MANUSCRIPT REPORT NUMBER
TRAVAIL INÉDIT NUMÉRO

MOTHERWELL HOMESTEAD
ARCHAEOLOGICAL FEATURE REPORT

BY
GARY ADAMS, SUSAN GLOVER, MARK WARRACK

(1978)
Motherwell Homestead
Archaeological Feature Report
by Gary Adams, Susan Glover, Mark Warrack
1978
The Manuscript Report Series is printed in a limited number of copies and is intended for internal use by the Department of Indian and Northern Affairs. Copies of each issue are distributed to various public repositories in Canada for use by interested individuals.

Many of these reports will be published in *Canadian Historic Sites/Lieux historiques canadiens* and may be altered during the publishing process by editing or by further research.

La série intitulée Travail inédit est imprimée à tirage limité pour les besoins du ministère des Affaires indiennes et du Nord canadien. Des exemplaires de chaque rapport sont distribués à des archives publiques au Canada, où les intéressés peuvent les consulter.

Bon nombre de ces rapports paraîtront dans la revue intitulée *Canadian Historic Sites/Lieux historiques canadiens*, et pourront être remaniés ou mis à jour.
Motherwell Homestead
Archaeological Feature Report
by Gary Adams, Susan Glover, Mark Warrack
1978

Abstract

1 Introduction
2 Notes on Stratigraphy
4 Shelter Quadrant
4 House Construction
7 Back Porch
11 Filtering System
13 Wooden Box
15 Outside Cistern and Water Barrel
17 Outside Pipes
18 Flower Garden
20 Main Road
22 The Orchard
24 Septic Tank
26 Tennis-court
28 Clothesline
30 Front Fence
33 Lovers' Lane
34 Western Tree Belt
38 Tree Line North of the House
31 Front Spruce Trees
41 Barn Quadrant
41 Barn
44 Barn Ramp
47 Men's Cottage
55 Dry Privy
57 Caboose
58 Hog Pen
60 Barn-yard Fence
63 Work-yard Fence
65 Coal and Gravel Concentrations
68 Dugout Quadrant
68 Dugout Filter System
69 Dugout Hill
70 Dugout Tree Line and Fence Line
73 Garden Quadrant
73 Farm Road
75 Hotbed
77 Garden Tree Lines
80 Outside Perimeter
80 Experimental Field
81 Outside Perimeter
84 References Cited

Illustrations
85 1 Location map of Motherwell homestead (northern half).
86 2 Soil profile on west side of House showing construction fill
   (Number 10) and related stratigraphy looking north.
86 3 Soil profile at front porch showing porch foundation and natural
   stratigraphy below.
87 4 View of house showing concrete borders and south lawns. Looking
   northwest (circa 1911).
87 5 View of house and front yards. Looking northwest (circa 1904).
88 6 Tennis lawn and house looking north (circa 1916). Note top of
   back porch on west wall of building.
88 7 Back porch looking east.
89 8 Plan view of back porch showing sill beams and supports.
90 9 Wooden barrel and oil drum filter systems partially excavated. Looking south.

90 10 Detail of wooden barrel filter system. Looking west.

91 11 Generator exhaust filter systems in plan and profile.

92 12 Plan view and construction details of wooden box feature.

93 13 Plan view and reconstruction of southwest corner of outside cistern.

94 14 Photo of house looking northwest (circa 1911). Note conduit and rock pile to left of automobile.

94 15 Flower garden looking north (circa 1919).

95 16 South end of flower garden looking northwest (circa 1922).

96 17 Front flower garden (circa 1920).

97 18 Profiles of front flower garden units.

98 19 Cross-section profile of main road.

99 20 Air photo of site taken in 1946. Top is west.

100 21 Map of orchard showing excavation units and interpretation of plantings.

101 22 Portion of panorama photo showing tennis-court in use. Looking west, 1922.

102 23 North side of tennis lawn showing excavation units and possible locations of court lines.

103 24 Entrance to tennis-court, looking southwest (circa 1922).

104 25 Back yard showing location of clothesline posts, elm trees and excavation units.

105 26 Back yard stratigraphy as revealed by clothesline post units.

106 27 Southwest clothesline foundation and tree remains. Looking north.

106 28 Back yard with remaining clothesline posts. Looking northeast.

107 29 Ornamental front fence looking west (circa 1911).

107 30 Portion of panorama photo showing detail of relationship between the front fence and the sidewalk. Looking northwest, 1922.

108 31 Front yard indicating location of excavation units and front fence lines.

109 32 Portion of panorama photo showing spruce trees behind tennis-court. Looking west, 1922.
Tree lines west of tennis-court lawn showing existing and former rows.

Shelterbelt with driving loop. Looking west from Widows Walk (circa 1928).

House front showing extensive tree line north side of house, 1911.

Widely spaced poplars on north side of house (circa 1910-12).

Location of front spruce trees.

Location of excavation units around the barn.

North foundation of barn at location of possible foundation juncture.

Foundations at "L" of barn.

Detail of wood ramp. Looking southeast (circa 1914).

Profile of earth ramp after excavation. Looking northwest.

Plan view of wooden ramp indicating location of excavation units and interpreted outline of wood ramp.

Schematic drawing of possible ramp construction.

The Men's Cottage with caboose in foreground. Looking northeast (circa 1914).

Work yard looking northeast (circa 1939).

Men's Cottage as it now stands in the town of Abernethy. Looking west.

Plan view and interpretation of Men's Cottage area.

Foundation of Men's Cottage after excavation.

Cellar of Men's Cottage looking north.

Rock border of flower bed south of Men's Cottage looking east.

Dry privy substructure and skids. Looking east.

Hogpen feeder looking north (circa 1939).

Plan view of hogpen operation showing excavation units and feeder remains.

Post remains at north end of hogpen.

Post remains at south end of hogpen.

Barn yard showing location of excavation units and interpreted fence line.

Northeast corner post of barn yard fence.
Barn yard fence at east side of barn. Looking southeast (circa 1914).

South side of barn yard with fence in foreground (circa 1945).

Diagram indicating proposed work yard fence line and relevant excavation units.

Location of coal and gravel concentrations and excavation units.

Location map of Motherwell homestead (southern half).

Plan view of excavations north of dugout.

Portion of panorama indicating entrance of farm road. Looking south, 1922.

Cross-section profile of farm road.

Photo of garden. Looking north (circa 1930).

Location of hotbed and expanded view of the feature.

Location of tree lines in northwest quadrant of garden.

Excavations at the north end of experimental field.

Plan view of wood feature outside perimeter.
In the summer of 1978, Parks Canada directed an archaeological program at the Motherwell farmstead. The mandate was simple. Structural research on the part of historians, architects and landscape specialists had been completed but there were still some unresolved questions. The archaeologist in charge was given a list of questions and the mandate to answer what he could.

The nature of this form of archaeology required a variety of small testing operations in specific areas within a 4.5 hectare lot. Each operation was situated and excavated to answer one specific question. All artifacts were retained. The excavation units doubled as a sample source so that the artifacts could be analysed separately.

This report presents the architectural findings of this project. It is arranged so that each particular feature is identified and historic documentation is cited. It is followed by a statement of stratigraphy and archaeological observation then any possible conclusions are drawn.

A total of 34 operations is examined. Of these, 17 are from the house quadrant, 9 are from the barn quadrant, 3 are from the dugout quadrant, and 3 are from the garden quadrant. The others are outside the perimeter. Seven projects are concerned with structures or portions of structures, fourteen pertain to cultural features and the remainder relate to landscape features.
Introduction

In past Parks Canada operations there has been some confusion arising from the difference in perspectives between archaeologists writing culture oriented reports and development personnel desiring specific construction information. As the Motherwell site archaeological program was almost entirely oriented towards supplying information to other branches, it was decided that two reports would be written. This introduces the first of these reports: one aimed specifically at an attempt to fill information gaps.

The general format of this report is to examine each feature (an archaeological term for non-portable artifacts) and describe it in a way that makes the information easily retrievable. To do this, each feature is individually treated. An introduction offers background information on where, why and how a feature was excavated. This is followed by a section on stratigraphy which gives the feature a vertical context. The feature description discusses the feature as it was found by the excavation team, complete with measurements and associative references. The artifact section briefly considers the kind of artifacts found in the same vicinity. This is followed by an interpretive section which explains the feature. The explanation takes the historical, archaeological and stratigraphic information and synthesizes it.

The field work was carried out under the direction of Gary Adams but individual features were entirely supervised by either Mark Warrack or Susan Glover. Therefore, each feature has been written by its excavator while continuity is maintained through editing and criticism by the project director.
Notes on Stratigraphy

Stratigraphy is the most significant control in excavation. It acts as a guide, separating various occupations and providing both relative and absolute dating on features and artifacts. In many cases it also provides an integrative mechanism by tying diverse pits through similar soils.

At the Motherwell Homestead, a very uniform soil sequence provided an incredible amount of additional information. In general, there were four stratigraphic levels to be dealt with. From the surface, the first level was the topsoil. It was from 1 cm to 10 cm thick and composed of a clay topped by a root mat. It varied in colour from grey to black and occasionally had a brownish hue. The second level was very similar to the one above and was usually separated by a darkening at the upper edge. The third level, which appeared sporadically, was a dark grey to black coarse clay. It was actually a result of some soil development mechanism working on the fourth and bottom level. This was a compact, coarse clay which ranged from olive grey to brownish grey in colour.

The fourth level was culturally sterile. It provided a bottom to most excavations and any abnormalities such as holes or depressions in it usually had to be explained in terms of cultural or natural disturbance factors. The third level, also reasonably sterile, represented the living floor, the ground surface, upon which Motherwell built his homestead. The other two levels represented the soil accumulation which occurred during the past eighty years. It was in these two levels that almost all artifacts and surface features had to be found. The fact that there were two of these levels suggested that the soil accumulation was interrupted for some period of time, allowing a stabilization process to occur. At this stage of investigation it is thought that this stabilization period appeared in or around the 1930s. At any rate there was a definite early and late horizon.
Using the above sequence as a base line, we can place most artifacts and features from uncultivated areas into either an early or late stage. Furthermore, we can examine any other soil horizons that occur as intrusive elements. In this way we can analyse and date post holes, excavated pits or trenches, midden, earth piles and fills. For these reasons, stratigraphy has been described carefully, and hopefully, consistently.
Shelter Quadrant

Most of the archaeological investigation was concentrated in the area identified as the shelter quadrant. This area actually contained a variety of features associated with shelter, recreation, aesthetics and food production. It was bordered on the north and east by the outer perimeter of the farmstead, on the south by the south edge of the tennis-court and on the west by a series of tree lines that ran along the west border of the tennis-court, back-yard and orchard (Figure 1).

Within this area, archaeological investigations were conducted around the perimeter of the house, tennis-court, back-yard, formal garden, orchard and tree lines. Specific features that were examined and reported included: house construction, generator filtering system, clothesline, back porch, tennis-court lawn, an orchard fence, wooden box, flower beds, the front fence line, the main road, the outside cistern, and the septic tank. Tree plantings that were located included the orchard, a "U" shaped line around the orchard, the front spruce trees, and the lines along the west edge of the quadrant.

House Construction

Introduction

Upon comparison of the stratigraphies of excavation units opened around the house and summer kitchen it was noted that certain levels about the house were consistent. A correlation of material was later compiled to give possible information on house construction.

The house was contracted and built in 1897. An accident prohibited the original mason from finishing so a second mason completed the summer kitchen in 1898 (Naftel 1969: 14-15). The stone required for the house was
collected by W. R. Motherwell in years prior to the house construction.

There were eight units dug around the four sides of the house, each to expose a particular feature (Figure 1).

The units on the east side of the house, on the south, and to the north between the basement windows were dug mostly by shovel. The other units had a great deal of trowel work, particularly in layers of artifact concentration. Shovels were used in the lower, sterile stratigraphic levels.

Stratigraphy
The stratigraphy varied considerably depending on the feature being excavated and the location of the unit in relation to the house. However, an overall stratigraphy for the house yard was generalized to seven levels. The first level was a sod layer, beneath which lay a very dark grey topsoil of clay, 5 cm to 10 cm thick. Below the topsoil was a layer of light brownish grey, sandy clay, 5 cm to 10 cm thick. Below this layer was a 30 cm to 80 cm thick yellowish brown clay fill. Beneath the clay fill was a thin layer of crushed mortar, sand and ash, 2 cm to 10 cm thick. A very dark grey sterile clay and a greyish brown clay were at the base, 50 cm from the surface. The above stratigraphy extended west of the house into the back-yard.

