.

Finally, it should be emphasized that the inherent research value of the collected data can only be evaluated within the total picture of Dawson City archaeology. When this material is compared with that retrieved from other sections
of Dawson City, only then will it be possible to place it within the historical context of the evolution of this northern community. Such an integrative synthesis, combining four years of archaeological research in Dawson City, is now underway.
Appendix A. Material Culture Analysis

Introduction
The collection of 1,194 artifacts from the survey area represents a broad range of material culture items. The analysis of this assemblage was initially begun in the archaeological field laboratory at Bear Creek. There, artifacts were sorted by provenience and type thus quantifying the collection. Concomittantly, type collections were isolated for further analysis, then transported to Winnipeg. The analysis of large metal containers was undertaken in the field; the size of these specimens prohibited shipment.

In terms of the taxonomic classification employed in the analysis, a variety of general categories were defined based on material, function and size. Subsequently, these categories were broken down into more specific classes (Table 7) and, eventually, individual types. Since the metal container grouping, especially small metal containers, composes the largest proportion of the assemblage, the major emphasis in the following study has been placed on them. This is not without justification since they also provide a variable body of data on area chronology and subsistence base. Where it was considered necessary for an understanding of the analysis a detailed discussion of artifact attributes is presented.
Table 7. Material culture assemblage classification and frequencies.

<table>
<thead>
<tr>
<th>Classification/Category</th>
<th>Quantity</th>
<th>Percent of Assemblage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total artifact assemblage</td>
<td>1194</td>
<td>100</td>
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<tr>
<td>Metal Artifacts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small Metal Containers</td>
<td>840</td>
<td>70.35</td>
</tr>
<tr>
<td>Large Metal Containers</td>
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<tr>
<td>Metal Container Lids/Endeds</td>
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<td>8.04</td>
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<tr>
<td>Metal Utensils</td>
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</tr>
<tr>
<td>Stoves/Stove Parts</td>
<td>16</td>
<td>1.34</td>
</tr>
<tr>
<td>Miscellaneous Metal Artifacts</td>
<td>114</td>
<td>9.55</td>
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<tr>
<td>Ceramic and Glass Artifacts:</td>
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</tr>
<tr>
<td>Ceramic Tableware</td>
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<td>Ceramic Jar</td>
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<tr>
<td>Glass Bottles</td>
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<tr>
<td>Glass Jars</td>
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</tr>
<tr>
<td>Plate Glass</td>
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<td>0.42</td>
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<td>Miscellaneous Artifacts:</td>
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<td>Shoes/Leather</td>
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<td>0.67</td>
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<tr>
<td>Plastic</td>
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<td>0.08</td>
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<tr>
<td>Fauna</td>
<td>9</td>
<td>0.76</td>
</tr>
</tbody>
</table>
Metal Artifacts

Small Metal Containers
Small metal containers include those items in which food, beverage or other household products were packaged. As such, the primary component of this sample includes tin cans of a "once opened, once used" function (i.e., once opened, long term storage of the contents becomes a problem) and what might be termed "family" size tins of a recloseable and re-useable function (i.e., baking powder, syrup, fuel, etc.). Although certain "institutional" size tin cans are included within this sample and not within the large metal container category, this distinction was justified by the identification of the latter as bulk storage vessels.

Small metal containers made up the largest sample of artifacts (70.35 percent) within the assemblage. Based on the identification of similarities and differences between each container, in terms of eight attribute characteristics (closure, shape, body manufacture, top end seam, solder, base end seam, marks and size), the sample was subdivided into 128 different types. Analysis of these attributes provides a variety of data on container content, capacity and date (Table 8). A discussion of these attributes is integral to an understanding of the conclusions drawn about each type. Individual attributes and their definitions, unless otherwise noted, have been extracted from Keen (1979). Following the attribute discussion, specific container types are characterized in Table 8.
Closure

The term closure refers to the method used to seal or close a metal container. Although this term usually refers to methods of sealing after the contents have been put inside (e.g., once-only closures), it might also refer to reclosable closures for items that have repeated use and storage. Seven distinct methods of closure were identified from the assemblage. These include hole-in-top, open-top, threaded cap/lid, slip-lid/cap, lever-lid/plug-in lid, key-strip/key lid and sprinkler & plate closures.

The most common form of hole-in-top consists of a metal disc or cap which has been soldered over the filler hole to close the container (e.g., solder-seal). However, another variety has the disc/cap crimped over the filler hole (e.g., "Gebee" seal). Hole-in-top may also consist simply of a drop (or two) of solder over a small filler or vent hole(s) which occurs on the end or side of the container.

Open-top refers to the "sanitary" method of closure exclusively used in the canning industry today. It involves folding or rolling the edges of the one-piece top with the body edges in order to seal the contents within the container.

A threaded cap/lid is evident by the existence of continuous threading or discontinuous lugs on the container body or the top end/shoulder, on the spout or neck and on the sealer/closure. Such closures can screw into or onto their respective containers.

Slip-lid/cap closures slip onto rather than into the container body or neck and work on the principle of friction to keep them in position. These closures are external rather than internal. Hinged lids that pivot the lid open and shut are included in this type.

Lever-lids/plug-in lids are the opposite to the above. They are internal closures that use friction by being pushed into the container (Keen 1979:pers. comm.).
Key-strip/key-lid closures are designed with special strips or panels of metal that are wound around a key in order to open the container. Many key-strip containers are recloseable while the key-lid containers are not.

Sprinkler & plate closures consist of a perforated metal plate or disc which is either slid or rotated over corresponding perforations in the top end of a container to expose or seal the contents as needed.

The assemblage also included a number of types with a dual or composite closure. This closure consisted of a hole-in-top end on a key strip body.

Shape
Eight different shapes were identified in the small metal container assemblage. These include cylindrical, square, rectangular, ovoid, elliptical, conical, pyramidal and composite. The definitions of these terms, with the exception of composite, are self-evident. Composite refers to a container composed of more than one geometric shape. Only one example of a composite shape occurred in the analysis, this being a container type which displayed rectangular and pyramidal characteristics.

Body Manufacture
Body manufacture refers to the method of construction of the body portion of a metal container. The method of construction is identified by the presence or absence of side seams. Three distinct methods are evident within the collection. These consist of pressed/drawn, lapped side seam and interlocked side seam.

Pressed/drawn construction is the result of a semiautomated or automated process, whereby a machine stamps a square or circular sheet of metal into a shallow container. The end product is a seamless body. Although the process may also
include an extension or drawing of the walls for a taller vessel, the present assemblage contains only those containers constructed by the initial pressing process. Consequently, they are known as solid-drawn containers.

A lapped side seam is created by the overlapping and soldering of two opposing body edges; the body portion is rolled or folded. This is the most economical type of side seam since only two seam layers are required. Lapped seams are often associated with containers that do not have high stress put on the body wall by the contents of the vessel. When more tensile strength of the container is required, the overlapping section of the body can be crimped (Keen 1979: pers. comm.). Both the plain and crimped lapped side seams were evident within the collection, although the former was by far the more prevalent.

Interlocked side seams are almost always machine made. They consist of the hooking or interlocking together of body edges. The interlocked edges are subsequently hammered flat and usually soldered on the outside. Such seams are nonprotruding thus enhancing the appearance of the can. They also provide extra strength for the body. Interlocked side seams result in three or more layers of metal. Although three variations of this method of construction have been perfected (the complex "Mennen" and "Talcum" seam, the outside seam and the inside seam) only the inside interlocked side seam was found to be present within the assemblage. The thick layers of metal which result from this seam posed a problem to manufacturers in fitting can ends to the body. As such a technique was perfected whereby the interlocked side seam occurred only partially along the side edges while "tabs" of the sheet metal were retained at the top and base of the body to form a lapped seam. These were subsequently incorporated into the attachment of the ends (Keen 1979: pers. comm.). Within the analysis, wherever these tabs were evident the term lock and lap was used in conjunction with the identification of the major side seam.
Top End Seam

Top end seam refers to the method of construction used in finishing the upper end of a container. Such construction may involve only the finishing of the upper body edges of a can, although it also might include the permanent attachment to the body of a separate piece of sheet metal through rolling, foldering, hammering and/or soldering. As such, the term top end does not include lids (e.g., hinged lids, slip-on lids, etc.). Five methods of top end construction were observed within the assemblage: capped-on top, single seam top, double-seam top: body edge curled and body edge raw.

A capped-on top is a flat cap-like piece of sheet metal which is fitted over the body edge and secured by pressure (e.g., hammering and/or solder). Essentially it is similar to a lapped side seam in that only two thicknesses of metal result. A capped-in variation also occurs where the end is fitted into the body (Keen 1979: pers. comm.).

In a single-seam top, the edge of the top piece is hooked over the straight top body edge in such a way as to result in three thicknesses of metal. The three thicknesses are then pressed together to form a bond. The top end is not flat as in the capped-on top but recessed to varying degrees from the body walls. This type of seam has greater tensile strength. The raw edge of the top piece is still visible along the body wall as in the capped-on top.

Double-seam top ends are the common construction method in today's canning industry and are indicative of fully automated procedures. The primary element of the double-seam is four or more thicknesses of metal. The present sample illustrates two varieties of the double seam. The most prevalent variety is the double-seam top: starting edge which is commonly associated with use of the modern can opener; the edge provides the track along which the cutting blade style opener
follows or the ledge upon which the punch style opener hooks and pivots. The construction technique consists of rolling the body edge into the top end bond so that the actual top end edge appears curled on itself. The finished product usually has a more pronounced recession of the end in relation to the body wall than the single seam top. The second variety is the double-seam top: clenched. Although usually associated with base end construction techniques, this method entails the initial process of rolling the top end and body edges together while the resulting ridge is folded over to make a smooth surface. Only a single container type within the collection had this type of top end. The double seam provides the greatest tensile strength and the greatest degree of air or water tightness.

Body edge curled describes the technique whereby the top body edge is folded or curled inward or outward. Although wire reinforcing may be incorporated into the rolled edge, none within the present sample showed such reinforcement.

Body edge raw construction was found to be most commonly associated with slip lid containers. The term denotes a lack of finishing on the top body edge.

Solder
Solder can be used as a fixative in metal container construction to reinforce the tensile strength of the seam, to facilitate air and/or water tightness and/or to attach other features (ears, handle, spouts, shoulders, etc.). Prior to outlining the techniques of soldering within the assemblage, it must be emphasized that the absence of solder is an important characteristic in itself. The lack of solder could indicate the inconsequence of internal container pressure, a lack of concern for leakage or, alternatively, the more recent perfection of seam construction techniques.
Four types of soldering, based on extent and placement, were found to predominate in the sample. These include all seams thick, all seams thin, soldered end seams and soldered side seams. Variations of these types, as later noted, were also present.

The soldering type all seams thick, as its name implies, refers to specimens with heavy irregular soldering on the end seams including hole-in-top filler cap where present and the side seam. Contrastingly, all seams thin indicates the use of automated soldering techniques (baths and capping machines) which apply an even solder around all seams. Specimens where only the end seam has been soldered are associated with containers having an interlocked side seam in conjunction with capped-on or single-seam ends. Finally, metal containers with only the side seam soldered occur primarily where there has been a need for a reinforcement of the interlocked seam. This type, however, may also occur as a true fixative on specimens with double seam ends and lapped side seams.