The stratigraphy was disturbed by a construction fill .8 m to 1.0 m out from the house, an average of 70 cm thick (Figure 2).

To the south of the house was the tennis yard which had four stratigraphic levels. The top level was a sod of a dark clay 2 cm to 7 cm thick. Beneath the sod was a 1 cm to 3 cm thick, dark yellowish brown sand. The third level was a very dark grey clay with gravel inclusions, 4 cm to 25 cm thick. A greyish brown sterile clay was at the base of the units.

Feature Description
Two units were opened on either side of the front porch to determine the
depth of the house foundation. The stone foundation was measured as
2.15 m deep with evidence of a construction trench projecting up to 80 cm
from the wall, angling toward the house to a depth of 1.0 m. As there
was no trench to the base of the foundation, the foundation must have been
laid against the basement excavation. A stone foundation which underlay
the porch measured 1.12 m from the surface of the porch to the base of
the foundation. The mortar which bonded the stones was in poor condition
(Figure 3).

A unit off the back door revealed the 1.10 m deep summer kitchen
foundation. The foundation was constructed of stone and mortar.

Another unit was placed at the south basement window well, marked
1924. The concrete casement was not attached to the house. A form-
constructed concrete cap measured 72 cm south, 18.5 cm thick and 12 cm
deep. Below the cap were stones and mortar to a depth of 36 cm.

There was a concrete border to the south and north of the main
walkway on the north side of the house. These borders ran from the house
sidewalk east to the front gate, defining the flower beds on each side of
the front walk. The concrete border measured 16 cm wide and went to a
depth of 37 cm (Figure 4).

Interpretation
Starting from the bottom of the stratigraphy were the two sterile layers.
The bottom level was the original sterile clay above which lay the original
topsoil and ground surface. A date of earlier than 1897, the year the
house was constructed, was given to this level of a very dark grey clay.
Above the clay was a layer of sand and crushed mortar from the construction
of the house. This layer was therefore dated to 1897-98. Above the
mortar was a yellowish brown clay fill which was taken from the dugout of
the basement and distributed around the house. This layer would be dated
after construction but how much later is not known. However, a photo
dated circa 1904 suggested that a lawn was being prepared at about that
time. It would also be in the same period that the concrete lawn borders
were laid (Figure 5). A soil deposit only 1 cm thick separated the
mortar and clay layers, which helped substantiate the hypothesis that there was a time period between the construction of the house and the spreading of the clay fill. Above the distribution of the clay fill are two to three later deposits, including the sod layer, which varied in type and location about the house.

Next to the house a thin layer, 4 cm of light brownish grey sand, dated to the 1950s when several improvements were made to the building. This sand layer was evident as a fill by the north sewer line and by the southwest corner of the house where the eave conductors entered the house to the cistern. Above the sand layer was a thin topsoil and sod layer which has developed since the 1950s.

In other areas about the house there was a topsoil directly above the clay fill. Motherwell may have spread a topsoil above the clay in order to prepare a lawn. This was certainly done for the tennis-court and flower beds. The earliest date based on a photo in Clarke's report (1977: 76) would be 1911 for the tennis-court.

The window wells probably all dated to 1924. There was no evidence of earlier concrete or wooden casements prior to the present ones.

The front porch was likely built at the time of the house construction or shortly thereafter. The historical photo of circa 1904 (Figure 5) displayed the front porch, making that the earliest confirmed date. The porch constructed of stone and concrete may have even been done by the mason.

The concrete borders to the east of the house as well as the main walk from the front gate were probably constructed well before 1911 (Figure 4). A photo in Clarke's report (1977: 76) indicated the concrete features and tennis lawn appeared at this time, and were therefore dated between 1905 and 1910.

**Back Porch**

**Introduction**

Historical records indicated that a small back porch at one time abutted to the summer kitchen entrance but as there was no surface evidence of
the feature, an excavation unit was established to look for subsurface remains.

There was very little written about the back porch but one photograph, taken prior to 1916, showed a portion of it (Figure 6). Another photograph gives good structural detail (Figure 7). The only mention of the porch (Naftel 1969: 29) stated that the porch was used more by hired hands than by the family.

Our excavation consisted of a 2.5 m by 1.3 m unit west of the summer kitchen door and adjacent to it. The northwest corner of the unit was 28 m west and 4 m south of Station 10. All excavation was carried out by trowel and was not screened.

Stratigraphy
The unit 85N5H was excavated in two stages; the first to investigate the porch and the second to take notes on the condition of the summer kitchen foundation. This section is concerned only with stratigraphic layers related to the porch.

The topsoil was a very dark, greyish brown clay mixed with gravel and a root mat. The gravel was probably accounted for by activity around the doorway. Its average thickness was about 4 cm.

Under the sod was a very dark, greyish brown layer of clay and gravel. It had no root mat and terminated at an average depth of 12 cm below the surface.

The third layer concentrated more to the sides of the porch. It was a dark brown clay mixed in a mulch of vegetable matter which resembled rotted grass or straw. To the north and south of the porch and within 50 cm of the house, this layer was directly below the sod, superimposing the second layer. The average thickness of the third layer was 6 cm.

Finally, there was a very thin layer of an unknown substance which appeared to be a flaky material, less than .2 cm thick and directly below layer two. It was rust coloured but did not appear to be metallic. It was concentrated directly in front of the doorstep and measured approximately 50 cm north-south by 40 cm east-west.
Feature Description
The back porch was rectangular in shape, measuring 1.4 m north-south and extending 1 m out from the west wall of the building. The bottom frame was supported by pieces of brick and stone, of which very few were found. Bricks were located below the doorstep and under the northwest corner of the sill while a rock was situated below the southwest corner of the sill (Figure 8).

The sill, no longer on the square, was 88 cm west of the house at its nearest (and most likely original) position. It was 1.42 m long and 12 cm wide at its widest point. The decayed condition of the board made it impossible to determine the thickness but the photographs suggested that it was quite thick. (It appeared to be a piece of 2 x 6 or 4 x 6 inch cut lumber.) There were three nails through this sill that pointed upwards. They were at points 7 cm, 18 cm and 72 cm from the north end. The first two could have been used as part of the west wall of the structure while the third probably joined a raised door ledge to the sill.

A second board was located 15 cm out from the summer kitchen doorsill. This board probably acted as a step as it was between 4.7 cm and 11 cm below the door sill. There was a brick found directly under the lower, south end which suggested that this was the more likely original elevation. The board itself was 95 cm long, 19.9 cm wide and 1.7 cm thick (1 x 8 inch cut lumber).

There was a wooden walkway west of the porch which consisted of two boards on an east-west orientation, covered at right angles with numerous boards. This walk was only partially excavated but the north-south oriented boards were 60 cm long, and 14 cm wide (1 x 6 inch cut lumber) and overlaid by an 8 cm wide by 4 cm thick board (2 x 4 inch cut lumber). The north support board was not located so that the distance between them was not available. The fact that the support boards were on top, the nails all protruded upwards and the photo showed the support boards below the walk, all suggested that this walkway was flipped over and therefore, not in situ.

Finally, there were two upright boards located about 31 cm below the surface. One was 10 cm wide and 4 cm thick (2 x 6 inch cut lumber) and the other was 8 cm wide by 3 cm thick (2 x 4 inch cut lumber). Both
began below 38 cm from the surface and continued to about 90 cm below the surface. Both were pointed on the lower end. They may have acted as support beams or piles for the north side of the porch but their actual function was purely conjectural.

Artifacts
Two artifacts were of particular note. First, a boot scraper was located off the northwest corner of the porch, within layer three. It was completely buried when found but the photo of the back porch indicated that it was probably 6 cm or 7 cm above the surface at the time the picture was taken. Second, a 1911 Canadian quarter was found in layer two. The close relationship of layer two to the porch offered a suggestion that the construction date predated that stratigraphic horizon and therefore, predated 1911.

Interpretation
The existence of a single sill beam, set on rocks, in combination with the appearance of the porch in the photographs, suggested that the structure was primarily constructed above the ground. This may have been done to provide suitable drainage around the structure. The location of the single sill gave a reasonably close approximation of the ground dimensions but the disturbed walkway damaged any contextual indicators between it and the porch. The two upright beams were broken well below the porch foundation and may have been totally unrelated. If they were part of the porch they were not evident in the photos. This indicated that they either never extended far above the ground or they post-dated the photo.

There was no archaeological evidence to indicate whether or not the porch had a wood floor though the photo (see Figure 7) had a vague suggestion that such a floor did exist. If such was the case, the thin rust coloured layer may have been some form of mat that predated the existence of the porch. As this mat lay beneath layer two, it would add considerable weight to the argument that the porch predated 1911. Also, if the porch had a floor, the step must have been below the porch. This
would mean that it either predated the porch, which is unlikely given the preservation of the step, or that it served some other function, perhaps related to drainage.

Filtering System
Introduction
A unit was originally opened to investigate the north side of the wooden box feature adjacent to the house. It was later found that this unit contained features of its own, the filtering system.

Historic documents made no mention of a filtering system for the generator's exhaust and the only mention of the generator was that it was used from prior to World War I up to when the town of Abernethy received electricity.

The unit for excavation was 2.30 m north-south by 1.5 m east-west, located one metre north of the house, east of the summer kitchen. Work was done by both trowel and shovel. No screening was necessary.

Stratigraphy
The sod layer varied from 6 cm to 10 cm. The second layer was a very dark grey blocky clay, 6 cm to 26 cm thick. To the south of the unit over the southwest corner was the third layer, a very dark greyish brown clay with gravel inclusions. The third layer was at an average depth of 35 cm to 55 cm. At the same level in the north portion of the unit was a fourth layer of olive brown clay and gravel. The fifth layer of dark brown clay was 40 cm to 50 cm below the surface. The sixth layer was a yellowish brown sand and gravel 52 cm to 58 cm below ground surface. Below 60 cm were two sterile clay layers. The fifth to eighth layers were confined to the north of the unit while the corresponding southern half was a dark brown clay and sand fill from a depth of 55 cm to 110 cm.

Feature Description
The remains of a wooden barrel extended 45 cm east from the west wall of
the unit and from 0 cm north to 68 cm north. The extent of the barrel was from 42 cm to 118 cm below ground surface. The wooden staves were 20 cm wide and 6 cm thick. The metal bands around the barrel appeared to be 20 cm apart. The barrel was full of burnt rocks, up to 20 cm in length, feathers, leaves, and brown paper, all of which were covered by a thick layer of black soot (Figures 9 and 10).

Less than 20 cm south and 20 cm east of the wooden barrel was a metal drum 57.5 cm in diameter. A rim around the top of the drum was 4 cm wide and 2 cm thick. A pipe, 1 m below the foundation line of the house and the approximate ground surface, continued 1.9 m north from the house into the drum. The top of the drum was 54 cm below ground surface. There was a 4 cm diameter pipe from the drum to the surface. The two pipes were not connected.

The top of the drum had been cut off and set back on top, held in place by two lengths of scrap iron. The bottom of the drum, about 1.3 m below the ground surface, was removed and set over a bed of rock another 14 cm into the ground. The inside of the drum was covered with soot and blackened earth.

Artifacts
A small rubber object with the word "Delco" imprinted upon it was found in the unit. This artifact was most likely a part of the generator or associated with it.

Interpretation
Both the metal drum and wooden barrel were related features. The pipe which extended from the house to the metal drum would have at one time been connected to the generator. The exhaust from the generator went through the pipe to the drum where it was filtered by the rocks and earth allowing a cleaner gas to escape by way of a second pipe to above ground (Figure 11).

The wooden barrel probably served the same purpose but was used before
the drum was installed. It would have been easier to replace the barrel by the drum than to clean out the barrel.

A building trench to the side of the barrel was seen in the profile as a dark brown clay and sand. The various layers above the sterile clay appeared to be construction layers from the house and summer kitchen.

There was no evidence of a construction pit for the metal drum. The hole must have been dug just to fit the drum. The rocks, leaves, feathers and paper were filtering agents for the highly carbonized exhaust. Motherwell must have felt there was no necessity for the leaves and feathers when he put in the second filtering system, the drum.

**Wooden Box**

**Introduction**

The unit of excavation was originally opened to investigate a pipeline attachment on the north side of the house. Soon after excavation began, the feature of a previously unrecorded wooden box appeared and took priority over the pipeline which in turn was related to the filtering system.

The excavation unit used to expose the box measured 1.5 m east-west by 1 m north-south and was located adjacent to the north wall of the house between the westernmost basement window and the summer kitchen. The unit was excavated totally by trowel and brush where needed.

**Stratigraphy**

The surface was covered by a clay sod layer about 5 cm thick. Under the sod in the northwest quadrant of the unit was a layer, 5 cm thick, of crushed mortar. Beneath the sod in the remainder of the unit was a very dark grey clay fill. A thin layer of lighter clay 3 cm wide was found from top to bottom along the outside of the east wall of the wooden box.
Feature Description
The wooden box was a buried rectangular structure 1.07 m east-west by .83 m north-south and a maximum of 1.4 m high. The box rested on a wooden floor which was above a wood foundation. The whole feature was set into the ground a total of 1.66 m.

The north, east and south walls were partially removed. The south wall was sawn off near the base, 12 cm above the 16 cm wide cross piece which lay on its edge across the bottom. The east wall was similarly sawn off 18 cm above a 12 cm wide cross piece.

The north wall at its maximum height was 1.23 m from the floor. A portion of the wall was removed to allow passage of the pipe connected to the filter system. The wall planks measured 13 cm wide and 3 cm thick. A cross piece 9 cm wide was also at the base.

The west wall, also the best preserved, had a cross piece at the base and 1.1 m above the floor. On this wall only the wall planks were overlapped by 2 cm.

Resting on the floor of the wooden box was a box frame 9 cm high, 15 cm north-south by 95 cm east-west. On the floor of the smaller frame was a layer of fine sand 1 cm thick.

The floor boards were of various widths, each oriented on an east-west direction and made of 2 cm thick lumber. The floor was placed overtop a wooden, 3 cm thick sub-floor, oriented north-south (Figure 12).

Artifacts
Most of the artifacts were household items such as glass and ceramics but a large number of nails were also located. Large pieces of concrete were found as fill used in the box.

Interpretation
The function of the wooden box has remained enigmatic. The interior wooden sand lined tray was probably an integral part and the overlapped timbers gave it an appearance of being waterproof. The construction of the box
itself suggested that it was quite strong and able to withstand considerable stress. It was located in the only spot around the house which never saw any sunlight and it was probably completely buried at all times. As portions of it were destroyed to allow for the passage of the filter system pipe, it probably predated the installation of the generator around World War I. Finally, some dark staining on the insides of some of the timber suggested either a fine layer of silt or some form of preservative.

These factors led to a few ideas about use. A suggestion that it once contained the generator batteries was based on the toxic nature of the batteries. However, the size of the box was probably too small for this purpose. It was also suggested that this feature could have acted as a refrigerator as the outside cistern did in later years (Clarke, personal communication). This did not seem feasible as the box was much smaller than the efficient icebox in the basement of the house. The possibility that it may have served as an original filter for the generator exhaust was rejected on the basis that the only feasible reason for destroying the south wall would have been to drill a hole for the filter exhaust pipe. It did not seem reasonable that the filter system would be constructed for the pipe, then mutilated to put the pipe in. Finally, the sand layer at the bottom strongly argued against any utilization as a liquid storage container.

Outside Cistern and Water Barrel

Introduction

A 1.2 m east-west by 2.0 m north-south excavation unit was placed by the northwest corner of the summer kitchen in order to investigate the external structure, caps and drainage mechanism of the outdoor cistern. All work was carried out by trowel.

No mention of the outdoor cistern was made in the historical records. It would have been built after the summer kitchen in 1898. The concrete cap was placed in 1953.
Stratigraphy
The surface was covered by a sod layer 1 cm to 5 cm thick. Beneath the sod was a 6 cm layer of very dark greyish brown clay. The next 8 cm was a layer of coarse clay with gravel inclusions. Below the gravel to a depth of 25 cm below ground level was a layer of dark brown coarse clay. The sterile clay was also present 19 cm below ground surface. A fine lens of sand 2 cm thick, 18 cm below ground level was found in the western half of the unit.

Feature Description
A wooden board appeared at a depth of 30 cm below ground level. It measured 42 cm long north-south, by 11 cm wide east-west, and about 5 cm thick (2 x 6 inch lumber). This board partially underlaid the southwest corner of the cistern (Figure 13).

Directly west 35 cm from the cistern were two piles of brick 58 cm apart. The brick pillar closest to the north of the unit was 3 bricks high, alternately oriented, with two bricks in each level. A similar pile of bricks to the south was only 2 bricks high.

Under the plank was a board oriented east-west, 20 cm wide and of undetermined length and thickness. Behind this board and along the stones by the cistern was a layer of fragile mortar set between the rocks.

About 78 cm east of the corner of the summer kitchen and 26 cm below ground level was a pipe 4 cm in diameter. It extended north 51 cm from the house and angled slightly downward. The pipe then Elbowed vertically .42 cm through the edge of the cistern cap. The vertical pipe had a diameter of 2.5 cm. The concrete cap which measured 34 cm north of the summer kitchen at its nearest point averaged 3 cm thick.

Artifacts
The greater amount of artifacts recovered were hardware items with household items being the second largest in number.
Interpretation
The large wooden plank was part of an earlier wooden cap on the cistern which was covered by the concrete cap. The remains of this cap were also visible inside the cistern.

The two brick piles may have supported a rain barrel for they were so situated as to place the barrel under the northwest corner of the summer kitchen eave. This interpretation was substantiated by a barrel seen near that location in one of the historical photos.

The rocks by the cistern were probably part of the original cistern wall. However, the original mortar was in poor condition. The inside of the cistern had been plastered with cement to stabilize it. There was no evidence of a drainage pipe from the cistern.

The smaller plank found next to the summer kitchen may have been part of the support for the rain barrel.

The purpose of the pipe from the summer kitchen was undetermined and seemingly unrelated to the cistern. It did not enter the cistern, nor was there evidence of any piping inside the cistern.

In the stratigraphy the sod layer and soil directly beneath were the natural levels found throughout the site. The gravel layer beneath may have been related to the construction of the concrete cap on the cistern. The sand and mortar related directly to the mortared rocks adjacent to the cistern.

Outside Pipes
Introduction
Four excavation units were placed at selected locations adjacent to the house in order to investigate outside pipe attachments. Three of these excavations were discussed in detail under the titles of "Cistern and Water Barrel", "Filtering System", and "Septic Tank". Therefore, that leaves the discussion here to investigate the indoor cistern intake pipe.

A 2 m by 2 m unit was placed at the southwest corner of the house. The greater part of this unit was taken down by trowel to the sterile clay where shovels were then used.
Stratigraphy
A 3 cm thick sod layer covered the southern half of the unit. Beneath the sod and exposed over the north half of the unit, the second layer was a fine sand and coarse clay up to 10 cm thick. The third layer was a 10 to 20 cm thick very dark grey clay and gravel. The fourth layer, up to 20 cm thick, was a pale brown clay mixed with sand and gravel. Beneath that layer, varying in thickness from 5 to 15 cm, was a fifth layer of sand mixed with ash and mortar. The next two layers consisted of a very dark grey sandy clay and a greyish brown sandy clay which were sterile.

Feature Description
The earth below the cistern pipeline was mostly a soft, sandy fill. A 6 cm in diameter (2 3/8") pipe was discovered 10 cm below the foundation line of the house and 1 m north of the south edge of the house. This pipe was 35 cm below the pipeline to the cistern which was visible above the ground surface.

No other features were found other than the 6 cm diameter pipe.

Artifacts
Nothing was found which would contribute to the interpretation of the pipe attachments. Most of the artifacts were of a household nature.

Interpretation
The various layers in the stratigraphy were a fill due to house construction. No purpose was found for the pipe below the surface. From inside the house the above surface pipeline was traced to the cistern but no evidence was found of the buried pipeline.

Flower Garden
Introduction
According to Clarke (1977:73) an oval flower garden spread nearly the
width of the lawn east of the tennis-court and was surrounded by cobbles. At either end of the bed, two concrete sewer pipes had been inverted and filled with earth to serve as ornamental flower pots. A study of several photographs revealed considerably more about the evolution of the garden.

A 1904 photo (Figure 5) showed no evidence of the garden but a circa 1911 photo had the sewer conduit and a pile of rocks in the northwest corner of the lawn (Figure 14). This indicated that the garden was established between 1904 and 1911, possibly in the latter year as the rocks may have been piled for placement around its perimeter. A circa 1919 photo (Figure 15) showed the garden at its maximum width with a smaller circular garden to the north and a conduit flower pot in the centre of the circle. Finally, a circa 1922 photo (Figure 16) showed the same garden, possibly narrower, with white painted cobbles and a raised mound in the centre.

Three excavation units were located in the area of the flower garden. They were excavated by shovel. The unit 85N6E, located to determine the east to west extent, was 8.0 m west and 24.0 m south of Station 10. It was .50 m north to south by 5.4 m east to west in size. The unit 85N6F, to determine the north end of the bed, was .50 m east-west by 4.2 m north-south and .60 m north of 85N6E. The south end of the bed was located by unit 85N6G which was .50 m east-west by 3.0 m north-south and 5.5 m south of 85N6E (Figure 17).

Stratigraphy
The natural stratigraphy of the area had three soil levels. The topsoil was a 10 cm thick, very dark grey clay. Below this was another level of very dark grey clay. The whole area overlay a dark greyish brown clay which was sterile. Within the flower bed, there was a black clay below the topsoil which was 10 to 45 cm thick. In the unit at the north end a 1 to 20 cm thick layer of dark greyish brown, mottled clay was below the fill. Below this level was the sterile clay (Figure 18).
Feature Description
The overall dimensions of the flower garden, as determined by the stratigraphy, were 3.7 m east to west and 10.4 m north to south. The soil bed for this garden was prepared to a depth of 45 cm. The mottled clay soil at the north end, below the prepared soil, indicated that the bed was intended to be 13.4 m north to south but was shortened. There was no evidence of the rock border or the concrete sewer conduits used as flower pots.

Artifacts
There were very few artifacts found in this area. Most were ceramic pieces and were found at the north end.

Interpretation
An observation of the stratigraphy of the flower garden revealed its maximum 13.4 by 3.7 m dimensions with an abbreviated 10.4 m length (Figure 17). Adding this information to that revealed by the photos suggested that the greater length probably included the circular flower bed on the north end. However, the lack of soil development strongly indicated that the smaller bed was abandoned, possibly as early as 1922. The main bed may have also been narrowed but this was not revealed in the stratigraphy.

Main Road
Introduction
This road passed from the grid road to the work-yard between the house and the formal lawn. It was dated by an historical photograph to pre-1904 but there was no other information on this road to be found in the historical reports.

From a point 32.5 m west and 13.0 m south of Station 10, a unit 4 m north-south by 0.5 m east-west was excavated across the road-bed. The unit was excavated by shovel.
Stratigraphy
The road-bed in this area had eight soil levels. The topsoil was a dark brownish grey clay 1 to 5 cm thick. The second level was an olive brown sand layer, 1 to 9 cm thick above an 8 to 20 cm thick very dark grey sand. Both these levels contained some gravel. The fourth level was a very dark brown silty clay, 5 to 8 cm thick, with inclusions of gravel and brick. The fifth level was a very dark greyish clay 3 to 8 cm thick. The sixth level was a thin layer of dark grey clay, 1 to 5 cm thick, containing some gravel. The seventh level was an olive grey clay 4 to 20 cm thick. The road-bed overlay a black clay (Figure 19).

Feature Description
The main road-bed was approximately 3.9 m wide. The first gravel lens descended from the surface to 9 cm below ground level and extended the width of the road-bed. The gravel lens became thinner to the north. The second gravel lens was 15 to 20 cm below ground level. It was 2.65 m wide and was offset to the north of the upper gravel lens. There were two depressions cutting through the lower gravel level into the soils below. These depressions were 1.35 m apart.

Interpretation
The main road experienced two main phases of construction. The two road-beds were indicated by two concentrations of soil levels containing gravel. The first road-bed began at the present surface level and continued to a depth of 10 cm. Sand and gravel was laid at least two times in this phase. The second bed began 15 cm below the surface and 34 cm above the top of the sterile clay level. The two road-beds were separated by a fill which may have been part of the rebuilding process for the more recent one. The deep ruts within the older layer may have indicated some period of long neglect between the two phases.
The Orchard

Introduction

The large area directly north of the house and bordered on all sides by trees, was originally known as an orchard. This area was extensively examined to locate the original planting scheme of the orchard proper and to determine the nature of certain protective hedges and fences.