Variations of the above were also found. Among these were: a thin solder wash around the ends with a thick band along the side seam; solder drops for reinforcement at the intersection of end and side seams; solder used only on the hole-in-top filler disc or vent hole, and solder around the lapped edges of a threaded cap, spout or neck on the top end seam. Solder was also used on a number of examples to attach ears, lugs and/or handles.

Base End Seam
Identical in many respects to top end seams, three types were present within the assemblage. These include capped base, single seam base and double seam base. Only within the double seam base is there a notable variation. This occurs in the double seam: clenched form where a three piece
seam base was used. Although the process of rolling and folding the edges is the same as that of the two piece seam base, a third separate metal strip is incorporated into the seam to increase tensile strength. As such, instead of the four thicknesses of metal associated with clenching, six layers occur (Keen 1979: pers. comm.).

Marks
The term mark refers to any inscription or design appearing on a metal container which is indicative of either the manufacturer of the container or the company using it for packaging. For the present collection, the existing marks are of three types: painted or lithographed marks, paper labels, and marks stamped into the metal itself. Many of the marks consist of embossed letters and numbers on can ends. These are believed to be the individual manufacturers' codes which denote batch numbers (the date and place of manufacture), capacity (the common name and/or size for the complete container) or possibly the contents of the containers. Unfortunately, these codes have yet to be researched and, as a result, are not given in the container descriptions (Table 8). Marks that have been included however consist of the name, logo or trademark of the manufacturers and producers, product brand names and content identifications and capacity.

Quantitative Measurements
Quantitative measurements were taken on all container types to record size range. In Table 8, all measurements appear in two sets of numbers. The first denotes the measurement of the container in millimeters. The second set is a lineal representation of the measurements in terms of "sixteenths
of an inch" and complies with the standardized format established by the American Can Company to describe their standard can sizes (American Can Company 1943:215-216). An example of this latter set would be 309 x 100 x 1015 (F=011). This translates to a container measuring 3 9/16 x 1 x 10 15/16 inches with a filler disc measuring 11/16" in diameter. All measurements are recorded left to right in the following order: maximum base dimension; minimum base dimension; maximum top dimension; minimum top dimension; minimum height and maximum height.

Capacity/Common Name
From the quantitative measurements, in conjunction with the net weights listed in various trade journals and treatises (Schwaab 1899; Hammel 1911; Bitting 1937; American Can Company 1943; Guess 1954; Heid and Joslyn 1963) for the appropriate can dimensions, the capacity of each container type was determined. Although capacity here is included primarily to give the reader additional information on the can size, capacity and quantitative measurement have evolved, in the canning industry, into common names for the containers. Where possible, these common names have been identified rather than actual net weights. Common name often identifies the shape of the can and the contents. For example, a can with the name "2Z Mushroom" refers to a 3 1/4 fluid ounce mushroom tin measuring close to 2" in height and diameter. Other examples of common names are "evaporated milk", "vacuum coffee", "#4 Base Ham", "No. 1 Picnic", "½ lb. Flat", etc. (see Heid and Joslyn 1963:280-281 for more complete listings).

Contents
Marks which identify the producer, the product or the product brand name, obviously provide the best indications of the
original contents of a metal container. However, the majori-
ity of the sample was devoid of such labels. As such, the
preceding attribute analysis for each type specimen proved
invaluable. Used in conjunction with illustrated wholesale
and/or retail catalogues from the turn of the century (e.g.,
Kelly Douglas and Company 1901, 1909; Sears, Roebuck and
Company 1897, 1908; and Marshall-Wells Hardware Company ca.
1908-1912) and the above mentioned lists of standard can
sizes, the analysis was able to provide, for the most part,
fairly specific identifications of contents for each con-
tainer type.

The attributes of closure, shape and quantitative
measurements were of greatest use. Often the identification
was very general, such as threaded spouts identifying cans
containing liquid products. In certain instances this
identification could be narrowed down to identify food
liquids and non-food liquids based on catalogue illustrations,
closure type and shape. Many threaded cap containers were
identified as containing dry products such as tea, coffee,
cocoa and spice on the basis of the opening diameter and
height of the neck. Likewise, other dry product containers
(tea, coffee, cocoa, spice, etc.) were identified by the
popular slip lid and plug-in lid closures used for these
products. Paint cans and jam pails were identified by the
size, shape and lever-lid closures. Almost all rectangular
metal boxes with hinged lids were believed to have contained
tobacco. In terms of shape, many rectangular and all pyra-
midal key strip cans have been identified as containing meat
products. The remainder of the rectangular key strip tins
are of the common sardine/fish variety. The ovoid ham tins
are easily identified. Size of container helped content
identification in the squat cylindrical 1 lb. Flat and \( \frac{1}{2} \) lb.
Flat fish (salmon or tuna) tins.
Hole-in-top cans present a wide range of speculative identifications, especially with regard to filler discs and vent holes. The common canning practice at the turn of the century was to fill the container through the filler hole subsequently cooking the contents inside. The filler disc might be absent or it could be in place with a small hole punched in to vent the steam. Following this process, the filler disc was either soldered on or the vent hole was sealed. Consequently, a general indicator of contents is the size of the filler disc. In essence, the smaller the hole, the smaller the unit contents. Evaporated/condensed milk tins are identified as having small filler/vent holes. This identification is made more specific by the fact that milk tins have had standardized sizes almost from their inception. Larger tin cans with relatively small filler holes likely indicate small unit contents such as peas, corn, other sliced/cubed vegetables or fruit, soup, etc. The reverse is also the case; the larger the hole, the larger the unit contents. This is especially true of meats as illustrated in Hammel's "List of Standard Meat Cans" (Hammel 1911:19-21). Filler holes for tongue and roasts are considerably larger than those for corned, chipped or hashed beef. The identification of meat as the contents of a container is also facilitated by the size, shape and closure of the tin. For example a process known as "intermittent cooking" is marked by the presence of one or two vent holes but no filler disc. Intermittent cooking is a common technique in the preparation of meat and sometimes seafood.

Hermetically sealed food containers pose a problem in content identification. This is especially true for open-top (sanitary) containers where standardized can sizes are used for a wide variety of products. In these instances, the
quantitative measurements of the container were matched with those listed in the standardized can size tables and the entire range of products recorded.

Dates
Again, marks provide the best indications of dates. Patent marks can provide a beginning date for the item whereas company names, product brand names and trademarks can be traced through trade indexes and business gazetteers to furnish rough chronologies. The most accurate date source is through company histories available from the company or through other research publications on tin cans or the canning industry. Where such information is lacking, this study has based its dates on documented developments in manufacturing techniques. In this respect closure, body manufacture, top end seam, solder and base end seam attributes are of the greatest use.

Generally speaking, after 1904 large scale advances were made to replace the common manufacturing techniques of hole-in-top closures and single seam ends respectively with open-top closures and double seam ends. By 1908, the American Can Company had a virtual monopoly on these techniques thus forcing other can manufacturers to continue with the older construction techniques. It was not until ca. 1916 that this monopoly was broken and large scale adoption of the new techniques took place. Consequently, for the benefit of doubt, many of the dates recorded in this study are represented as being either pre- or post-1916. Additional technological advancements occurred in 1907 when interlocked side seams were adopted for open-top cans. Depending upon the degree of technological overlap at the time of construction for a metal container (i.e., open top closure with single seam ends, lapped side seam with double seam ends, etc.), the analysis has inferred either a specific date range or a ter-
minus post/ante quem date for each specimen. The introduction of vacuum packing in 1926 provides a final reliable date indicator (May 1938:359).

The particular date range affixed to any particular container type, although primarily based upon the above technological criteria, is supported by other technological assumptions which by themselves are difficult to accurately date. In this respect, sophistication and simplicity of the soldering techniques used on a can may be deemed to be a later development. Early techniques where soldering was used both as a fixative and sealant for the container tend to be characterized by thick uneven application on all seams. During the 1890s, interior soldering was banned for health considerations. As semi-automated and automated techniques and machinery began to develop, solder became more thinly and evenly applied. Eventually, as better seam construction techniques were developed and used, solder could be dispensed with on the appropriate seam or seams, resulting in containers with solder only around the end seams or only along the side seam. Finally, with the perfection of seam construction, soldering became a reinforcement agent if used at all.