Clarke (1977:69) suggested that the orchard was originally planted in the 1930s. This was a result of Motherwell's return home from federal politics and the resultant new attention focused on the farm. Clarke also noted that the orchard was accompanied by a 3 m (10 foot) high fence which was erected around the saplings to protect them from rodents. Finally, the 1946 air photo of the site (Figure 20) showed a "U" shaped hedge, open to the south, around a small plot of trees in the north central portion of the orchard.

The major excavation unit was a 3 m by 60 m trench which lay east-west across the orchard and the eastern edge of the work-yard. The north-east corner of this trench was 2 m east and 8 m south of Station 9A. This trench also incorporated six earlier 2 by 2 m units in the north central area of the orchard. In addition, 85N1S was a 5 m east-west by 3 m north-south unit with its northwest corner 10 m west and 23.5 m south of Station 9A. A 7 by 7 m unit, 85N1T, was located 9.5 m west and 18 m south of Station 9B. There was also a considerable amount of shovel testing undertaken to find the extent of the core orchard area (Figure 21).

Excavation was primarily conducted by shovel or shovel shave techniques though trowels were used around root systems or in particularly heavy artifact concentrations. Screens were used sparingly.

Stratigraphy

The orchard had been regularly ploughed as a weed control measure for several years. Therefore, the two upper soil zones were replaced by a 20 cm thick layer of very dark grey clay. Below this was the usual sterile level of dark greyish brown clay.
Feature Description

The orchard area proper was revealed in units 85N1E, 85N1J, and 85N1N. There were 7 stumps ranging from 10 cm to 30 cm in diameter. Two of these had preparation pits, one of which was 80 cm in diameter and 50 cm deep. Measurements between these stumps in a north-south direction ranged between .70 m and 1.20 m with an average of 1.20 m (4 feet). Likewise, they were found to be in three rows and measured between .90 m and 1.20 m apart with an average spread of 1.0 m (3 feet).

At a distance of 6 m west of the orchard area, two circular pit depressions were discovered. They were 1.6 m apart in an almost straight north-south line. One of these was excavated to reveal a basin shaped pit, 80 cm in diameter and 40 cm deep. At a point 9 m south of these two depressions, a small root cluster was found 32 cm below the surface. There was also a depression, similar to the first two, found 7 m east of the orchard area.

There were two post hole features found in the orchard. The first was a 15 cm by 20 cm hole located in the trench 7 m west of the orchard. The second was an 11 cm diameter post located near the south end of the orchard, 10 m east of the orchard row proper.

Artifacts

The majority of the artifacts recovered in this area were household items, predominantly ceramics and glass.

Interpretation

The orchard rows appeared to have been planted in prepared pits in a manner that conformed with Motherwell's usual four foot planting scheme. The trench revealed three rows of trees relatively evenly spaced and apparently offset. Further testing suggested that the root system included no more than 3 or 4 trees north and 6 trees south of the trench. This would mean that there were three rows of 8 to 13 trees.
The depressions and stumps to the south appeared to be in approximately the same position as the east and west edges of the "U" shaped hedge. As a feature it has been concluded that the hedge was put in sometime prior to 1946 and removed between 1946 and the late 1950s in all areas except a short strip to the west that paralleled the southern half of the orchard (Figure 21).

The two fence posts provided some indication of the fence that at one time surrounded both the central orchard and the enclosing hedge. The fence post at the south end of the orchard was likely the southeast corner post as there was no post between it and the lawn area. There were several small rocks around it which would have helped to support it.

**Septic Tank**

**Introduction**

The septic tank located in the southeast quarter of the orchard was not specifically mentioned in any site reports but could be dated to the 1950s when Richard and Pat Motherwell modernized the water and sewage systems (Clarke 1977:192). In addition, a second unit was located on the north side of the house to locate the sewer line and pinpoint where the pipe left the wall of the house.

The unit in the orchard was 3 m north-south by 1 m east-west and was located on the north side of the tank mouth (opening), 16.5 m west and 21.0 m north of Station 10. The unit beside the house was 1 m north-south by 1.84 m east-west, 15.4 m west and 2.3 m south of Station 10. Both units were excavated by shovel.

**Stratigraphy**

The stratigraphy of the excavation unit in the orchard was associated with the construction of the septic tank. The natural strata of the area included a dark grey clay, plough zone, and an olive grey sterile clay. The tank unit had three soil levels. Uppermost was the topsoil, 1 to 13 cm thick. This was followed by an olive grey clay, 16 to 40 cm thick,
with gravel inclusions and leaching. Below this was a similar clay, 1 to 32 cm thick, and mottled with dark grey clay. All these levels overlay the concrete cap of the septic tank except in the northern end of the unit where they overlay a dark olive grey clay, the sterile level.

The stratigraphy of the unit beside the house had been modified by both house construction and excavation for the installation of the sewer line. Only two soils were associated with the sewer line— a 3 to 5 cm thick, very dark greyish brown clay topsoil above a light brownish grey clay 6 to 45 cm thick. The sewer line was found in this lower level.

Feature Description
The septic tank opening measured 90 cm east-west by 110 cm north-south with 16 cm thick walls on all but the east side which had a 20 cm thick wall. This opening extended 59 cm above the body of the tank. On the surface, it had impressions of 18 cm wide boards that were used as concrete molds. The tank itself extended 180 cm north of the opening, 110 cm west, 30 cm south and 60 cm east. Wooden forms were used on the interior of the tank but not the exterior. The tank was capped twice with concrete. The upper cap was 12 cm thick, the lower cap was hidden under the first but its thickness appeared to be no greater than the first. At the seam between the body of the tank and the opening, 2.5 cm thick (1 inch) wood planks were laid.

The sewer line was located 67 cm below the foundation line of the house and about 35 cm west of the northeast casement. The pipe was 13 cm in diameter. Below the pipe was a large rock apparently supporting the pipe.

Interpretation
The septic tank was constructed by pouring cement into a hole containing an inside form only, supported by iron cross beams. Two layers of concrete were then poured over the whole area, except the opening, to ensure a tight solid covering. The opening of the tank was then constructed by
pouring concrete into wood forms of 18 cm wide boards but 2 cm thick planks were left between the tank and the opening overflow to take stress at the opening. Then the entire area was covered by the earth previously excavated to make the hole for the septic tank.

To lay the sewer line, a trench 45 cm wide was dug from the north wall of the house to the southeast corner of the septic tank (if it went in a straight line). A 13 cm pipe was then laid approximately 67 cm below ground level. The trench was then refilled.

**Tennis-Court**

**Introduction**

From a study of the historical photographs it appeared that the posts for the tennis net were often located opposite the back veranda of the house and were at least 1.0 m inside the caragana hedge, and probably more (Figures 4 and 22). It was within this approximate area that the excavation units were located (Figure 23). The photographs also showed a walkway leading from the main road, through the hedge onto the tennis-court in the same vicinity (Figure 24). According to the site report the tennis-court was in use by 1914 and was usually marked out with white ribbon. Chicken wire was used at the east end of the court as a tennis fence, probably only rolled out when necessary or seasonally (Clarke 1977:69).

In the area of the tennis-court three excavation units were opened along the northern side to locate the net post holes and court line demarcation. The first unit, 85N6A, was 2.0 m north-south by 1.0 m east-west. The second unit, 85N6B, was 2.0 m west of the first, 2.0 m square, and 23.0 m west and 19.0 m south of Station 10. The third unit, 85N6C, 2.0 m west of the second unit, was 2.5 m north-south by 2.0 m east-west. These units were excavated by trowel and shovel shaving.

**Stratigraphy**

The stratigraphy of this area consisted of four soil levels. The topsoil was a 2 to 7 cm thick dark grey clay. Below this was a gravel layer with
dark yellowish brown sand, 1 to 3 cm thick. This was followed by a 4 to 25 cm thick very dark grey clay with gravel inclusions. The whole area overlaid a sterile olive brown clay.

Feature Description
The search for net post holes was not successful. Only one small upright piece of wood was uncovered near the south wall of 85N6B.

In two of the units metal staples, 5 cm long across the top and 8.5 cm long on each prong, were located in situ. The 7 staples were found in up to four different lines running east-west and were spaced over a distance of 1.0 m north-south. Both wood and staples were found in the second level.

Artifacts
Artifacts were mainly of a domestic nature. Many were personal items like buttons and hair pins.

Interpretation
The metal staples found in the ground of the tennis-court were likely used to secure the ribbon which marked the lines of the court. As three to four different east-west lines were represented by the locations of the staples it was thought that the demarcation of the court varied frequently, if not annually.

The piece of upright wood excavated was small and likely could not have supported the weight of the net which stretched across the court. The lack of any substantial evidence for a post hole indicated that the net posts were thin and changed locations frequently, thereby leaving no permanent indications of where they stood. This speculation was corroborated by Restoration who have acquired the original poles.
Clothesline

Introduction

Excavation units were placed around the four concrete foundations which served to support clothesline posts in the back-yard of the house (see Figure 25). The purpose of these units was to locate and verify post locations and the elm trees planted by each post to provide shelter for the back lawn and to screen the clothesline.

The "as found" document showed elm trees remaining by all but the northeast post before the area was bulldozed. In 1969 they were recorded as having a twelve inch diameter trunk, as large as any of the older stumps, but the date of their planting was unknown (Clarke 1977:69). The 1922 panorama photo showed no identifiable elm tree between the clothesline post and the row of white spruce behind (Clarke 1977:68).

The dimensions of the four excavation units varied at each of the corners of the clothesline. From a point 34.0 m west of Station 10 a 3 m² unit, 85N5B, was laid out to enclose the concrete foundation and an elm sapling. A 1.6 m north-south by 1.0 m east-west area of the southeast corner of this unit was not excavated. At the southeast concrete foundation, 8.0 m south of 85N5B, a 2 m² unit, 85N5C, was excavated. The southwest foundation, 3.0 m west of 85N5C, was enclosed in a 2.0 m north-south by 3.0 m east-west unit, 85N5D. The northwest unit, 85N5E, was 3.0 m west of 85N5B and measured 2.0 m north-south by 3.0 m east-west (see Figure 25). All the units were excavated by trowel with some shovel shaving in the lower stratigraphic levels.

Stratigraphy

The overall stratigraphy of the back-yard was composed of seven soil levels. The uppermost level was the topsoil, a very dark grey clay, 1 to 6 cm thick. The next level was also a very dark grey clay, 7 to 20 cm thick. Below this was a level of fill with very dark grey and olive grey clays. Various areas could have either of these clays or a mixture of both. The thickness of this level was from 2 to 20 cm. Below the mixed level was a lens of white powdery material, 4 to 10 cm thick, which contained an extremely
high percentage of artifacts. The whole area overlay a dark olive grey sterile clay (Figure 26).

This overall stratigraphy varied within the excavation units. The units 85N5D and 85N5E did not have the topsoil or the white level (referred to as the garbage level). Unit 85N5C also lacked the garbage level and in its west half the mixed soil level thinned out. Unit 85N5B contained all the soil levels and the clay fills were separated within the unit.

The stratigraphy in units 85N5B, 85N5C and 85N5D was interrupted by tree preparation pit fill, which was a very dark grey clay.

Feature Description
The four clothesline posts formed a rectangle measuring 11 m north-south and 5.5 m east-west (centre to centre). The foundations were poured into square holes and used wood forms at the top only. The molds were 44 cm square and 5 cm deep, with centre post holes 15 cm square (to hold 6 by 6 inch wooden posts). The one remaining post is 1.92 m tall. The concrete extended approximately 62 cm deep without a mold.

There was evidence of trees planted in each corner. In the northeast corner there was a pit 60 cm east of the concrete foundation and approximately 80 cm in diameter. This pit was believed to be a preparation pit for tree planting but there were no tree remains within it. The southeast corner exhibited a preparation pit in the south wall profile, located 80 cm south of the concrete foundation. Several roots were uncovered in the excavation unit but none extended into the south wall.

In the southwest corner a tree stump was uncovered 2.0 m west of the concrete foundation. The stump was located in a pit approximately 60 cm in diameter (Figure 27). The northwest corner had no definite preparation pit. There was a 15 cm diameter hole 1.0 m west of the foundation but this was much smaller than anticipated. There were also roots 1.0 m northwest of the concrete foundation.