A similar chronology is assumed for the gradual development in sheet metal stamping machinery and the cooking procedure used for hermetically sealed food containers. Such developments appear to be witnessed in the presence of absence of expansion rings on the ends and/or expansion beads on the body wall. Both of these are machine stamped prior to construction and both were developed to accommodate pressure buildup in the containers during cooking. In this respect, an evolutionary sequence from the absence of expansion rings or beads to the presence of expansion rings on ends only through to the presence of both end and body expansion rings and beads can be anticipated.
<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>112</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seam top (1 expansion ring)-solder present all seams/thin-single seam base-fruits, vegetables or meats-pre-1916 (possibly 1890's to ca. 1908)-No. 3 (3 lb.) can-107X123mm (F=54mm) or 404X414&quot; (F=202&quot;)</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>pressed, hinged slip-lid-rectangular shape-&quot;inside&quot; interlocked side seam-top body, edge curled-double-seam base: starting edge-tobacco-&quot;Puritan Cut Plug&quot;, D. Ritchie Tobacco Co., Montreal-post-1890 (likely post 1907)-1 lb. capacity-155X106X56mm or 602X402X203&quot;</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>re-closeable key-strip- cylindrical shape-lapped side seam-capped-in-top-solder present all seams/thin-single seam base (2 expansion rings)-butter-&quot;Coldbrook Creamery; 1898; G.E. Whitney &amp; Co.; San Francisco&quot;-post-1898 to pre-1907-2½ lbs. capacity-142X94mm or 510X310&quot;</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>pressed slip-lid (2 expansion rings)-conical shape-&quot;inside&quot; interlocked side-top body edge curled-solder present at base/side seam juncture and around ears-double seam base: starting edge-lard-ca. 1907-1916-5 lb. capacity-136 (150) X161mm or 506 (514) X606&quot;</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seam-single seam top (2 expansion rings)-solder present all seams/thin-single seam base (2 expansion rings)-condensed milk-pre-1916 (probably 1900-1910)-No.3-110X106mm (F=19mm) or 405X403&quot; (F=012&quot;)</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>pressed slip-lid-cylindrical shape-&quot;inside&quot; interlocked side seam-top body edge curled-double-seam base: starting edge-tobacco-&quot;Macdonald's Brier&quot;, W.C. Macdonald Inc., Montreal-post-1865 to pre-1972-1 lb. capacity-103X101mm or 401X400&quot;</td>
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<tr>
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<td>re-closeable key-strip-cylindrical shape-&quot;inside&quot; interlocked side seam (lock &amp; lap)-top body edge raw-solder present side seam-double-seam base: starting edge-tobacco or coffee-post-1916-1 lb. capacity-129XN.I.mm or 501 X N.I.&quot;</td>
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<tr>
<td>TYPE</td>
<td>QUANTITY</td>
<td>DESCRIPTION</td>
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<tr>
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<tr>
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<td>threaded cap-rectangular shape-&quot;inside&quot; interlocked side seam-single seam top-solder present at ends &amp; around lapped opening seam-single seam base-dry foods (spice, tea, coffee, cocoa, etc.)-ca. 1907 to 1916-1 to 1½ lb. capacity - 86X86X202mm (Op=50mm) or 306X306X715&quot; (Op=200&quot;)</td>
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<td>open-top-cylindrical shape-lapped side seam-capped-in top (1 expansion ring)-solder present all seams/thin-capped-in base (1 expansion ring) -meat or seafood (probably roast beef or salmon) -ca. 1904-1916 (possibly 1904-1907)-1 lb. Flat-109X69mm or 404X211&quot;</td>
</tr>
<tr>
<td>10</td>
<td>112</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-lapped side seam-single seam top-solder present as thin wash around ends and thick band partially along side seam-single-seam base-condensed milk-pre-1907-No. 1 Tall-75X110mm (F=30mm) or 300X401&quot; (F=103&quot;)</td>
</tr>
<tr>
<td>11</td>
<td>120</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seam-single seam top-solder present all seams/thin-single seam base-condensed milk-pre-1916 (probably 1890-1908)-11⅛ fl. oz. capacity-76X86mm (F=24mm) or 300X305&quot; (F=100&quot;)</td>
</tr>
<tr>
<td>12</td>
<td>44</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-lapped side seam-single seam top (1 expansion ring)-solder present as thin wash around ends and filler disc with thick band partially along side seam-single seam base (1 expansion ring) -fruits, vegetables or meats-pre-1907-No. 2 (2 lb.) - 86X115mm (F=35mm) or 307X403&quot; (F=103&quot;)</td>
</tr>
<tr>
<td>13</td>
<td>2</td>
<td>open-top-cylindrical shape-lapped side seam-capped-in top (2 expansion rings)-solder present all exterior seams and interior side seam-capped-in base (2 expansion rings) -vegetables, fruits or soup-pre-1907 (probably ca. 1890-1908)-No. 2-98X114mm or 313X407&quot;</td>
</tr>
<tr>
<td>TYPE</td>
<td>QUANTITY</td>
<td>DESCRIPTION</td>
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<tr>
<td>14</td>
<td>2</td>
<td>threaded cap-cylindrical shape-lapped side seam-single seam top-solder present all seams/thin-single seam base (1 expansion ring)-dry foods (tea, coffee, spice, cocoa, etc.)-pre-1907-303 Cylinder - 87X137mm (Op=60 mm) or 307X506&quot; (Op.=206&quot;)</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
<td>slip-lid-cylindrical shape-&quot;inside&quot; interlocked side seam (1 body bead)-top body edge raw-3 piece double seam base: clenched-dry foods (likely tea or baking powder)-ca. 1907-1916-1½ lb. capacity - 91X170mm or 308X611&quot;</td>
</tr>
<tr>
<td>16</td>
<td>6</td>
<td>key strip with &quot;solder-seal&quot; Hole-in-top (filler disc with 2 vent holes) - rectangular shape-lapped side seam-single seam top (1 expansion ring)-solder present as thin wash around ends and filler disc with thick band partially along side seam-single seam base (1 expansion ring)-meat-pre-1907 (possibly pre-1904)-2 lb. capacity-106X61X118mm (F=46mm) or 403X206X410&quot; (F=113&quot;)</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>hinged slip-lid-rectangular shape-&quot;inside&quot; interlocked side seam-top body edge curled-double seam base: clenched-likely tobacco-post-1907 (possibly post-1916) - 1 lb. capacity - 163X68X42 mm or 607X211X111&quot;</td>
</tr>
<tr>
<td>18</td>
<td>25</td>
<td>open-top-cylindrical shape-lapped side seam-double seam top: starting edge (2 expansion rings)-double seam base: starting edge (1 expansion ring)-vegetable, some fruits, soups, meat &amp; fish products - ca. 1904-1907-Picnic No. 1 - 68X102mm or 210X400&quot;</td>
</tr>
<tr>
<td>19</td>
<td>5</td>
<td>open-top-cylindrical shape-&quot;inside&quot; interlocked side seam (lock &amp; lap)-double seam top: starting edge (3 expansion rings)-solder present side seam-double seam base: starting edge (3 expansion rings)-vegetables or fruits-&quot;Royal&quot; (possibly Royal City brands from Westminster Canners ltd., New Westminster) -post-1916-No. 2½ - 110X119mm or 400X411&quot;</td>
</tr>
<tr>
<td>20</td>
<td>9</td>
<td>key-lid (roll top)-rectangular shape-pressed-double seam top: starting edge-base seam absent-sardines-&quot;King Oscar Brand Sardines&quot;, Chr. Bjelland &amp; Co., Stavanger, Norway-post-1901-No. ½ Oil - 105X75X21mm or 402X215X013&quot;</td>
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<td>21</td>
<td>16</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (3 expansion rings)-solder present side seam-double seam base: starting edge (3 expansion rings)-fish (likely salmon)-&quot;Packed in Canada&quot;-post-1930-½ lb. Flat.-86X52 mm or 303X200&quot;</td>
</tr>
<tr>
<td>22</td>
<td>6</td>
<td>open top-cylindrical-&quot;inside&quot; interlocked side seam-double seam top: starting edge (3 expansion rings) solder present side seam-double seam base: starting edge (3 expansion rings)-vegetables (peas)-&quot;...City Brand;... SWEET PEAS;...ODER...; WE...ED&quot; (either Westminster Canners Ltd., New Westminster, or Broder Canning Co., Lethbridge)-post-1916-No.2.-86XH5mm or 306X409&quot;</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>slip lid-rectangular shape-&quot;inside&quot; interlocked side seam-top body edge raw-double seam base: starting edge (1 expansion ring) -dry foods (spice, mustard, starch, etc.) -&quot;Canco&quot;-likely post-1908-½ lb. capacity -83X55X105mm or 304X202X402&quot;</td>
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<td>24</td>
<td>2</td>
<td>slip lid-rectangular shape-&quot;inside&quot; interlocked side seam-top body edge raw-2 piece double seam base: clenched - corn starch-&quot;Colman's; No. 1; Starch&quot; (Coleman-Keen(Canada) Ltd., Toronto)-post-1916-½ lb. capacity -64X43X99mm or 207X110X314&quot;</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>threaded cap-composite shape (rectangular and pyramidal features)-lapped side seam-single seam top (1 expansion ring)-solder present all exterior seams and interior side seam-single seam base (1 expansion ring)-maple syrup-General Foods Corp. Distributor (Towle's Log Cabin Syrup)-pre-1916 (possibly ca. 1890-1908)-1 qt. capacity.-145X107X(120) 152mm (S=21mm) or 511X402X(412)600&quot; (S=015&quot;)</td>
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<td>26</td>
<td>1</td>
<td>pressed slip lid-cylindrical shape-pressed (1 body bead)-top body edge raw-base seam: absent-likely tobacco-post-1850-½ lb. capacity -97X68mm or 313X210&quot;</td>
</tr>
<tr>
<td>27</td>
<td>1</td>
<td>slip lid-rectangular shape-lapped side seam-top body edge curled-solder present all seams/thin-capped-on base-dry product (laundry starch, corn starch, baking powder, lye, etc.) -pre-1916 (possibly pre-1904)-1 lb. capacity -92X64X134mm or 310X208X504&quot;</td>
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<tr>
<td>TYPE</td>
<td>QUANTITY</td>
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<td>28</td>
<td>2</td>
<td>hinged slip lid-rectangular shape-lapped side seam-top body edge curled-solder present all seams/thin-capped-on base-dry foods (tea, coffee, spice, etc.)-pre-1907-1/2 to 2 lb. capacity-128X84X178mm or 500X305X614&quot;</td>
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<td>29</td>
<td>7</td>
<td>off-centre vent hole(Hole-in-top: no filler disc)-cylindrical shape-lapped side seam-capped-on top-solder present as thin wash around ends and thick band partially along side seam-capped-on base-meat, meat products or seafood-pre-1907-No. 1 Tall-76X117mm or 300X410&quot;</td>
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<td>30</td>
<td>2</td>
<td>key-strip-cylindrical shape-lapped side seam-double seam top: starting edge-solder present side seam-double seam base: starting edge-butter-&quot;North American Transportation &amp; Trading Co.; Butter&quot;-ca. 1904-1907-2 lb. capacity-137X86mm or 506X305&quot;</td>
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<td>31</td>
<td>3</td>
<td>threaded cap-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-solder present around lapped seam of opening-double seam base: starting edge-dry foods (likely tea, coffee or cocoa)-post-1916 (possibly post-1907)-5 to 10 lb. capacity-153X298mm (Op=56 mm) or 600X1112&quot; (Op=203&quot;)</td>
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<tr>
<td>32</td>
<td>3</td>
<td>slip lid-cylindrical shape-&quot;inside&quot; interlocked side seam-top body edge raw-double seam base: starting edge-ground chocolate-&quot;Ghirardelli's Chocolate&quot;, D. Ghirardelli Co.; San Francisco-post-1916 (possibly post-1907)-1/2 to 2 lb. capacity-116X216mm or 408X808&quot;</td>
</tr>
<tr>
<td>33</td>
<td>1</td>
<td>slip lid-cylindrical shape-lapped side seam-top body edge raw-solder present all seams/thin-capped on base-dry foods(tea, spice, cocoa)-pre-1907-2 lb. capacity-80X234mm or 302X904&quot;</td>
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<td>34</td>
<td>2</td>
<td>slip lid-conical-&quot;inside&quot; interlocked side seam (2 body beads; 2 pressed ears)-top body edge curled-solder present around ears-double seam base: starting edge-lard-post-1916 (possibly post-1907)-5 lb. capacity-156(289)X206mm or 604(1106)X802&quot;</td>
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<td>TYPE</td>
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<td>35</td>
<td>7</td>
<td>key strip-cylindrical shape-&quot;inside&quot; interlocked side seam-solder present all seams/thin-capped-on base-butter-&quot;Elgin Brand Butter; the Elgin Creameries, Elgin, Ill. U.S.A.&quot;-post-1870 to pre-1916-2 lb. capacity 136X70mm or 506X212&quot;</td>
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<td>36</td>
<td>1</td>
<td>square/rectangular shape-lapped side seam-single seam top (1 expansion ring)-solder present all seams/thin-single seam base (1 expansion ring)-likely food storage-pre-1907 (specimen is incomplete)-N.I.X 108X145mm or N.I. X 403X511&quot;</td>
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<tr>
<td>37</td>
<td>7</td>
<td>open top - cylindrical shape-lapped side seam-double seam top: starting edge (2 expansion rings)-solder present side seam-double seam base: starting edge (2 expansion rings)-cream-&quot;Canada First; Evaporated Cream&quot;-ca. 1904-1907-14 fl. oz. capacity-75X116mm or 215X409&quot;</td>
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<td>38</td>
<td>1</td>
<td>off centre threaded cap-cylindrical shape-lapped side seam-single seam top (1 expansion ring)-single seam base (1 expansion ring)-household cleanser or polish -pre-1907 (possibly 1866-pre-1904)-75X93mm (S=28mm) or 215X310&quot; (S=101&quot;)</td>
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<td>39</td>
<td>2</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-double seam base: starting edge-marmalade-&quot;James Keiller &amp; Son Ltd.; Dundee Marmalade&quot;-post-1916 (probably ca.1930's)-11½ oz. capacity-78X89mm or 301X308&quot;</td>
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<td>40</td>
<td>1</td>
<td>&quot;solder-seal&quot; Hole-in top (2 filler discs—one each on top and base—with 1 offset vent hole on top)-cylindrical shape-lapped side seam-single seam top-solder present all seams/thin-single seam base-likely a specialty item (exotic soup)-&quot;16K&quot; embossed on base and can is painted blue-likely Crosse &amp; Blackwell, London-pre-1916 (likely ca. 1904)-11½ fl. oz. capacity.-77X91mm (F=43mm) or 300X309&quot; (F=111&quot;)</td>
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<td>41</td>
<td>60</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (3 expansion rings)-solder present side seam-double seam base: starting edge (3 expansion rings)-dog food-&quot;Dr. Ballards&quot;, Vancouver-post-1950-No. 2-87X115mm or 306X408&quot;</td>
</tr>
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</table>
TYPE | QUANTITY | DESCRIPTIONS
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42 | 1 | open top-cylindrical shape-"inside" interlocked side seam (lock & lap)-double seam top: starting edge-double seam base: starting edge-liquid product (possibly milk)-post-1907 (likely post-1916)-14 fl. oz. capacity-75X116mm or 215X409"
43 | 5 | key strip with "solder-seal" Hole-in top (filler disc with 2 overlapping vent holes) -pyramidal shape-lapped side seam-single seam top-solder present as thin wash around ends, thick ring around filler disc and thick band partially along side seam-single seam base-meat (corned or hashed beef)-pre-1907 (possibly pre-1904) - 1 lb. Square-(86X50)X(86X59) X96 mm (F=40mm) or (305X115)X(305X205)X312" (F=108")
44 | 3 | key strip-rectangular-"inside" interlocked side seam-double seam base: starting edge (1 expansion ring)-likely meat-"Ginna & Co., New York"-pre-1903-84X55XN.I.mm or 304X203XN.I."
45 | 24 | key strip with "solder-seal" Hole-in-top (filler disc with 1 vent hole)-lapped side seam-single seam top (1 expansion ring)-solder present as thin wash around ends & filler disc with thick band partially along side seam-single seam base (1 expansion ring)-meat (vienna sausage or roast beef)-pre-1907 (possibly pre-1904) - 2 lb. Tall - 110X110mm (F=77mm) or 406X406" (F=213")
46 | 19 | key strip with double vent hole Hole-in-top (no filler disc)-rectangular shape-lapped side seam-capped-on top-solder present all seams/thin-capped-on base-meat-ca.1890-pre-1907-2 to 3 lb. capacity-81X81X170 mm or 303X611"
47 | 1 | "solder-seal" Hole-in-top (filler disc with 1 off centre vent hole)-cylindrical shape-lapped side seam-capped-in top-solder present all exterior seams and interior side seam-capped-in base-likely pork & beans, soup or stew-"1 lb. Net" - pre-1904-14 fl. oz. capacity-76X88mm (F=42mm) or 300X308 (F=111")
48 | 3 | open top-cylindrical shape-"inside"interlocked side seam-double seam top: starting edge (3 expansion rings)-solder present side seam-double seam base: starting edge (3 expansion rings) -fruit or vegetable-post-1916-2 lb. capacity-109X128mm or 404X500"
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<tr>
<td>49</td>
<td>1</td>
<td>key strip-cylindrical shape-lapped side seam-solder present all seams/thin-single seam base (1 expansion ring)-fish or meat-pre-1916 (probably pre-1907) - 112XN.I. mm or 406X NI&quot;</td>
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<td>50</td>
<td>2</td>
<td>key strip-cylindrical shape-&quot;inside&quot; interlocked side seam (lock &amp; lap)-double seam top: starting edge (1 expansion ring)-double seam base: starting edge (1 expansion ring)-meat or fish (possibly pork &amp; beans)-post-1916 (possibly post-1930)-11½ oz. capacity-76X90 mm or 300X308&quot;</td>
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<tr>
<td>51</td>
<td>35</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (1 expansion ring)-solder present side seam-double seam base: starting edge-condensed milk-&quot;Vaccuum Packed&quot;-post-1926-No. 1 Tall-76X118mm or 300X412&quot;</td>
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<td>52</td>
<td>2</td>
<td>threaded lid-cylindrical shape-&quot;inside&quot; interlocked side seam-top body edge curled-double seam base: starting edge (1 expansion ring)-baking powder-&quot;Magic Baking Powder&quot;-post-1916-1 lb. capacity - 73X132mm or 214X503&quot;</td>
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<td>53</td>
<td>9</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (3 expansion rings)-solder present side seam-double seam base: starting edge (3 expansion rings)-vegetables (peas, corn) - post-1931-No. 2 Vaccuum-86X86mm or 306X306&quot;</td>
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<td>54</td>
<td>2</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc but no vent hole)-rectangular shape-&quot;inside&quot; interlocked side seam-single seam top-solder present all seams/thin-single seam base-oysters-&quot;Eagle Brand; Trade Mark &quot;and&quot;The Morgan Oyster Co. S.F.&quot;-likely 1907-1916- 1½ to 2 lb. capacity-114X48X180mm (F=35mm) or 408X114X701&quot; (F=106&quot;)</td>
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| 55   | 5        | key strip with "solder-seal" Hole-in top (filler disc with 2 adjacent vent holes)-pyramidal shape-lapped side seam-single seam top (1 expansion ring)-solder present as thin wash around ends and filler disc with thick band partially along side seam-single seam base (1 expansion ring)-meat (corned or hashed beef)-pre-1907 (possibly pre-1904) - 1 lb. Square - (84X51)X(84X59)X96 mm (F=41mm) or (304X200)X(304X205)X312" (F=109")
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<th>TYPE</th>
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<tr>
<td>56</td>
<td>2</td>
<td>slip lid-conical shape-2 lapped side seam (1 body bead and 2 ears)-top body edge curled-solder present all seams/thin-capped-on base lard-&quot;Ivory Brand Lard Compound; The Cudahy Pkg. Co.; Omaha&quot;-1890 to pre-1908-10 lb. capacity-180(210)X176mm or 700(804)X615&quot;</td>
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<td>57</td>
<td>1</td>
<td>key strip-rectangular shape-lapped side seam-single seam base (1 expansion ring)-likely meat-pre-1916 (possibly pre-1907)-97X68X70mm or 312X211X212&quot;</td>
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<td>58</td>
<td>1</td>
<td>hinged slip lid-rectangular shape &quot;inside&quot; interlocked side seam-top body edge curled-double seam base: starting edge-tobacco-&quot;Athlete Smoking Misture; D. Ritchie Co., American Tobacco Co. Canada Ltd. Montreal-post-1907 (likely post-1916)-1 lb. capacity-155X102X57mm or 602X401X203&quot;</td>
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<td>59</td>
<td>3</td>
<td>slip lid-conical shape-&quot;inside&quot; interlocked side seam (1 body bead)-top body edge curled-solder present around ears-double seam base: starting edge-lard-post-1916-3 lb. capacity-137(156)X159mm or 506(602)X604&quot;</td>
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<td>60</td>
<td>1</td>
<td>lever-lid-conical shape-lapped side seam. (drawn shoulder crimped onto body, 2 ears &amp; 1 wire bail)-top body edge curled-solder present on all exterior seams and interior shoulder seam-double seam base: starting edge-likely lard-pre-1907-5 lb. capacity-164(355)X131mm or 610(1400)X503&quot;</td>
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<td>61</td>
<td>2</td>
<td>lever lid-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-solder present side seam with reinforcement at end seams-double seam base starting edge (1 expansion ring)-likely jam-post-1906-1 to 2 lb. capacity-123X123mm (Op=108mm) or 413X413&quot; (Op.=405&quot;)</td>
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<tr>
<td>62</td>
<td>2</td>
<td>sprinkler &amp; circular plate-rectangular shape -&quot;inside&quot; interlocked side seam-capped-on top-double seam base: starting edge (1 expansion ring)-black pepper-&quot;Nabob Brand Pure Spice; Black Pepper&quot;-post-1916 (probably-ca. 1930's)-6 oz. capacity-60X33X97mm or 205X105X313&quot;</td>
</tr>
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| 63   | 1        | slip lid-cylindrical shape-"inside" interlocked side seam (1 body bead)-top body edge raw-double seam base: starting edge-dry foods (tea, coffee, spice, cocoa, baking powder,
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<th>TYPE</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