The northeast excavation unit contained a large concentration of bricks, stones, mortar, wood and artifacts mainly scattered to the south of the concrete foundation and east of the pit. These concentrations were found within the "garbage" soil level.
Artifacts
The majority of artifacts found in this area were of a domestic or personal nature. There was little hardware. The largest percentage of artifacts was located in the excavation units at the northeast and the southeast corners.

Interpretation
The clothesline was set up to be a permanent feature of the back-yard of the house (Figure 28). The elm trees planted at each corner were to be both utilitarian and decorative features of the yard. The northeast corner showed no elm tree remains during "as found" investigations and only a preparation pit was located during archaeological excavations. This suggested that this tree never thrived.

A tentative dating scheme was established for the stratigraphy of the back-yard. The sterile clay level was dated pre-1896. The white powdery level above it containing bricks, wood, mortar, etc. probably dated to the house construction, 1896-97, with a small garbage midden at the northeast corner. The next soil levels of very dark and sterile clays may have represented landscaping of the yard between 1897-1910 (see house and yard construction). The soil levels above these were in the natural sequence, thus dating them as 1900 to the 1930s and the 1930s to 1977. The tree pits were dated to the period just after the landscaping phase, possibly 1905 to 1920.

Front Fence
Introduction
The ornamental fence line which ran the length of the house quadrant was constructed with cedar posts and woven wire. The original gate-posts were more substantial than the rest of the fence posts. Constructed some time after the turn of the century (Figure 29), the fence line had begun to deteriorate by the 1920s and sometime during the 1950s the gate-posts were replaced by Richard Motherwell. The wire gates were changed to crude
wagon wheel driveway gates and a lattice-work house gate (Clarke 1977:78). An examination of a close-up photograph of the front gate from the 1922 panorama showed that the original gate-posts were located at the east end of the front walkway (Figure 30) whereas the existing gate-posts are located 60 to 64 cm west of the end of the walkway.

The first excavation unit, 85N8A, was located on the south side of the main road, 18.5 m south and .50 m west of Station 10. It measured 1 m north-south by 3 m east-west. Unit 85N8C was in the same location but covered a greater area measuring 4 m north-south by 6 m east-west. Another unit, 85N8D, was located on the north side of the main road, 13.2 m south and 2 m west of Station 10. It measured 1.0 m north-south by 1.0 m east-west. The final unit, 85N8B, incorporated the house gate, and was 7.0 m south and 1.4 m west of Station 10. It measured 2.5 m north-south by 2.5 m east-west (Figure 31). Units 85N8A and 85N8B were excavated by trowel and shovel shaving. The other units were excavated by shovel with some troweling and shovel shaving.

Stratigraphy
The natural stratigraphy of the area along the fence line was present in units 85N8C and 85N8D. A very dark grey clay topsoil, 6 to 8 cm thick lay over a layer of very dark grey clay 25 to 30 cm thick. These soils overlay a greyish brown sterile clay.

Unit 85N8A had a topsoil containing a high percentage of gravel, 4 to 8 cm thick, above a level of humus containing some clay which was up to 4 cm thick. Below this was a layer of gravel in a dark olive grey clay, 1 to 17 cm thick. The lowest level excavated was a black clay 4 to 15 cm thick.

Unit 85N8B had a 2 to 7 cm thick clay topsoil followed by a 6 to 12 cm thick very dark grey clay. Below this was a layer of medium sized gravel, 1 to 7 cm thick. The next level was an 8 to 14 cm thick very dark grey clay. Below this was a brown organic mat, 2 to 4 cm thick, which was only 70 cm wide. The area overlay a greyish brown clay which was sterile.
Feature Description

In unit 85N8B two concrete supports for gate-posts were uncovered. These front gate supports contained the existing gate-posts which were 10 cm\(^2\) and 60 cm west of the end of the concrete walkway. The cement surrounding the posts was in poor condition but the one on the south side indicated that the concrete was laid in an approximate square measuring 20 cm to a side. These gate-posts were not fully excavated as they are supporting the existing fence line. However, in the remaining area of the unit there was no evidence of previous posts.

The units at the main road revealed concrete supports on either side of the gate. The distance between the two gate-posts was 4.6 m. The concrete support on the south side of the road was in bad condition, broken into several pieces, but the overall dimensions remaining were 40 cm east-west by 30 cm north-south, beginning 1 to 3 cm below ground level. There were wood remains in the post hole. A fence post was uncovered 2.70 m south of this gate-post on the existing fence line. It consisted of a 13 cm\(^2\) post with a 12 cm wide plank support on one side. There was no evidence to suggest the date of this fence post.

The concrete support located on the north side of the road was in good condition and was located immediately adjacent to the concrete curb which bordered the front lawn. The dimensions of the support were 45 cm north-south by 40 cm east-west with a post hole measuring 25 cm north-south by 21 cm east-west. Forms were used at the top only, 2.5 cm thick and 10 cm wide. The concrete extended to a depth of at least 40 cm below the surface.

Artifacts

In the units at the gate-posts the artifacts were mostly small hardware items like wire and nails. In unit 85N8C the artifacts included a large number of ceramic and glass pieces.
Interpretation
There was no evidence of the earlier gate-posts at the front gate or the south side of the main road. The concrete supports found in these locations may have been large enough to accommodate the posts seen in historical photographs. The earlier posts of the main road were likely built in the same locations. The differences in location of the original and recent posts of the front gate seemed to indicate that the fence line was altered for some reason when the new gate was put in. However, the total lack of archaeological evidence for the earlier gate-posts left this hypothesis unsubstantiated (Figure 31).

The concrete foundation found on the north side of the main road was larger than the other three. It was also constructed differently. Here the concrete was set into a form at the top. Its construction was very similar to that of the clothesline supports.

Lovers' Lane
Introduction
One of the oldest tree belts was in the middle of the farmstead and acted as a decorative partition between the house and barn-yard. This double line of maples stretching south of the men's cottage was known as Lovers' Lane.

An excavation unit 3 m north-south by 10 m east-west was shovelled to test for the original tree lines. The northeast corner of the unit was 2 m west and 8 m south of Station 9C.

Stratigraphy
The area of the excavation unit was relatively undisturbed and consisted of a very dark grey topsoil clay over the sterile dark greyish brown clay.
Feature Description
There were three obvious tree rows of modern plantings which had to be removed before excavation. Upon excavation four original planting rows were found. Starting from the east, the first row consisted of four plantings north-south between 50 cm and 80 cm apart. The second row 1.5 m west of the first row contained two plantings, 2 m apart. The third row was 3.4 m west of the second and had two plantings, 80 cm apart. The fourth row was 1.7 m west of the third row and had three plantings, 80 cm and 90 cm apart. Thirty centimeters west of the second row of plantings was an 8 cm wide band of ash and mortar stretched north-south through the unit.

Artifacts
The majority of artifacts were glass and ceramic pieces with some metal hardware pieces.

Interpretation
Excavation revealed that the original Lovers' Lane was a double row of trees planted on either side of the lane. The east side of the lane consisted of two rows 1.5 m apart and trees spaced an average of 65 cm apart. The west side of the lane had two rows 1.7 m apart with tree spacing of 85 cm. The lane between the two rows would have been 3.4 m (12 feet) across. The band of ash was not functionally determined.

Western Tree Belt
According to the structural history report some of the oldest tree lines sat in the middle of the farmstead where they served as a partition to separate the house and lawn from the barn-yard. Clarke stated that this section of maple and poplar was an extension of the maple belt known as Lovers' Lane that stretched south from the Men's Cottage. Two arching rows of maple on the house side of the barn-yard fence were
said to have served as a driving loop, joining the two access roads. Towards the lawn, cottonwoods were planted to give added height and variety. In later years, possibly 1914, a row of white spruce was added (Figure 32) to the belt, giving it a distinct ornamental flavour (Clarke 1977:52-53). Major McFadyen, a farm-hand in 1914, claimed that it was he who dug the trench and made the ground ready to receive the line of spruce trees (Clarke 1977:56-57).

Three excavation units were opened in the tree belt area west of the tennis-court to determine tree line spacings, and the existence of a driving loop. Unit 85N9D, located 44.0 m north of Station 24, measured 2 m north-south by 4 m east-west. The second unit 85N6H cross-sectioned the shelter belt area, 38.0 m north and 4.0 m east of Station 24, and measured .50 m north-south by 11.0 m east-west. Unit 85N6D was located to the east of the shelter belt next to the tennis-court, 43.0 m west and 18.0 m south of Station 10. The unit measured 4.0 m north-south by 2.0 m east-west.

Excavation units 85N5R and 85N5Q were opened at the west end of the house back-yard to determine the northern extent of the white spruce line. Both units were .5 m north-south by 3.0 m east-west. Unit 85N5R was located 41.5 m south and 1.5 m east of Station 9C. Unit 85N5Q was 5.0 m further south (Figure 33).

Units 85N6D and 85N9D were excavated by shovel shaving and trowel. All other units were excavated by shovel to the sterile level.

Stratigraphy
The stratigraphy of unit 85N6D consisted of five soil levels with some variation at the north end. The topsoil was a 3 to 8 cm thick very dark grey clay. The second level was a 3 to 8 cm thick lens of brown gravel. The third level was a 4 to 28 cm thick very dark grey clay. The fourth level was also a very dark grey clay, 20 to 48 cm thick. The whole area overlay a dark olive grey sterile clay. In the north end of the unit the gravel lens thinned out completely and below the third soil level was a clay pad 10 cm thick and 1.3 m wide on top of a layer of concrete
fragments and mortar. In the north-east corner of the unit there was a layer of mottled clay fill above the sterile clay level.

Units 85N9D and 85N6H lay in an area previously disturbed by cultivation and had similar stratigraphies. The very dark grey clay topsoil was 8 to 22 cm thick. Below this was a 2 to 28 cm thick very dark grey clay. The whole area overlay a dark greyish brown sterile clay. Unit 85N6H had a 3 cm thick lens of ash and charcoal, 70 cm wide, which lay in the lower portion of the first soil level. The stratigraphies of units 85N5R and the east half of unit 85N5Q were similar. The topsoil was a 13 cm thick very dark grey clay. The second level was a dark greyish brown clay 7 cm thick. The third level was a 15 cm thick very dark grey clay. These levels overlay a dark greyish brown sterile clay. The west half of unit 85N5Q consisted of a mottled clay fill beginning just below the topsoil. This fill was interrupted at the centre of the unit by the natural stratigraphy of the area thereby creating two sections of fill in the profile of the unit.

Feature Description

Unit 85N6D had multiple features. A 66 cm wide trench ran north to south within the unit and began 32 cm from the north wall. In the centre of this trench were two tree stumps, 2.2 m apart north to south, and 8 cm below ground level. In the northeast corner of the unit a layer of concrete fragments was uncovered 18 cm below the surface and extending into the unit wall. A depression lined with a woody material of unknown origin, 15 cm thick, was uncovered in the northwest corner of the unit 18 cm below ground level. The south wall of the unit contained the profile of a post hole 12 cm wide and 34 cm long. This post hole began 30 cm below ground level and was located at the west end of the trench.

Tree stumps were found in two other excavation units. In unit 85N9D a stump was located in the east wall 70 cm south and 11 cm below ground level. A stump was located in unit 85N6H, 3.0 m east and .25 m north, and began 22 cm below ground level.

The profile of 85N6H revealed a trench 2.3 m wide and 40 cm deep,
beginning 60 cm from the east wall of the unit. At the bottom of this trench was a layer of a brown organic mat 2 cm thick and 60 cm wide. The soil in the trench was the first clay below the topsoil with a small percentage of gravel mixed throughout.

The north profile of 85N5Q showed two trenches, one 76 cm wide, and the other at least 1.2 m wide. Both trenches were from 12 cm to 34 cm below ground level. No features were exposed in unit 85N5R (Figure 33).

Artifacts
A small number of artifacts of a domestic nature was uncovered in all units. Unit 85N6D also contained a number of square nails.

Interpretation
The trench found in 85N6D was likely the one prepared by Major McFadyen for the line of spruce trees planted around 1914 in front of the shelter belt. This trench extended along the west edges of the tennis-court and the back-yard, as seen in unit 85N5Q. It terminated at a point corresponding with the concrete curb bordering the north side of the house yards. The second trench in unit 85N5Q indicated that further tree lines within the shelter belt also may have had prepared soils for tree plantings.