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<td>64</td>
<td>1</td>
<td>recloseable key strip-cylindrical shape-lapped side seam (1 body bead &amp; a crimped on shoulder) -top body edge curled-double seam base: starting edge (1 expansion ring)-likely tobacco-post-1907 (likely post-1916)-1½ to 2 lb. capacity-129X97mm or 501X313&quot;</td>
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<td>65</td>
<td>1</td>
<td>slip lid-conical shape-2 &quot;inside&quot; interlocked side seams (1 body bead &amp; 2 ears)-top body edge curled-solder present around ears-double seam base: starting edge-lard-&quot;Red Star Brand; Kettle Rendered; Leaf Lard&quot;-post-1907 (likely post-1916)-10 lb. capacity-180(211)X171mm or 701(805)X612&quot;</td>
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<td>66</td>
<td>1</td>
<td>slip lid-conical shape-lapped side seam (1 body bead)-top body edge curled-solder present all seams/thin-double seam base: starting edge-lard-&quot;Wheaton Breon &amp; Co.; Optimus; Pure Family Lard&quot;-pre-1908-3 to 5 lb. capacity-134(154)X158mm or 504(602)X603&quot;</td>
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<td>67</td>
<td>9</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam (lock &amp; lap)-double seam top: starting edge-solder present side seam-double seam base: starting edge (3 expansion rings) -fish (salmon)-&quot;Canada&quot;-post-1916 (likely ca. 1940's)-1 lb. Flat-102X68 mm or 400X211&quot;</td>
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<td>68</td>
<td>3</td>
<td>key strip-ovoid shape-&quot;inside&quot;interlocked side seam-double seam top: starting edge (1 expansion ring)-solder present all exterior seams with reinforcement along side seam-double seam base: starting edge (1 expansion ring)-ham-post-1916-#4 Base Ham-295X213X134 mm or 1110X806X504&quot;</td>
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<td>69</td>
<td>2</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (3 expansion rings)-solder present side seam-double seam base: starting edge (3 expansion rings)-institutional size: vegetables, fruits, juices, meat &amp; fish products, soups, specialties-post-1916-No. 10-155X177mm or 601X614&quot;</td>
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<tr>
<td>70</td>
<td>1</td>
<td>recloseable key strip-cylindrical shape-&quot;inside&quot; interlocked side seam (crimped on shoulder)-top body edge curled-solder present side seam-double seam base: starting edge (3 expansion rings)-jam, peanut butter or tobacco-post-1916 (possibly post-1930)-2 to 4 lb. capacity-129X122mm or 501X413&quot;</td>
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<td>71</td>
<td>1</td>
<td>key strip-pyramidal-&quot;inside&quot; interlocked side seam-double seam top: starting edge (1 expansion ring)-double seam base: starting edge (1 expansion ring)-corned beef-&quot;...igona...Corned Beef&quot; &amp; &quot;Uruguay&quot;-post-1916 (probably post-1930)=1 lb. capacity (82X64)X(78X54)X91mm or (303X208)X(301X202)X309&quot;</td>
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<td>72</td>
<td>7</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (2 expansion rings)-solder present side seam-double seam base: starting edge (2 expansion rings)-vegetables, some fruits, juices, soups, meat, fish, pet foods, specialties-&quot;Canada&quot;-post-1916-No. 300-77X110mm or 300X406&quot;</td>
</tr>
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<td>73</td>
<td>1</td>
<td>key strip-rectangular shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (1 expansion ring)-solder present side seam-luncheon meat-&quot;Klik&quot;; Canada Packers Ltd., Toronto-post-1944-1 lb. capacity-96X50X N.I.mm or 312X115X N.I.&quot;</td>
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<td>74</td>
<td>2</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (2 expansion rings)-solder present side seam-double seam base: starting edge (2 expansion rings)-possibly pork &amp; beans-post-1916-1 1/2 oz. capacity-75X88mm or 300X308&quot;</td>
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<td>75</td>
<td>3</td>
<td>slip lid-cylindrical shape-&quot;inside&quot; interlocked side seam (1 body bead)-top body edge raw double seam base: starting edge-dry products (tea, spice, tobacco, etc.)-post-1916-1 or 1 1/2 lb. capacity-110X124mm or 405X414&quot;</td>
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<td>76</td>
<td>1</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-lapped side seam-single seam top-solder present as thin wash around ends, partially along side seam and interior around ends-single seam base-likely fish or meat-pre-1908-1 lb. capacity-108X63mm (F=101mm) or 404X207&quot; (F=400&quot;)</td>
</tr>
<tr>
<td>77</td>
<td>1</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-lapped side seam-capped in top-solder present all seams/thin single seam base-fish-pre-1908-1/2 lb. capacity-87X45mm (F=87mm) or 307X112&quot; (F=307&quot;)</td>
</tr>
<tr>
<td>TYPE</td>
<td>QUANTITY</td>
<td>DESCRIPTION</td>
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<tr>
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<tr>
<td>78</td>
<td>1</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc but no vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seam (2 ears-possibly post manufacture alteration)-double-seam top: starting edge-solder present all seams/thin-double seam base: starting edge-likely meat (sausage, roast, beef, tongue)-ca. 1904-1916-6 lb. capacity-138X162mm (F=66mm) or 507X606&quot; (F=210&quot;)</td>
</tr>
<tr>
<td>79</td>
<td>1</td>
<td>slip lid-rectangular shape-&quot;inside&quot; interlocked side seam -top body edge raw-double seam base: starting edge (1 expansion ring)-tea-&quot;G.F. &amp; J. Galt Wholesale Grocers; 1882; Winnipeg Branch; Coffee &amp; Spice Mills&quot; &amp; &quot;Winnipeg; Galt's Teas&quot; -likely post-1907-1 lb. capacity-101X101X155mm or 400X400X602&quot;</td>
</tr>
<tr>
<td>80</td>
<td>1</td>
<td>slip cap-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-double seam base: starting edge-dry foods (coffee, tea, cocoa, spice, etc.)-&quot;Pat, May. 10, 1898, Ill. Can. Co. Chicago&quot;-post-1904-3 lb. capacity-133X174mm (Op.=102mm) or 504X506&quot; (Op.=400&quot;)</td>
</tr>
<tr>
<td>81</td>
<td>1</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-solder present side seam-double seam base: starting edge (1 expansion ring)-likely fruits, some vegetables, or meat products-post-1907 (likely post-1916)-No. 2½-110X121mm or 406X412&quot;</td>
</tr>
<tr>
<td>82</td>
<td>1</td>
<td>&quot;Hole-in-top&quot; (1 vent hole on side)-rectangular shape-&quot;crimped&quot; lapped side seam-capped in top (1 expansion ring)-solder present thick all exterior &amp; interior seams-capped-in base (1 expansion ring)-likely sardines-pre-1904-¼ Oil-109X79X25mm or 404X301X100&quot;</td>
</tr>
<tr>
<td>83</td>
<td>1</td>
<td>slip lid-cylindrical shape-lapped side seam-solder present all seams/thin-single seam base-tobacco-&quot;W.D. &amp; H.O.Wills; Bristol, London&quot;-pre-1916 (likely pre-1904)-¼ lb. capacity-69X73mm or 211X213&quot;</td>
</tr>
<tr>
<td>84</td>
<td>1</td>
<td>key strip-cylindrical shape-lapped side seam (with crimped shoulder)-top body edge raw-solder present along side and shoulder seams-double seam base: starting edge (2 expansion rings)-likely coffee-1904-1907-1 lb. Vaccuum Coffee-132X89mm or 502X308&quot;</td>
</tr>
<tr>
<td>TYPE</td>
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<td>DESCRIPTION</td>
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<tr>
<td>85</td>
<td>1</td>
<td>conical shape-&quot;inside&quot; interlocked side seam (2 ears)-top body edge curled-solder present interior side seam-double seam base: starting edge-possibly lard-post-1904-3-5 lb. capacity-152 (N.I.)X162mm or 600 (N.I.)X608&quot;</td>
</tr>
<tr>
<td>86</td>
<td>1</td>
<td>open top - cylindrical shape - lapped side seam-capped in top (2 expansion rings)-solder present all exterior seams and interior side seam-capped in base (2 expansion rings)-likely fruit or vegetable-pre-1907-No. 3 (3 lb.) -105X122mm or 402X413&quot;</td>
</tr>
<tr>
<td>87</td>
<td>6</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seams-single seam top-solder present all seams/thin-single seam base (1 expansion ring)-vegetable, fruit, soups, specialties-ca. 1907-1916-No. 2 (2 lb.)-85X116mm (F=38mm) or 306X408&quot;(F=107&quot;)</td>
</tr>
<tr>
<td>88</td>
<td>4</td>
<td>key strip with &quot;solder-seal&quot; Hole-in-top (filler disc with one vent hole and interior circular steam/pressure control plate)-cylindrical shape-lapped side seam-single seam top (1 expansion ring)-solder present as thin wash around ends and filler disc with thick band partially along side seam-single seam base (1 expansion ring)-meat(tongue or roast beef)-pre-1907-2 lb. Flat.-139X72mm (F=92mm) or 508X213&quot; (F=310&quot;)</td>
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<tr>
<td>89</td>
<td>1</td>
<td>threaded cap-rectangular shape-lapped side seam-single seam top (1 expansion ring)-solder present all seams thick-single seam base (1 expansion ring)-likely spice-pre-1916-1 lb. capacity-97X68X138mm (Op=40mm) or 313X210X507&quot; (Op=109&quot;)</td>
</tr>
<tr>
<td>90</td>
<td>2</td>
<td>&quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seam-single seam top-solder present all seams/thin-single seam top-likely vegetable, soup, meat or fish-likely ca. 1907-1916-No. 1 Picnic-68X101mm (F=38mm) or 210X315&quot; (F=108&quot;)</td>
</tr>
<tr>
<td>91</td>
<td>1</td>
<td>open top-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (2 expansion rings)-double seam base: starting edge (2 expansion rings)-speciality item (eg. beer or whipped cream topping) -post-1916 (likely post-1930)-16Z or ½ quart capacity-69X152mm or 211X600&quot;</td>
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<tr>
<td>92</td>
<td>2</td>
<td>Hole-in-top (no filler disc but 1 vent hole) -cylindrical shape -&quot;inside&quot; interlocked side seam -single seam top (2 expansion rings)- solder present over vent hole-single seam base (1 expansion ring)- evaporated milk-ca. 1907-1916-6 oz. Evaporated Milk-64X61mm or 208X206&quot;</td>
</tr>
<tr>
<td>93</td>
<td>1</td>
<td>plug-in lid-elliptical shape -&quot;inside&quot; interlocked side seam-double seam top: starting edge (with crimped edge for opening)- double seam base: starting edge-cereal coffee substitute-&quot;Postum Cereal; Instant Postum; C.W. Post; Postum Co. Inc., Battle Creek, Mich., U.S.A.&quot;-post-1911 (likely post-1930)-4 oz. capacity-81X36X109mm (Op=46X25mm) or 303X106X404&quot; (Op.=113X100&quot;)</td>
</tr>
<tr>
<td>94</td>
<td>1</td>
<td>slip lid-conical shape -&quot;inside&quot; interlocked side seam-(2 body beads; 2 rivetted ears)-top body edge curled-double seam base: starting edge-lard-&quot;Silver Leaf...Kettle...Swift...&quot;-post-1912 (likely post-1916)-5 to 6 lb. capacity-136(150)X159mm or 505(514)X604&quot;</td>
</tr>
<tr>
<td>95</td>
<td>1</td>
<td>slip lid-cylindrical shape -&quot;inside&quot; interlocked side seam (1 body bead)-top body edge raw-double seam base: starting edge-tobacco or lard-post-1916-2 to 3 lb. capacity-130X151mm or 502X515&quot;</td>
</tr>
<tr>
<td>96</td>
<td>1</td>
<td>open top-cylindrical shape -&quot;inside&quot; interlocked side seam (2 double body beads)-double seam top: starting edge (2 expansion rings)-solder present all exterior seams/thin and interior inner basal expansion ring-double seam base: starting edge (2 expansion rings)-institutional size:vegetables, fruits, juices, meat &amp; fish products, soups-post-1916 (likely post-1930)-No. 10-143X178mm or 510X700&quot;</td>
</tr>
<tr>
<td>97</td>
<td>2</td>
<td>key strip with &quot;solder-seal&quot; hole-in-top (filler, disc with 1 vent hole)-cylindrical shape-lapped side seam-single seam top-solder present all seams/thin-single seam base-meat or fish-pre-1907-14 oz. capacity-109X61mm (F=77mm) or 400X206&quot; (F=300&quot;)</td>
</tr>
<tr>
<td>98</td>
<td>1</td>
<td>slip lid-cylindrical shape -&quot;inside&quot; interlocked side seam (1 body bead)-top body edge raw-double seam base: starting edge (1 expansion ring)-dry product (baking powder, starch, etc.) post-1907 (likely post-1916)-6 oz. capacity-64X95mm or 208X311&quot;</td>
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<td>DESCRIPTION</td>
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<tr>
<td>99</td>
<td>1</td>
<td>slip lid-rectangular shape-&quot;inside&quot; interlocked sideseam-double seam base: starting edge (1 expansion ring)-cocoa-&quot;Walter Baker &amp; Co. Ltd.; Breakfast Cocoa&quot;-ca. 1900-½ lb. capacity-84X56X110mm or 304X203X404&quot;</td>
</tr>
<tr>
<td>100</td>
<td>1</td>
<td>hinged slip lid-rectangular shape-&quot;inside&quot; interlocked side seam (1 body bead)-top body edge curled-single seam base (1 expansion ring)-tobacco-&quot;Yale&quot;; &quot;Mixture&quot;; &quot;Marburg Bros.Limited&quot; &amp; &quot;Ginna &amp; Co. Tin Cans, New York&quot;-pre-1903-4 oz. capacity. -98X66X43mm or 314X209X111&quot;</td>
</tr>
<tr>
<td>101</td>
<td>1</td>
<td>plug-in lid-square shape-&quot;inside&quot; interlocked side seam-capped on top-solder present end seams-capped on base-tea-ca. 1908-1912-1 lb. capacity 111X111X117mm (Op.=71mm) or 405X405X409&quot; (Op. =214&quot;)</td>
</tr>
<tr>
<td>102</td>
<td>1</td>
<td>slip cap-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge (metal strap handle, off center opening) -solder present along side seam, on handle and around lapped opening seam-double seam base: starting edge (3 expansion rings)-liquid product (vegetable oil or syrup)-post -1916-1 quart capacity-102X230mm (S=32mm) or 400X800&quot; (S=104&quot;)</td>
</tr>
<tr>
<td>103</td>
<td>1</td>
<td>threaded cap (with diaphragm)-rectangular shape-&quot;inside&quot; interlocked side seam-single seam top (1 expansion ring; wire bail &amp; off centre opening)-solder present all exterior seams including wire bail and lapped opening seam plus interior end seams -single seam base (1 expansion ring)-liquid product (syrup, vegetable oil, varnish, kerosene, solvent)-pre-1916 -1 to 2 qt. capacity-122X98X177mm (S=27mm) or 413X310X700&quot; (S=101&quot;)</td>
</tr>
<tr>
<td>104</td>
<td>1</td>
<td>threaded cap-cylindrical shape-&quot;inside&quot; interlocked side seam (1 body bead)-double seam top: clenched-double seam base: starting edge-dry product (cocoa, spice, tea, etc.)-post-1904-1 lb. capacity - 83X117mm (Op.=55mm) or 304X410&quot; (Op=202&quot;)</td>
</tr>
<tr>
<td>TYPE</td>
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<tr>
<td>105</td>
<td>1</td>
<td>key strip-cylindrical shape-lapped side seam (with shoulder collar)-solder present interior shoulder seam-double seam base: starting edge (3 expansion rings)-meat (chipped beef)-ca. 1904-1908-½ lb. capacity - 101X36mm or 401X103&quot;</td>
</tr>
<tr>
<td>106</td>
<td>1</td>
<td>&quot;solder-seal&quot; hole-in-top (filler disc with 1 vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seam-single seam top-solder present all seams/thin-single seam base (1 expansion ring)-likely soup, some vegetables or meat (sausage, hamburger, etc.)-ca. 1907-1916-No. 1 (1 lb.).-68X109mm (F=37mm) or 211X404&quot; (F=108&quot;)</td>
</tr>
<tr>
<td>107</td>
<td>3</td>
<td>key strip with 2 vent holes (no filler disc)-rectangular shape-&quot;inside&quot; interlocked side seam-solder present all seams/thin-single seam base (1 expansion ring) meat (corned or hashed beef or loaf) -pre-1916 (likely pre-1908)-2 lb. sq.-121X73X121mm or 412X214X412&quot;</td>
</tr>
<tr>
<td>108</td>
<td>1</td>
<td>&quot;hole-in-top&quot; (1 vent hole but no filler disc)-cylindrical shape-lapped side seam-single seam top (1 expansion ring)-solder present all seams/thin-single seams base (1 expansion ring)-fish or meat (roast beef, lamb tongue, lunch tongue, chipped beef, salmon, etc.)-pre-1907-No. 1 Flat-103X67mm or 400X210&quot;</td>
</tr>
<tr>
<td>109</td>
<td>1</td>
<td>plug-in lid-square shape-lapped side seam-single seam top-solder present all seams/thin-single seam base (1 expansion ring)-tea-ca. 1908-1912-2 lb. capacity-131X131X144mm (Op.=114mm) or 502X502X510&quot; (Op.=408&quot;)</td>
</tr>
<tr>
<td>110</td>
<td>2</td>
<td>key strip with &quot;solder-seal&quot; Hole-in-top (filler disc with 1 vent hole)-rectangular shape-lapped side seam-single seam top (1 expansion ring)-solder present all seams/thin-single seam base (1 expansion ring)-fish (oyster, herring, sardines)-pre-1907-1 lb. capacity-136X93X49mm (F=44mm) or 505X310X115&quot; (F=112&quot;)</td>
</tr>
<tr>
<td>111</td>
<td>1</td>
<td>hinged slip lid-rectangular shape-&quot;inside&quot; interlocked side seam-top body edge curled-double seam base: starting edge-tobacco or candy-post-1904-1 to 2 lb. capacity-227X133X51mm or 815X504X200&quot;</td>
</tr>
<tr>
<td>TYPE</td>
<td>QUANTITY</td>
<td>DESCRIPTION</td>
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| 112  | 1        | open top-cylindrical shape-lapped side seam (1 body bead)-double seam top: starting edge-solder present along side seam and around base end seam-capped-in base-butter-ca. 1904-1907-1 lb. capacity-141X66mm or 508X202"
| 113  | 1        | plug-in lid-cylindrical shape-"inside" interleaved side seam-double seam top: starting edge-solder present on at juncture of side seam to end seams-double seam base: starting edge-dry products (cocoa, tea, spice, etc.)-post-1904 (possibly post-1907)-2 lb. capacity-120X167mm (Op.=85mm) or 411X609" (Op.=306")
| 114  | 12       | "solder-seal" hole-in-top (filler disc with 1 vent hole)-cylindrical shape-"inside" interleaved side seam-single seam top (1 expansion ring)-solder present on all seams/thin-single seam base (1 expansion ring)-fruits or vegetables (berries, peas, corn, etc.)-ca. 1907 to 1916-No. 2½-102X117mm (F=26mm) or 400X410" (F=100")
| 115  | 1        | threaded cap-rectangular shape-"inside" interleaved side seam-single seam top (wire bail & off centre opening)-solder present on all seams/thin-single seam base-liquid product (vegetable oil or varnish)-ca. 1907 to 1916-1 qt. capacity-123X53X249mm (S=26mm) or 412X201X913" (S.=100")
| 116  | 1        | key strip with "solder-seal" hole-in-top (filler disc with 1 vent hole)-rectangular shape-lapped side seam-single seam top (1 expansion ring)-solder present on all seams-thin-single seam base (1 expansion ring)-meat (loaf or bacon)-pre-1907-½ lb. capacity-111X81X68mm (F=44mm) or 406X303X211" (F=112")
| 117  | 2        | slip lid-cylindrical shape-lapped side seam-solder present side seam-single seam base-tobacco-"W.D. & H.O. Wills; Bristol, London"-pre-1916 (likely pre-1904)-½ lb. capacity-68X41mm or 211X110"
| 118  | 1        | lever lid-cylindrical shape-lapped side seam-single seam top-solder present all seams/thin-single seam base (1 expansion ring)-paint-pre-1916-1 pint capacity-88X103mm (Op=68mm) or 308X400" (Op.=211")
<table>
<thead>
<tr>
<th>TYPE</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>119</td>
<td>1</td>
<td>&quot;solder-seal&quot; hole-in-top (filler disc with 1 vent hole)-cylindrical shape-&quot;inside&quot; interlocked side seam-single seam top-solder present all seams/thin-single seam base-meat or fish (potted meats, sausage, tuna, salmon)-ca. 1907-1916-No. 1 Flat-106X79mm (F=47mm) or 403X301&quot; (F=113&quot;)</td>
</tr>
<tr>
<td>120</td>
<td>1</td>
<td>&quot;solder-seal&quot; hole-in-top (with filler disc)-rectangular shape- &quot;inside&quot; interlocked side seam-single seam top-single seam base-meat (loaf)-ca. 1907-1916-¾ lb. capacity-88X77X92mm (F=52mm) or 307X215X309&quot; (F=200&quot;)</td>
</tr>
<tr>
<td>121</td>
<td>1</td>
<td>threaded cap-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-double seam base: starting edge-baking powder-&quot;J.A. Folger &amp; Co.; Golden Gate Baking Powder&quot; -post-1904-5 lb. capacity-135X231mm (Op.=96mm) or 505X902&quot; (Op.=312&quot;)</td>
</tr>
<tr>
<td>122</td>
<td>2</td>
<td>key strip with 1 basal vent hole-cylindrical shape-&quot;inside&quot; interlocked side seam (lock &amp; lap)-double seam top starting edge (2 expansion rings &amp; soldered tab for key)-solder present side seam-double seam base: starting edge (1 expansion ring)-powdered whole milk-&quot;Klim Powdered Whole Milk...Borden Co.&quot;-post-1926-No. 10-157X197mm or 603X712&quot;</td>
</tr>
<tr>
<td>123</td>
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<td>hole-in-top (vent hole but no filler disc)-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-solder present side seam &amp; vent hole-double seam base: starting edge (1 expansion ring)-coffee-&quot;Hills Bros.; Red Can Brand; The Original Vacuum Packed&quot; - post - 1926-5 lb. capacity 169X203mm or 610X800&quot;</td>
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<tr>
<td>124</td>
<td>1</td>
<td>threaded cap (with diaphragm)-cylindrical shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge-solder present around lapped opening seam-double seam base: starting edge-liquid product (household cleanser, varnish, petroleum product)-post-1907 (likely post-1916)-½ to 1 qt. capacity-87X240mm (S=32mm) or 306X908&quot; (S=104&quot;)</td>
</tr>
<tr>
<td>125</td>
<td>1</td>
<td>recloseable key strip-cylindrical shape-&quot;inside&quot; interlocked side seam (1 body bead)-top body edge raw-double seam base: starting edge-coffee-&quot;Seal Brand Coffee, Chase &amp; Sanborn&quot;-1915 to 1930-2 lb. capacity-139X149mm 507X513&quot;</td>
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<td>TYPE</td>
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<tr>
<td>126</td>
<td>1</td>
<td>&quot;Gebee&quot; seal hole-in-top-cylindrical shape-&quot;inside&quot; interlocked side seam-single seam top-single seam base-evaporated milk-&quot;The Borden Co. Limited; Eagle Brand&quot; - ca. 1914-6 oz. capacity-75x85mm (F=24mm) or 215x305&quot; (F=015&quot;)</td>
</tr>
<tr>
<td>127</td>
<td>1</td>
<td>threaded cap-rectangular shape-&quot;inside&quot; interlocked side seam-double seam top: starting edge -double seam base: starting edge-crystalized eggs-&quot;LaMont's Crystalized Eggs; C. Fred LaMont Seattle&quot;-ca. 1898-1 lb. capacity-76x76x142mm (Op.=38mm) or 300x300x509&quot; (Op.=108&quot;)</td>
</tr>
<tr>
<td>127</td>
<td>1</td>
<td>slip cap-cylindrical shape-&quot;inside&quot; interlocked side seam-top body edge raw-double seam base: starting edge-black tea-ornate embossed design indicative of &quot;G.F. &amp; J. Galt&quot;-post-1916 -2 lb. capacity - 108x268mm or 404x912&quot;</td>
</tr>
</tbody>
</table>