The cross-section of 85N6H revealed two areas where former road-beds for the driving loop may have existed. The first was the 2.3 m wide trench containing gravel which was located near the east end of the unit within the shelter belt area. The second road-bed may have been represented by a slight depression in the second soil level which also contained a thin lens of ash and charcoal. This lens may have been deposited in what was an area safe for burning, i.e. a gravelled area. Of the minimum of four tree lines known to have made up the shelter belt from a 1928 photograph (Figure 34), white spruce, poplar and two rows of maple, three were represented by the tree stumps excavated. The remaining tree line or tree lines were likely placed somewhere between the two lane ways east of the tree stump found in unit 85N6H. The concrete fragments and the concrete and chalk soil level in unit 85N6D may have represented a
pathway leading from the roadway onto the tennis-court, but appeared to be too deeply buried for that purpose and there was no historical evidence to support this supposition.

The post hole in the south wall of unit 85N6D may have represented a fence line but there was no other historical or archaeological evidence to prove this. The second alternative was that the post hole represented the remains of the tent which could be seen in a 1911 photograph.

In a 1928 photograph (Figure 34) showing the shelter belt, there was some sort of different soil running north-south in front of the spruce trees. The excavations did not show this line but it was thought that it may have been a weed control area between the trees and the well-manicured lawn of the tennis-court.

Tree Line North of the House

Introduction

According to the structure history report, Motherwell planted an abbreviated row of four poplars on the north side of the house in order to offer its exposed location more protection and to partially block the view of the orchard from the dining room and parlour (Clarke 1977:66). However, an examination of historical photographs (Figures 35 and 36) showed a row of trees in the area which numbered more than four and which may have extended the entire length of the house and the back-yard.

The excavation unit was located 24.0 m west and 3.0 m north of Station 10, and measured 5.6 m north-south by 3.0 m east-west. This unit was on the north side of the concrete curb which bordered the house yard. It was excavated by shovel.

Stratigraphy

The stratigraphy of this unit was the natural stratigraphy of the area. The unit lay in cultivated soil. The plough zone consisted of a very dark grey clay 30 cm thick. This overlay a dark greyish brown sterile clay.
Artifacts
A small number of artifacts of a domestic nature were found with a few square nails.

Interpretation
The location of the small row of poplars was difficult to ascertain. On the site plans these trees were placed on the north side of the concrete curb but the photographs did not show a specific location. It is possible that the trees were so widely spaced that the excavations did not cover a wide enough area.

Front Spruce Trees
Introduction
Excavation units were opened to determine the exact locations of two of the former spruce trees which were planted alongside the ornamental front fence line. One tree was located at the south corner of the main gateway while another tree was planted at the north-east corner of the house beds. Two more trees straddled the entrance of the farm road (Clarke 1977:56). The locations of the latter trees were not involved in the excavations. An examination of historic photographs dated the planting of the spruce trees to circa 1904 to 1918.

The unit to locate the tree on the south side of the main gateway was also opened to examine the front fence line. This unit, 85N8C, measured 4.0 m north-south by 6.0 m east-west and was 18.5 m south and .50 m west of Station 10. The unit to locate the northern spruce tree was located on the north side of the curb, 3.0 m north and 2.6 m west of Station 10 and measured approximately 3.0 m north-south by 1.8 m east-west (Figure 37). Both units were excavated by shovel.

Stratigraphy
The stratigraphy of both units consisted of three soil levels. The very
dark grey clay topsoil was 6 to 8 cm thick. Below this was another very
dark grey clay 25 to 30 cm thick. In both areas these levels overlay a
greyish brown sterile clay.

Feature Description
In the unit at the north-east corner of the house beds, a tree stump was
exposed. This stump measured 30 cm in diameter and was located 1.65 m
west of the front fence line and 2.75 m north of the concrete curb bordering
the house beds (Figure 37).

Within the unit on the south side of the main gateway, dead tree
roots were exposed. These roots led directly underneath the modern spruce
planting which was not removed from the excavation. The modern spruce tree
was located 3.6 m east and 3.25 m north within the unit.
Barn Quadrant

The barn and work-yard areas received considerable attention during archaeological excavations. This area was identified as the work area and was bordered to the north and west by the perimeter of the farmstead, to the east by the shelter quadrant tree lines and to the south by a fence line that separated the dugout from the barn-yard (Figure 1).

Within this area, work concentrated on the barn, dry privy, men's cottage, caboose, barn yard fence, barn ramp, piggery, work-yard fence and some unknown coal and gravel concentrations. There were no internal tree plantings to be excavated within this section.

Barn
Introduction

Excavation units were located at two points along the exterior of the barn to reveal the depth of the stone footings and the possibility that one side was a later addition and related to the additional work done on the stone house summer kitchen.

According to the site report, the original shape of the barn remained in some doubt. The tender called for a rectangular stable. However, at some point between March 1896 and 1907 the building was converted from a rectangle to an "L" shape. Engineering and Architecture believed that the eastern extension of the barn foundation was added on at a later date because the stonework of the "addition" was of different enough character and quality to indicate that it was done at a later date than the main building (Clarke 1977:116-117).

There were no historical indications that the stable had to be expanded before the superstructure was added in 1907. However, there were several
possibilities based on speculation. The first possible configuration was the full basement layout in which all present outside walls were built in 1896 as they now stand, except for certain modifications to doors and windows as the interior structure evolved. This configuration was supported by the evidence of all exterior walls having the same twenty inch thickness while the interior dividing wall was only eighteen inches thick.

The second possibility was that the original structure was a rectangle, built on an east-west axis, which would provide good lighting and winter heating. This theory required that half of the southern wall be demolished when the addition was constructed. However, the central doorway on the north wall was consistent with an original full wall there, that was blocked off because of internal changes (Clarke 1977:118-120).

The third possibility was that the rectangular structure was built on a north-south axis and had one half of its east wall only eighteen inches thick (Clarke 1977:121).

Two excavation units were opened alongside the wall of the barn where the eastern extension would have been added onto the rest of the building. The first unit, placed in the corner of the "L" shape of the building, the southwest corner of the eastern extension, measured 2 m² with the walls of the barn as the north and west walls of the unit. The second unit, measuring 1 m north-south by 4 m east-west, was placed on the north wall of the barn directly opposite the first unit. The second unit began 10 m west of the northeast corner of the barn (Figure 38). Both units were excavated by shovel.

Stratigraphy
The stratigraphy of the two excavation units varied. The unit on the south side had soils relating to the construction of the barn. The top level was humus, 3 to 9 cm thick and the second was a dark grey clay, 1 to 11 cm thick. At one point only, next to the eastern barn wall, was a 4 cm thick lens of fine brown sand. Elsewhere, the clay overlay a 1 to 18 cm thick layer of sand, gravel and mortar with some grey clay. The fourth level was a 1 to 4 cm thick olive clay with a dark clay mottling. Below this were the
natural soils of the area - a very dark grey clay, 6 to 20 cm thick, over sterile olive clay.

The unit along the north wall of the barn had seven soil horizons. The dark grey clay topsoil was 1 to 6 cm thick. The second layer was an 8 to 15 cm thick dark grey clay and the third was very dark grey clay 5 to 10 cm thick. The fourth layer was a 4 cm thick gravel lens and the fifth was a black clay, 30 to 40 cm thick. The area overlay a sterile dark greyish brown clay. In the profile of the west wall was a builder's trench 64 cm thick, below the topsoil. This trench extended 68 cm from the wall of the barn.

Feature Description
The footings of the barn on the north side were about 80 cm deep with no apparent construction changes. The footings in the "L" of the barn were about 50 cm deep. On this side the stones below the surface of the west wall appeared to butt against the stones of the north wall. However, the foundation stones above the surface in the north wall appeared to butt against the foundation stones of the west wall.

Artifacts
A few small metal hardware objects were found in both units.

Interpretation
The smooth north wall indicated that any foundation addition would have had to occur on the south (Figure 39). The test in the "L", however, seemed to suggest that while a south addition was possible below the surface, it was highly unlikely above the surface (Figure 40). To clarify this situation it would be necessary to add a unit to the west wall but the area of any possible juncture was hidden by one of the concrete pillars.
Barn Ramp

Introduction

The purpose of excavation was to locate and determine structural details of the original wood ramp (Figure 41) and to explore the possibility that animal pens were located beneath the ramp.

According to the site report Motherwell installed a substantial board ramp on the west wall of the barn sometime after 1907. The open space underneath enabled air to flow through, keeping the stone barn wall dry and the barn interior healthy for the animals. In 1933 concrete buttresses were placed at various points around the barn to support crumbling walls (Clarke 1977:135). By the late 1930's the wooden ramp was replaced by an earthen ramp which utilized the earth taken from a small stock dugout located west of the barn (Clarke 1977:137-138).

Six excavation units were opened in the earth ramp covering the area from the main doors of the barn to a point 12 m west. These units were excavated by shovel to a maximum depth of 2.5 m (Figure 42). After the removal of that portion of the earth ramp, five excavation units were located in the area to expose any remains of the wood ramp and animal pens. Unit 85N12H was located 16 m east and 38 m north of Station 26 and measured 4 m north-south by 3 m east-west. Adjacent to this unit to the north was unit 85N12K, also 4 m north-south by 3 m east-west. To the west of these units were two units measuring 4 m north-south by 1 m east-west, 85N12J and 85N12L. Unit 85N12M, 1.5 m north-south by 1 m east-west was located to the west of unit 85N12J.

Stratigraphy

The stratigraphy of the earth ramp consisted of two soil levels. Most of the ramp was made up of a light olive grey clay fill. Below this, near the original ground level, was an organic layer approximately 10 cm thick.

The stratigraphy beneath the ramp consisted of three soil levels. The first level was a continuation of the organic layer, found in the ramp excavations, and was 9 cm thick. The second level was a dark grey clay up to 20 cm thick. The whole area overlay a dark olive brown clay.
Feature Description

Excavations of the earth ramp uncovered a small implement dump within the first five metres from the barn. The implements included harrows, a breaking plow, a disc plow, and a mower. At a distance of 12 m from the barn there was a 40 cm thick bed of rocks, on the floor of the unit, just below an elevated layer of organic matter.

Excavations below the earth ramp revealed numerous sizes and lengths of lumber within the top 10 cm. There were several lengths of 10 cm by 20 cm lumber (4 by 8 inch) laid in three lines north to south. From the barn wall these lines measured 1.2 m, 1.9 m and 3.4 m west. The maximum area covered by the remaining lumber lengths was 4.0 m north-south.

Along the south side of the area was a 10 cm by 3 cm (probably 2 by 4 inch) board laid on edge in an east-west line. This board was in a line with the south side of the barn door and its remains extended for three metres continuing into the earth ramp.

There were several other wood scraps within the excavated area. One board, lying east-west, and measuring 13.5 cm by 2 cm had a 12 cm long (4 3/4 inch) butt hinge attached to it by three screws, 40 cm from its west end. Another board had a leather strap still attached to it. All the remaining wood was fairly deteriorated and showed no specific configuration. However, all the wood found in the excavations was concentrated in an area corresponding to the width of the barn doors, approximately 3.4 metres (Figure 43).

The organic matter layer was also concentrated within an area corresponding to the width of the barn doors. This layer began 60 cm from the west barn wall and extended west into the unexcavated portion of the earth ramp.

The remains of three upright wood posts were uncovered in the excavated area. One was located in the southwest corner of unit 85N12J. It had a 6 cm diameter. The second upright was located in unit 85N12H, 2 cm west of the barn wall and 3 cm south of the concrete pillar within the unit, and had a diameter of 5 cm. The third upright measured 2 cm in diameter and was 22 cm west of the barn wall and 40 cm south of the concrete pillar in unit 85N12K.
Artifacts
In addition to the implements found within the fill, the earth ramp also contained smaller machine parts, ceramics, glass and domestic articles. The area excavated beneath the ramp contained large numbers of nails plus small domestic articles.

Interpretation
An examination of the wood found beneath the earth ramp and an interpretation of an historical photograph (Figure 41) gave some indications of the construction of the wood ramp. Because of the lack of post holes large enough to have contained the timbers visible in the photograph plus the presence of substantial boards set on the ground, it was determined that the ramp was constructed upon wooden sills. Frames consisting of three posts joined by two diagonal cross-pieces were set north-south on (4 by 8 inch) sill beams. These beams were set approximately 1.3 m apart. The frames were then connected by interior boards which also served to create enclosures within which animals could be penned. There may also have been a north-south beam laid along the inside of the posts (Figure 44).

The theory for the construction of the top of the ramp was based upon the construction details of a wooden feature uncovered in a cultivated field west of the barn. This wooden feature consisted of four large cross-beams with (1 by 6 inch) lumber laid perpendicularly across forming a solid "floor". The width of this feature was almost equal to the width conjectured for the wood ramp, which was just slightly less than that of the barn doors.