**LEGEND FOR TABLE 8:**

- N.I. = not identified
- F = filler disc diameter
- S = interior spout diameter
- Op = interior opening diameter
- D = diameter
- L = length
- W = width
- H = height
- BD = base
- TD = top diameter
- mH = minimum height
- MH = maximum height
- BLxW = base length x width
- TLxW = top length x width
**Shape (closure/opening)**

<table>
<thead>
<tr>
<th>Shape (closure/opening)</th>
<th>Quantitative Expression</th>
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</thead>
<tbody>
<tr>
<td>cylindrical (open top &amp; slip lid)</td>
<td>D x H</td>
</tr>
<tr>
<td>cylindrical (hole-in-top)</td>
<td>D x H (F=)</td>
</tr>
<tr>
<td>cylindrical (threaded cap or lever lid/plug-in lid)</td>
<td>D x H (S=) or (Op=)</td>
</tr>
<tr>
<td>conical</td>
<td>BD (TD x H)</td>
</tr>
<tr>
<td>square, rectangular, ovoid or elliptical (open top &amp; slip lid)</td>
<td>L x W x H</td>
</tr>
<tr>
<td>square, rectangular, ovoid or elliptical (threaded cap or lever lid/plug-in lid)</td>
<td>L x W x H (S=) or (Op=)</td>
</tr>
<tr>
<td>square, rectangular, ovoid or elliptical (hole-in-top)</td>
<td>L x W x H (F=)</td>
</tr>
<tr>
<td>pyramidal (open-top)</td>
<td>(BL x W)(TL x W)xH</td>
</tr>
<tr>
<td>pyramidal (hole-in-top)</td>
<td>(BL x W)(TL x W)xH (F=)</td>
</tr>
<tr>
<td>composite (threaded cap)*</td>
<td>L x W x (mH) MH (S=)</td>
</tr>
<tr>
<td></td>
<td>*isolated occurrence-rectangular &amp; pyramidal features</td>
</tr>
</tbody>
</table>

**Large Metal Containers**

As previously stated, large metal containers generally refer to substantial bulk storage items. These containers comprise 2.68 percent of the entire artifact assemblage. Subdivided into 16 different types, attributes characteristic of the small metal container sample are also applicable here. Dating of this sample was made impossible by the poor documentation concerning construction technology. For the most part, the sample appears to be primarily composed of bulk tea and petroleum product storage vessels (Table 9).
Table 9. Large metal container type descriptions.

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>threaded cap-rectangular shape-interlocked side seam-body panels-double seam top-double seam base-liquid product (likely gas, oil, kerosene) -231X231X350mm or 902X902X1313&quot;</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>hole-in-top (square filler plate)-rectangular shape-lapped side seam-capped on top-solder present all seams including filler plate-capped on base-bulk dry product (likely tea)180X167X180mm (702X609X702&quot;) &amp; also 185X145X172mm (705X512X613&quot;)</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>hole-in-top (possible spout remnant)-rectangular shape-lapped side seam body panels-capped on top-solder present all seams-capped on base-liquid product (gas, kerosene, varnish)-126X88X180mm or 500X308X702&quot;</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>screw valve spout-square/rectangular shape-seams unidentified-off center opening &amp; wire handle on top end-solder present around crimped-on spout opening and handle plate-oil-&quot;Standard Oil Company; Oil&quot;; also &quot;Pratt Manufacturing Company, New York&quot; -230X230mm or 901X901&quot; in perimeter</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>extendable (telescoping) spout-cylindrical shape-seams unidentified-off center opening &amp; wire handle on top end-oil-&quot;T.D. Oil Co. Skagway AAA&quot; -250mm or 914&quot; in diameter</td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>threaded cap (with diaphragm)-square/rectangular shape-seams unidentified-off center opening &amp; sheet metal handle on top end-petroleum product (possibly petroleum)-240X240X350mm or 908X908X1313&quot;</td>
</tr>
<tr>
<td>G</td>
<td>2</td>
<td>closure absent-rectangular shape-lapped side seam body panels-capped on base-liquid product (possibly petroleum)-240X240X350mm or 908X908X1313&quot;</td>
</tr>
<tr>
<td>H</td>
<td>1</td>
<td>threaded cap-rectangular shape-lapped side seam-capped on top (with off center opening &amp; sheet metal handle)-solder present all seams-capped on base-liquid product (lubricating oil, vegetable oil, gas kerosene, varnish, syrup)-150X85X310mm or 514X306X1114&quot;</td>
</tr>
<tr>
<td>I</td>
<td>1</td>
<td>open top-rectangular shape-interlocked side seam-double seam top-double seam base-likely bulk dry product (tea)-180X140X175mm or 702X509X615&quot;</td>
</tr>
</tbody>
</table>
Metal Container Lids/Ends

Metal container lids and ends represent a separate collection where individual specimens lacked a recovered association with a metal container body. Although sorted into 26 different types, the vast majority seem to represent additional examples of types defined within the small metal container category. This also includes one unassociated key from a keystrip container. This

<table>
<thead>
<tr>
<th>TYPE</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>2</td>
<td>open top-square shape-interlocked side seam-double seam top-double seam base-likely bulk dry product (eg. tea)-196X196X174mm or 712X712X614&quot;</td>
</tr>
<tr>
<td>K</td>
<td>1</td>
<td>threaded cap-rectangular shape-lapped side seam-body panels-capped on top-solder present all seams-capped on base-liquid product (oil, gas, kerosene)-237X237X352mm or 906X906X1314&quot;</td>
</tr>
<tr>
<td>L</td>
<td>4</td>
<td>threaded cap-rectangular shape-interlocked side seam-body panels-capped on top (with off centre opening and wire handle)-capped on base-liquid product (oil, gas, kerosene)-235X235X340mm or 904X904X1307&quot;</td>
</tr>
<tr>
<td>M</td>
<td>1</td>
<td>open top-rectangular shape-lapped side seam-capped on top-solder present all seams-capped on base-likely bulk dry product (eg. tea)-128X152X250mm or 501X600X914&quot;</td>
</tr>
<tr>
<td>N</td>
<td>1</td>
<td>plug-in lid-square shape-lapped side seam-capped on top-solder present all seams-capped on base-tea-168X180X180mm or 610X702X702&quot;</td>
</tr>
<tr>
<td>O</td>
<td>1</td>
<td>threaded cap-rectangular shape-interlocked side seam-body panels-double seam top (with off center spout and sheet metal handle)-double seam base-liquid product (oil, gas, kerosene)-230X230X345mm or 901X901X1310&quot;</td>
</tr>
<tr>
<td>P</td>
<td>2</td>
<td>open top-rectangular shape-interlocked side seam-capped on top-capped on base-likely bulk dry product (eg. tea)-270X270X360mm or 1010X1010X1403&quot;</td>
</tr>
</tbody>
</table>
being the case, other than a small number of producers' marks
the information yield is for the most part redundant. However,
of particular interest within this sample is the number and
variety of pot/pail plug-in covers (i.e., 5 types: A, E, F, 
H and I) (Table 10). By their nature, these implements suggest
a far greater range of household utensils than recovered.

Table 10. Metal container lid/end type description

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
</table>
| A    | 2        | plug-in lid-raised circular-lapped & rivet-
ted side seam (on collar)-single seam (where
collar attaches to "end")-top end piece
pressed (2 expansion rings & small triangular
wire handle with tabbed sheet metal hinge)-solder present collar/end seam & interior
handle hinge tabs-body edge raw-likely pot
or pail cover-163mm or 608" in diameter |
| B    | 1        | slip lid-raised circular-pressed (2 expansion
rings)-body edge raw-lard pail cover-"Choice
Family Lard"-150mm or 515" in diameter |
| C    | 1        | capped on top (or base)-flat circular-pressed-
body edge raw-tin can-134mm or 504" in dia-
meter |
| D    | 1        | single seam top (or base)-recessed circular-
pressed (1 expansion ring)-body edge raw-
tin can-155mm or 602" in diameter |
| E    | 1        | plug-in lid-raised circular-lapped side seam
(on collar)-single seam (where collar attach-
ted to "end")-top end pressed (small circular
wire handle with tabbed sheet metal hinge)-
solder present along side seam-body edge raw-
likely kettle, small pot/sauce pan or pail
cover-136mm or 506" in diameter |
| F    | 1        | plug-in lid-raised circular-lapped side seam
(on collar)-single seam (where collar attach-
ted to "end")-top end pressed (2 expansion
rings & small circular wire handle with crude
<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>2</td>
<td>key strip lid/end-recessed circular-lapped side seam-double seam top: starting edge-solder present side seam-body edge raw-butter-N.A.T. &amp; T. Co. (North American Transportation and Trading Company)-133mm or 504&quot; in diameter</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>plug-in lid-raised circular-lapped &amp; rivetted side seam (on collar)-single seam (where collar attaches to &quot;end&quot;)-top end pressed (double expansion ring, triangular wire handle with tabbed sheet metal hinge)-lumps of solder on all interior &amp; exterior surfaces indicate crude attempts at mending holes-body edge raw-likely large pot or pan cover-241mm or 908&quot; in diameter</td>
</tr>
<tr>
<td>I</td>
<td>1</td>
<td>plug-in lid-flat circular-pressed (4 expansion rings &amp; small circular wire handle with crude tabbed sheet metal hinge)-body edge curled-large pot or pan cover-260mm or 1004&quot; in diameter</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>key strip with &quot;solder-seal&quot; hole-in-top (filler disc with 1 vent hole)-recessed circular-lapped side seam-single seam top-solder present all seams/thin-body edge raw-likely meat tin-111mm (F=43mm) or 406&quot; (F=111&quot;) in diameter</td>
</tr>
<tr>
<td>K</td>
<td>2</td>
<td>capped-on top (with threaded cap)-flat circular-pressed (with centrally positioned, crimped-on opening)-body edge raw-liquid product (eg. household cleanser, oil, etc.) -150 mm (S=38mm) or 600&quot; (S=108&quot;) in diameter</td>
</tr>
<tr>
<td>L</td>
<td>1</td>
<td>slip lid-flat rectangular-pressed-body edge raw-cocoa-Walter Baker &amp; Co. Ltd.; 2 lb. Net; Breakfast Cocoa-ca. 1900-82X54mm or 304X202&quot; in perimeter</td>
</tr>
<tr>
<td>N</td>
<td>1</td>
<td>lever lid-recessed circular-pressed (with 1 laterally positioned circular wire pull-tab handle)-body edge raw-dry product (spice, tea, coffee, etc.)-96mm (Op=82mm) or 313&quot; (Op=304&quot;) in diameter</td>
</tr>
<tr>
<td>Type</td>
<td>Quantity</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>O</td>
<td>3</td>
<td>slip lid-flat circular-pressed-body edge raw-dry product (likely baking powder, spice, starch, cocoa)-101mm or 400&quot; in diameter</td>
</tr>
<tr>
<td>P</td>
<td>1</td>
<td>key strip lid/end-recessed circular-&quot;inside&quot; interlocked side seam-double seam top: starting edge (double expansion ring &amp; tab for key)-body edge raw-powdered whole milk-(Klim) Borden &amp; Co.-post-1926-156mm or 603&quot; in diameter</td>
</tr>
<tr>
<td>Q</td>
<td>3</td>
<td>key strip with &quot;solder-seal&quot; hole-in-top (filler disc &amp; 1 vent hole)-recessed circular-lapped side seam-single seam top-solder present all seams/thick-body edge raw-meat-138mm (F=88mm) or 508&quot; (F-308&quot;) in diameter</td>
</tr>
<tr>
<td>R</td>
<td>2</td>
<td>single seam top (or base)-recessed circular-pressed (1 expansion ring)-body edge raw-tin can-148mm or 513&quot; in diameter</td>
</tr>
<tr>
<td>S</td>
<td>1</td>
<td>recloseable key strip-recessed circular-pressed-solder present around ends-body edge curled-likely butter (Coldbrook Creamery)-138mm or 507&quot; in diameter</td>
</tr>
</tbody>
</table>
| T    | 1        | key strip-recessed "D" shaped-lapped side seam-single seam top (1 expansion ring)-solder present all seams/thick-body edge raw-meat-ca.1898 to 1907 ("PAT. JULY 5 98")-129X132mm or 502X503"
| U    | 1        | 2 piece inter-threaded screw cap-recessed circular-pressed-external segment has threaded walls and flat "diaphragm"-internal segment just has threaded walls and lip-body edge curled-112mm or 407" exterior diameter; 97mm or 313' interior diameter |
| V    | 1        | key strip lid/end-recessed circular-lapped side seam-single seam top (1 expansion ring)-body edge raw-likely meat-77mm or 300" in diameter |
| W    | 41       | open top (sanitary)-flat circular-pressed-assorted sizes                                                                                  |
| X    | 11       | open top (sanitary)-flat square/rectangular-pressed-assorted sizes                                                                       |
| Y    | 1        | open top (hole-in-top)-flat square-pressed                                                                                               |
| Z    | 3        | open top (hole-in-top)-flat circular-pressed assorted sizes                                                                            |
Metal Utensils