The area of the organic matter also corresponded to the width of the barn door substantiating the presence of animals in that area.

This interpretation of the structure of the wood ramp is highly conjectural in many details but agrees with the evidence presented to date.
Men's Cottage

Introduction

The Men's Cottage was erected in 1908 to accommodate the farm labourers working the Motherwell homestead. Both permanent and transient labour occupied the Men's Cottage until 1921 when it became the home of Olive and Archie Gillespie (Figure 45). At that time an enclosed veranda was added to the south and east side of the cottage as well as a cellar and lean-to to the west (Figure 46). A Quebec stove was said to be sufficient heat for the house.

The cottage was used very little after the 1937 death of Archie Gillespie. Walter Brock and family then lived in the cottage from 1941 to 1943 or 1944. The cottage was later sold and removed from the site to the nearby town of Abernethy, sometime in the fifties (Figure 47).

Excavation of the Men's Cottage was divided into four operations which included the cellar, the original cottage, the veranda extensions, and the surrounding area outside the cottage (Figure 48). Due to time limitations as much excavation as possible was carried out by shovel and shovel shaving, screening most of the back dirt. Trowels were used extensively in areas which required careful work.

Stratigraphy

There was a great variance in numbers and types of soils within the area of the Men's Cottage. Therefore the stratigraphy is described in general and is detailed under "Feature Description" when necessary.

Generally the entire area was covered by a sod layer which averaged 6 cm. Within the original foundation was a layer of very dark grey clay beneath the sod to a depth of about 20 cm. Beneath this was the sterile clay. Within the layer beneath the sod was a lens of gravel 6 cm to 15 cm beneath the surface. The major exceptions to the above stratigraphy were found in the cellar and front yards.

The cellar consisted of a fill from the bottom of the cellar walls to the top, a depth of approximately 1.50 m. This fill contained numerous large blocks of concrete. At the base of the cellar was a yellowish brown clay.
The stratigraphy to the west of the cellar related to its construction. Beneath the sod was a very dark greyish brown clay layer to a depth of 10 cm below the surface. Beneath this layer was a mottled clay at depths of 10 cm to 35 cm below the surface. Below the mottled soil was a layer 20 cm thick of a very dark brown clay. At a depth of 55 cm below the surface was the sterile, dark yellowish brown clay.

To the south of the cottage the stratigraphy varied between the area south of the cellar and the area south of the outer foundation. South of the cellar beneath the sod was a layer of clay mixed with sand and crushed mortar to a depth of about 15 cm below the surface. Beneath this layer were numerous thin layers within the next 10 cm. In order from top to bottom they were a yellowish brown sand, coal, yellowish brown sand, gravel, and ash, followed by a layer of very dark grey clay from 25 cm to 40 cm beneath the surface. At an average depth of 40 cm was the sterile clay.

The eastern half south of the cottage structure had a layer 6 cm to 26 cm below the surface of very dark grey clay with a blocky texture. Beneath this layer was a similar layer, but with gravel inclusions at a depth of about 22 cm to 34 cm. Below the gravel was a layer 8 cm thick of very dark greyish brown clay, above the dark brown sterile clay.

Feature Description

Three related foundations were discovered at the Men's Cottage. The first was the inner foundation of which only the north, east and south portions existed. The foundation was a poured concrete of stones, sand and cement, averaging .5 m wide and .16 m to .2 m thick. Only the inside edge was smooth as compared to the roughly poured top and outer edge. The inner dimension of the enclosed area was 5.33 m north-south by 3.55 m east-west (Figure 49).

The outer foundation was 1.75 m to the east and south of the inner foundation. The northeast corner and the southwest portion where this foundation had abutted against the original foundation was missing. The total inside length along the outer foundation was 7.6 m north-south by 5.90 m east-west. The actual foundation was concrete composed of rock,
pebbles and cement. This foundation was smooth on all sides except for the bottom. The outer edge was straight, .3 m to .35 m from top to bottom. On the top was a ledge .15 m wide from the outer edge to a ridge .06 m wide and .04 m high on the inner edge. The inside of the foundation was on an angle outward .1 m, .25 m from top to bottom.

The cellar consisted of four walls each .16 m thick, made up of stones, rock, metal scrap, glass and cement. The inside of the walls was smooth, and marked every .23 m by form lines. The south wall was 1.8 m from top to bottom, while the other walls had been broken to approximately 1.4 m. The inner dimensions of the cellar were 5.6 m north-south by 2.82 m east-west. At the base of the cellar was a hard clay and no evidence of a floor (Figure 50).

Against the west wall was a wood feature which rested on the clay floor and actually was set .07 m into the clay. This feature consisted of two upright boards .78 m apart, each .03 m thick. A board .2 m above the floor was between the two uprights and another board was .35 m higher. A third board lay on top across the uprights. The uprights were backed by, and nailed to from behind, boards .17 m wide which lay flush against the cellar wall.

The cellar was a distance of .83 m west of the inner foundation. Between these two foundations were several layers in the stratigraphy not common to the inner foundation. Beneath the sod was a .06 m thick layer of a very dark grey clay. Beneath this was a thin layer of pale brown ash, beneath which lay a .04 m thick layer of very small black seeds. Below the seeds was a layer of very dark greyish brown clay above the sterile clay.

To the west of the cellar was a pale brown clay, .4 m wide and up to .4 m thick, .15 m below the surface. This clay was next to the cellar wall and lay the length of the cellar.

West of the cellar .6 m and north of the south end 2.5 m was a stump roughly .3 m in diameter. Another stump .3 m west of the cellar and .5 m south had a diameter of .25 m.

The south wall of the cellar had a notch taken out of the top of the wall in the southeast corner. The notch was .87 m long from the eastern
edge and .3 m from the top of the wall to the base of the notch (Fig. 50). On the surface of the ledge were three boards .1 m wide, .04 m thick, laying north-south side by side (2 x 4 inch lumber).

Adjacent to and south of the south wall of the cellar, .3 m east of the west wall, was a large concrete block. The block measured 1.08 m east-west by .71 m north-south and .27 m deep. The sod layer lay directly on top of the concrete block.

Directly south of the concrete block was a series of boards each about .22 m wide north-south by .8 m long east-west. These successive boards were from .2 m south of the concrete block to 1.5 m south. The wood was discovered .15 m below ground level.

Nails were pounded into the wood from the underside and bent over at a 90 degree angle. Under the wood toward the south end was a strip of linoleum .67 m by .52 m. Beneath the boards the length of their extent was a layer of gravel .05 m thick.

Only .1 m south of the wooden boards was a pile of disoriented bricks within an area of .5 m north-south by 1.9 m east-west, just beneath and in the sod layer. The bricks were mixed with mortar, but did not appear to be set into it. The only resemblance to a pattern was a possible east-west orientation.

A row of rocks which were on the average .2 m to .25 m in diameter was located just beneath the sod layer south of the cellar. The rocks formed a line approximately .7 m south of the building beginning from the southeast corner of the large concrete block to the east and elbowing south in front of the veranda. The line then angled back toward the veranda .75 m east of the west edge of the veranda. A small space of 1.0 m separated the line where it curved outward again south of the veranda and back toward the southeast corner of the foundation. Within this front border were two ornamental shrubbery stumps, each about .4 m in diameter (Figure 51).

A rock border continued to the east beginning in the southeast corner and oriented north-south .7 m east of the foundation. This border extended north 3.0 m to a carefully laid assemblage of rocks 1.0 m north-south by .6 m east-west adjacent to the foundation. A small stump similar to the
others south of the cottage was found in this rock border. The line did not appear to continue to the north of the house, however this feature was not fully excavated. A concentration of bricks was located in the northeast corner, east of the foundation. The bricks were disoriented and entangled within a tree root.

Three small posts were found east and south of the original foundation. These posts, each 2.5 cm square and averaging 10 cm long, were found 30 cm below ground level in an upright position. A similar upright post, 3.5 m in diameter and 18 cm long, was found 20 cm below ground level 15 cm south of the outer foundation.

Artifacts
A concentration of pane glass was found along the north foundation with a greater intensity toward the center. A second concentration of pane glass was located just inside the eastern part of the outer foundation 1.1 m north, .17 m below surface. The third concentration of pane glass was discovered in the rock alignment to the south where the gap in the line curved toward the foundation.

A ceramic concentration was located .15 m to .2 m below the surface by the northeast corner of the outer foundation.

Burnt bone fragments, scrap metal, nails, pane glass, and household items were found between the original foundation and the cellar in the ash layer. Very few square nails were located in the excavated areas of the Men's Cottage.

The cellar proved to be a fill of variable rubbish from top to bottom. Within the rubble was a 1953 Saskatchewan license plate. There were also large amounts of baling wire (over 160 bundles). Large concrete blocks were also found throughout the cellar fill.

Among the brick concentrations to the south of the cellar were numerous pieces of ceramic drainage tile. The pieces were mixed in amongst the bricks and mortar with no visible pattern.

Between the inner and outer foundation, 4.3 m north-south by 2 m east-west in the southeast corner, one particular unit revealed a large
number of artifacts. The number of artifacts included hair pins, sewing needles, varied buttons, straight pins, tacks, nails, leather, eyelets, ceramics, and glass all much higher in proportion than adjacent units.

Three coins were found in the excavation, all within the original foundation. The oldest, a 1918 U.S.A. one cent piece, was found .10 m below ground level next to the east wall 2.21 m north of the south foundation. The second coin, a 1945 Canadian one cent piece was found .7 m north and 1.5 m west of the inner southeast corner at a depth of .23 m. The third coin, a 1946 Canadian five cent piece was found .1 m below surface, located .85 m south and .37 m west from the northeast corner inside the inner foundation.

Interpretation
The stratigraphy within the original foundation and the veranda extension indicated that the foundations were constructed without disturbing the sterile clay. This meant that the foundations were built on or near the original ground surface. The gravel lens was probably deposited when the Men's Cottage was moved from the site. A natural deposit has accumulated upon the gravel since the removal of the cottage.

A similar gravel layer and related layers appeared in the east and south flower beds. Here also the gravel was probably deposited when the cottage was removed and subsequent layers accumulated since then.

The Men's Cottage was composed of the original foundation built in 1908, with a lean-to extension over the cellar and an added enclosed veranda to the east and south. The inner foundation was the original.

The original foundation was poured with the use of a frame on the inside only, resulting in a smooth inside edge. The outer foundation was made by the use of a form. All the sides with the exception of the bottom were uniform and purposefully shaped to support the superstructure of the veranda (Figure 48).

The cellar was constructed by use of .23 m wide boards to line the inside and without the use of a form on the outside. The top and outer edges were squared off .26 m from the top. This portion of the upper wall had collapsed on the north, east and west walls. The north-south oriented
walls were abutted against the end, east-west walls. The notch removed from the southeast corner may have been either a chute opening into the cellar or a window, however no glass concentrations were found. The cellar had a dirt floor and the wood feature against the west wall was shelving.

The 1953 Saskatchewan license plate meant that the cellar was not filled until 1954 or later, presumably soon after the cottage was removed. The fill included rubbish needed to be disposed of as well as the concrete rubble destroyed by the removal of the cottage.

To the west of the cellar were various layers from construction back dirt. These mottled clay soils were thrown on the original ground surface, a sterile clay over a natural deposit of dark clay. The layer above the mottled soil was the natural deposit and sod which developed after the cellar's construction. The narrow strip of light coloured clay found parallel to the cellar on the west side was a construction fill.

The large concrete block south of the cellar was a doorstep leading into the lean-to. Leading toward the doorstep was a wooden walkway constructed over a bed of gravel used as an aid for drainage. Perhaps the gravel was a pathway before the wood walk was constructed, and the linoleum cloth a mat of some kind.

The bricks and mortar to the south of the walkway did not indicate any external structure. It was highly probable that they were collapsed from the south chimney when the cottage was removed. The tile which was associated with the bricks may have been part of the rubble associated with the cottage. A particular photo taken in 1939 (Clarke 1977:176) indicated a clothesline by the southwest of the cottage oriented in a northwest-southeast direction. The bricks may have supported a post for the clothesline.

There were two stumps west of the cellar which from their appearance and location may have been the original maples from the north shelter belt.