The majority of the metal utensil sample appears to be related to food/kitchen oriented activities. This artifact category makes up only 0.59 percent of the total artifact assemblage. The collection includes an enamelled pie plate, a bread pan, an enamelled pail, a baking pan and a flour sifter. Although a relatively small sample from an apparently dense occupation site, this collection is augmented by the 5 types of pot/pail plug-in lids discussed previously (Table 10). Also, there appear to be two examples of home made utensils recycled from scrap tin. One item is a small, shallow three-sided rectangular tray. Although its function remains uncertain, its form is analogous to that of a gold separator. The second recycled implement is a butter can (similar to the "Coldbrook Creamery" tin-type #3, Table 9) on which the base end has been completely and systematically perforated to create a sieve. Its intended function appears to have been that of a flour sifter.

Stove/Stove Parts

Within the collection of stoves/stove parts (n=16) half are relatively intact complete specimens from a diagnostic perspective. Included here are what might be labelled "barrel" stoves as well as a number of portable box-like examples. The remainder of the sample is basically stove parts. It consists of five stove pipe sections, a cast iron door from a kitchen type wood burning stove and the base of what appears to have been another barrel stove.

Each of the three barrel stoves has a pair of circular openings on the top end; one would be used for the stove pipe, the other for loading wood. The nature of these specimens leaves little doubt that they were used primarily for
heating purposes as opposed to cooking. One example is relatively substantial in size suggesting it to have been employed within a structure. The remaining pair are small and would appear to be portable. These could have been used either in a structure or tent, the latter probably having been the case.

The five box stoves may be broken down into squat and elongated styles. The former includes three specimens each of which has a single opening on its upper surface for insertion of the stove pipe. As well, each is constructed of double lined sheet metal with side mounted hinged doors. Although one has been badly damaged and measurements could not be taken, dimensions for the two other examples suggest a set size for this stove type, it being circa 350X250X250mm. The general appearance of these specimens rules out a use beyond that of a heating source. Again it is possible that they may have been employed in either a structure or tent with the latter case suggested as the most probable. The elongated specimens, it would appear, could be used both for cooking and as a heating source. One, measuring 900X250X250mm, has three top openings while the second has only two. In size, it is 750X250X250mm.

The box stoves, as a group, most likely represent varieties of the "Klondike Camp Stove". This appliance was an integral component of the outfitter's supply package for would-be Klondike stampers (Archibald and Carter 1972/1973). In one case where a manufacturer's label remained intact, the company of Holbrook, Merril and Stetson of San Francisco and Sacramento was identified. This company is known to have manufactured no less than ten styles and sizes of Klondike stoves (Archibald and Carter 1972/1973:511).
Miscellaneous Metal Artifacts
This catch-all category includes undiagnostic and unidentifiable metal artifacts as well as a small number of other specimens outside of the range of previous groupings. Within the former description are undiagnostic strip/strap fragments, unidentified sheet metal fragments, undiagnostic metal container fragments and a small number of metal rod or tube sections.

Of the identifiable artifacts, four are barrel hoops, three are "Lipton Soup" foil pouches and two are threaded bottle caps. Both bottle caps have legible producers' marks. One is a painted mark identifying the specimen as a cap for a Dutch "Bols" dry gin bottle. The other is an embossed logo from a flavoring extract bottle under the trademark of the E.R. Durkee and Company of New York. The producer's mark dates this specimen between 1860 and circa 1900 (Lunn 1979: personal communication).
Ceramic and Glass Artifacts

Ceramic Tableware
Tableware includes all specimens which by their form appear to have been used at the table for meals. As a group, it accounts for all but one ceramic specimen. This group may be further divided into the general classes of dinnerware and teaware. A small number of undiagnostic fragments are excluded.

The single diagnostic example of ceramic dinnerware consists of a white earthenware side plate with scalloped edges and an overglaze painted floral motif. The words "Made in Japan" appearing on its base indicate that the specimen dates to the 20th century (Hamilton 1979: personal communication).

Two examples of ceramic teaware have been identified from the sample. One is a body sherd from a porcelain cup. This cup has a scalloped rim with a moulded scroll and bead design on the side, a lithographed apple or cherry blossom motif and gold painted bands on the rim and handle. This form of decoration was most popular from circa 1890 into the 20th century (Hamilton 1979: personal communication). The second specimen is a white earthenware saucer with scalloped rim, moulded scroll side, overglaze gilt sprig pattern and overglaze gilt band at the rim and on the side. The inscription "Wood & Son, England", appearing on the base, dates this saucer to some time between 1891 and 1907 (Godden 1964:689).
Ceramic Jar
Only one example of a ceramic jar was retrieved from the site. The jar is coarse white earthenware and has been identified as a marmalade container. More specifically, this specimen is the base from a "Dundee Marmalade" jar, a product of James Keiller & Sons. The identification is based upon the presence of the impressed marks "K" (for Keiller) and "Maling". C.T. Maling & Sons (Ltd.) of Newcastle-upon-Tyne, England manufactured these jars for Keiller from 1890 to 1963. However, based upon the mode of manufacture and shape of the specimen the present jar appears to be one of the earlier types, suggesting a late 19th to early 20th century date (Hamilton 1979: personal communication).

Glass Bottles
Of the 41 glass bottles or fragments recovered, 17 include diagnostic attributes sufficient for a content and/or chronological identification (Table 11). Dividing the 14 specimens with content identification into subgroups, six are pharmaceutical bottles, four contained liquor and the remaining four are food containers. The latter group includes two ketchup bottles, a milk/cream bottle and a single generalized food bottle.

A number of specimens had legible manufacturers' marks and, in one case, a producer's mark (see Table 11). In combination with specific attributes, it has been possible to at least relatively date all 17 diagnostic specimens. Unfortunately, for a majority it was impossible to give a narrow chronological placement.
Table 11. Glass bottles with diagnostic attributes.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>bottles (complete; complete without base; base)-pharmaceutical-&quot;Philadelphia Oval&quot; style (one with manganese tint)-late 19th century to pre-1914.</td>
</tr>
<tr>
<td>1</td>
<td>bottle (base)-clear-pharmaceutical-unidentified mark: a trident-20th century</td>
</tr>
<tr>
<td>1</td>
<td>bottle (base)-amber/brown-pharmaceutical-Parke, Davis &amp; Company, Detroit, Michigan-post-1875</td>
</tr>
<tr>
<td>1</td>
<td>bottle (complete)-clear-pharmaceutical-Dominion Glass Company, Redcliffe, Alberta-1951</td>
</tr>
<tr>
<td>1</td>
<td>bottle (neck/finish)-clear-liquor-20th century</td>
</tr>
<tr>
<td>1</td>
<td>bottle (complete)-clear-liquor-late 19th century</td>
</tr>
<tr>
<td>1</td>
<td>bottle (base)-clear-liquor-Dominion Glass Company, Hamilton, Ontario-1964</td>
</tr>
<tr>
<td>1</td>
<td>bottle (complete)-amber/brown-liquor-Dominion Glass Company Redcliffe, Alberta-1948</td>
</tr>
<tr>
<td>1</td>
<td>bottle (finish)-clear-wide-mouthed-unidentified food-no dates</td>
</tr>
<tr>
<td>1</td>
<td>bottle (complete)-turquoise-cream/milk-wide-mouthed-unidentified basal mark: A/198-ca. 1900</td>
</tr>
<tr>
<td>2</td>
<td>bottles (complete; finish/neck)-clear-ketchup-The T.A. Snider Preserve Company, Cincinnati, Ohio-ca. 1884 to 1900</td>
</tr>
<tr>
<td>1</td>
<td>bottle (base)-clear-function not identified-turn mould-ca. 1860-1920</td>
</tr>
<tr>
<td>1</td>
<td>bottle (neck/finish)-turquoise-function not identified-applied finish using finishing tool and fire polishing-late 19th to early 20th century</td>
</tr>
</tbody>
</table>

Glass Jars
Three of the 11 jar fragments from the survey area were diagnostic. Each of these specimens was a food-storage container
and each displayed an identifiable mark. Two were fruit or sealer jars; one was a Kerr Self Sealing Mason jar patented in 1915 and the other was manufactured for the Vacuum Jar Glass Co. (San Francisco, California), patented in 1893. The third specimen is a pickle/condiment jar from the H.J. Heinz Co., patented in 1891. These dates correspond closely with the earliest dated specimens from the glass bottle collection.

**Plate Glass**

Five plate glass fragments were recovered. Although plate glass could conceivably have been used for other functions, it would seem probable that these specimens are window fragments.

**Miscellaneous Glass**

Two clear glass container fragments are tentatively identified as that of an inkwell/ink bottle or, perhaps, a glue/mucilage bottle. This identification is based solely on the projected shape with diagnostic attributes being absent.
Miscellaneous Specimens

Leather
Seven leather shoes and a single piece of leather strip/strap were recovered. Within the sample of shoes, only one pair is matched. They also constitute the only female examples. No specific function for the leather strip/strap can be identified.

Plastic
A single plastic artifact, an orange "Lily" beverage cup, is included within the survey zone assemblage.

Fauna
The sample of collected faunal remains is exceedingly small with what might be expected given the density of occupation in the hillside area. Amounting to nine specimens, specific identifications were impossible during the in-field analysis. On a general level, all but one are long bones of a large species of ungulate. At least a small number have been sawn or have other butchering marks. The exception is that of a complete ungulate skull, probably moose.
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