The rock border south of the cellar and the veranda represented a flower bed. The space in the border may have been around the shrubbery, for there was no evidence of a doorway at this location. The flower bed extended to the east of the veranda as far north as the side entrance, the arranged pile of rock. Unfortunately, the bricks in the northeast corner
were removed before any information on their orientation could be obtained. They may have been related to the rock border.

To the south of the cellar between the walkway and the flower bed were the numerous stratigraphic layers. At the bottom was the sterile clay and above it the natural deposit of clay. A thin ash layer on the clay may have resulted from cleaning the chimney on the south wall above the cellar. The ash may also have been dumped as refuse at the side of the door. Upon the ash was a sand layer possibly used in construction or as a drainage agent in front of the door. The coal layer upon the sand may have been a result of where the coal was kept at one time. Upon the coal was a layer of sand either to cover the coal residue or for some type of construction. The fill above the sand was rubble due to the removal of the cottage in the early 1950s.

The fill between the original cottage and the cellar contained a seed layer which would have been deposited at the same time the cellar was filled. These seeds were found only in the cellar and between the foundations thereby safely relating the two.

The glass concentrations on the north of the house were a result of the large north window mentioned in the historical reports. The glass by the southeast of the veranda and the glass found in the flower bed to the south of the cottage may have been from the above windows, however documentation did not give window locations other than the one to the north.

Along the eastern veranda from the side entrance to the south were varied artifacts. Historical documentation indicated that this was Mrs. Gillespie's sewing room. By the nature of the artifacts recovered this may be confirmed.

The ceramic concentration by the northeast corner of the veranda was probably left after the cottage was removed.

The 1918 coin which post-dated the construction of the cottage in 1908 may have been dropped through the floor above. When the cottage was moved a deposit was laid overtop. The other two coins of 1945 and 1946 must have been dropped after the cottage was gone because of their late date. However they too could have fallen through the floor and later disturbed, though the cottage was thought to have been unoccupied after 1943.
The three posts within the southeast portion of the veranda may have once been in a garden outside of the original foundation. The post to the south of the veranda was probably used to tie and support a plant or shrub in the flower bed. Because of their depth and the upright position they were obviously not disturbed by the removal of the cottage.

**Dry Privy**

Introduction

According to the site report the privy was always located in the excavation area, from before WWI to the mid-fifties when a new bathroom was built in the house. There was nothing in the record to indicate that the privy was ever moved to or from that location, or that it was ever rebuilt (Clarke 1977:191). The superstructure of the privy measured roughly 1.2 m by 1.5 m and was 2.4 m high at the peak of the gable. Inside a removable double latrine box sat on a packed earth floor over the pit (Clarke 1977:190).

Two excavation units were opened to include the entire substructure of the dry privy. The first unit, 85N11A, was located 42.0 m north of Station 24 and measured 1.54 m north-south by 1.80 m east-west. The second unit was located 1.0 m further north of Station 29 and measured .5 m north-south by 1.5 m east-west. Both units were trowelled to below the substructure and then shovel shaved.

**Stratigraphy**

The stratigraphy of the area of the dry privy consisted of seven soil levels. The topsoil, 3 to 8 cm thick, was a very dark grey clay. The second level was also a very dark grey clay, 2 to 12 cm thick. The third level, 1 to 7 cm thick, was an olive clay from some form of fill. The fourth level was a very dark grey clay, 10 to 20 cm thick. The whole area overlay three levels of dark greyish brown sterile clays.
Feature Description
Excavations revealed that the remains of the substructure had a wooden boat or skid beneath. This skid consisted of two parallel lengths of 10 cm by 10 cm (4 x 4 inch) lumber set 70 cm apart and connected by a 4.5 cm by 4.5 cm (2 x 2 inch) board nailed on top. The larger boards were 94 cm long and oriented east-west. The ends of these boards were cut on an upward bias of about 30° and 14 cm from the west end holes were drilled horizontally for .31 cm diameter wire to pass through. The cross-board was located 16 cm from the west end (Figure 52).

The flooring of the privy was laid over the top of the skid. Three adjacent floor boards, set north-south, were found immediately east of the cross-board of the skid. These tongue-in-groove boards were of 2.2 cm by 20 cm (1 x 8 inch) lumber and 1.18 m long. Four other smaller lengths of this type of lumber were found on the north and south sides of the structure.

The east and south sides of the feature were bordered by 4.5 cm by 10 cm (2 x 4 inch) lengths of lumber, one on the south side, three on the east. An area measuring 130 cm by 30 cm between the floor boards and east wall had a packed earth floor.

Artifacts
The artifacts found within the privy area were domestic and hardware including a laxative tin and a bathroom tissue bracket.

Interpretation
Excavations in the area of the privy were unsuccessful in locating a sewage hole. Although the privy reportedly remained in the same location for over thirty years there was no hole within the immediate area. It also seemed inconsistent for the structure to have skids if it was maintained in a permanent location. Finally, the location of the flooring within the structure indicated that the door was on the west side while the "as found" photos showed the door on the east side of the privy.
The above statements conflicted with the belief that the privy was located in a permanent location. There were two hypotheses which reconciled these facts. The first was that the privy was a portable unit, hence the skids. As such it would have facilitated the removal of deposit by moving the structure, with its bottomless latrine box, away from the deposit. The second theory was that the latrine box itself was hinged or removable to allow for the use of buckets, as was mentioned in the history report.

Caboose

Introduction

Excavation was begun to investigate a row of rocks around the south edge of the caboose. It was immediately realized the structure had been modified for use as a chicken coop and further investigation for fence lines was pursued.

The caboose was originally used as a portable kitchen and shelter for the hired men, but was no longer used after the late thirties or early forties (Clarke 1977:181). At this time it was moved from in front of the Men's Cottage, probably to its present location.

The units for excavation were derived from a point 36 m south and 15 m east of the datum point number four. 85N3A was the surface south of the caboose, 85N3B a unit 1 m north-south by 2 m east-west located southwest of the caboose. The units 85N3C, 85N3D, and 85N3E were south and east of the caboose, all measuring 2 m by 2 m each.

These units were excavated by trowel and shovel shaving.

Stratigraphy

The sod layer, a thickness of 6 to 8 cm, was coarse clay. The level below the sod was a buried mixture with coarse clay and inclusions of light clay. The second layer was coloured very dark grey and lay between 6 cm and 18 cm below the sod. The brown to dark brown sterile clay began 18 cm below the surface.
Feature Description
A row of rocks was visible on the surface aligning south from the caboose 2.5 m and curving east 4.2 m, the length of the caboose. The rocks were partially buried 10 cm to 15 cm below the surface. Chicken wire was exposed from under the rocks so that one edge of the wire was held in place by the rocks.

All of the units were dug to the depth of the sterile clay. Only one unit, 85N3B contained any features at all. This single feature was a post 12 cm in diameter, located .45 m east and .45 m north within the unit. The post was found between .32 m and 1.05 m below the surface.

Interpretation
Our interpretation of the caboose was entirely related to its function as a chicken coop. This was based primarily on the evidence of a chicken wire fence line that paralleled the south wall. The fence line was suspected of continuing around the east side of the caboose where it would have attached to the extant gate. However, no evidence whatsoever was found to indicate this fence.

The post near the southwest corner of the caboose and adjacent to the rocks was the only related post that was found.

Hog Pen
Introduction
There was no mention in the historical records of when the hog pen was constructed. The historical photos dated the pen to 1945, however, it may have been as early as 1930 (Clarke, 1977, personal communication). Apparently there were two sections to the hog pen, a southern section which contained the gate and feeding trough (Figures 46 and 53) and a northern area for the pigs to roam.

The southwest corner of the trough was located 24 m east and 4 m north of Station 3. The top of the concrete trough was allotted 85N4A, the
unit to the south 85N4E, to the southeast 85N4B, to the northeast 85N4D and to the north 85N4F (Figure 54).

Stratigraphy
The surface was a very dark grey sod of coarse clay 4 cm to 8 cm thick. Beneath the sod was a 20 cm thick layer of very dark grey coarse clay. Below the second layer was the brown to dark brown sterile clay.

Feature Description
The concrete base for the feeder was composed of four parts. The main section measured 1.8 m east-west by 7.8 m north-south with additional concrete strips to the north, south and west. The north and south end pieces were 13 cm wide and 1.8 m long, whereas the strip on the west edge was 13 cm wide and 8.2 m long.

Iron pegs, approximately 1 cm², were set into the concrete in a north-south line. The first was 58 cm west of the eastern edge and others were evenly spaced every 79 cm along the length of the trough.

A 10 cm diameter post was located 6 cm from the northeast corner of the trough. In the same unit 90 cm east of the concrete was a board 60 cm long and 12 cm wide.

In the northwest corner was a post 10 cm in diameter, located adjacent to the concrete strip. A third 10 cm diameter post was located in the southwest corner 6 cm east and 5 cm south of the corner of concrete. Due east in the opposite corner was a fourth post of a similar size just south of the concrete (Figures 55 and 56).

Interpretation
The feeding trough was built in stages. It began on a bed of stones with a brick border, over which was poured the large concrete slab within a form. The end pieces and west edge piece were added to act as a border around the trough. A wood trough was then fastened to the concrete by means
of iron pegs. Posts at the corner of the concrete supported both the wood trough and the hog pen fence.

The board located east of the concrete base was incidental and had no relevant structural function.

Barbed wire was also embedded in the concrete and buried beneath the surface to prevent the hogs from rooting under the fence (Figure 54).

Barn-yard Fence

Introduction

According to the historical report a high board fence crossed through the centre of the property, walling off the barn-yard from other parts of the farmstead. This fence ran from the northeast corner of the barn south into the dugout quadrant, then west to encompass the dugout well, and northwest to join the page wire fence line which enclosed the north end of the dugout quadrant. The high board fence was part of the complete fence barrier around the dugout quadrant (Clarke 1977: 98). On the west side of the implement shed a gate in the board fence gave access to the working driveway (Clarke 1977: 107-108).

Six excavation units were located at varying points within the fence line area. Unit 85N9G, 3 m north-south by 2 m east-west, was located 46 m north and 1 m west of Station 24. Unit 85N9H, an adjacent 2 m square, was located 46 m north and 3 m west of Station 24. Forty-two metres north of Station 24 was unit 85N9C which measured 2 m north-south by 3 m east-west. Unit 85N9P, 2 m square, was located 12 m north of Station 24. Three metres south of Station 24 was unit 85N9U which measured 6 m north-south by 4 m east-west. Unit 85N9V measured 6.7 north-south by .64 m east-west and was 17.2 m south and 6.8 m west of Station 24 (Figure 57). All units were excavated by a combination of shovelling and shovel shaving.

Stratigraphy

Only unit 85N9P was located in a cultivated area. Units 85N9C, 85N9G and
85N9H had similar natural stratigraphies. The very dark grey clay topsoil was 2 to 10 cm thick. Below this was a 6 to 24 cm thick olive clay. The next level was a very dark grey clay 6 to 20 cm thick. All units overlay a dark greyish brown sterile clay.

Units 85N9U and 85N9W were both located near the dugout. The topsoil was a very dark grey clay 4 to 10 cm thick. Below this was a 9 to 23 cm thick very dark grey clay. In unit 85N9U only the third level was a 3 cm thick dark greyish brown clay and the fourth level was a very dark grey clay 10 cm thick. All areas overlay a dark greyish brown sterile clay.

Feature Description

During the excavations of the barn-yard fence line two fence posts and two post holes were located.

The first fence post was located in units 85N9G and 85N9H. The post itself was set deeply into the sterile clay soil. It had a 15 cm diameter and was approximately 50 cm below ground level. On the north and south sides of the post were nailed two 71 cm lengths of board, 9 cm wide and 5 cm thick (2 x 4 inches), which were fastened to the post and set at a northeast-southwest angle, horizontal to the surface of the ground (Figure 58). The fence post was surrounded by a pit, 87 cm north-south by 60 cm east-west. This pit was filled with rocks and small stones, which surrounded the fence post. The rock pile began 20 cm below ground level. This fence post was located on the line dividing the two excavation units 1.10 m north (0.0 m east 85N9G, 2.00 m east 85N9H).

In unit 85N9C a post hole was exposed. Located 30 cm below the surface the post hole had a diameter of 23 cm by 18 cm. Some minor traces of wood were found inside the hole, which had a depth of 43 cm. Within the unit the post hole was located 53 cm to 74 cm north and 182 cm to 200 cm east.

The second fence post was located in unit 85N9P. It had rocks piled around it as in 85N9G but there was no discernible pit nor any boards nailed to it. The pile of rocks covered 1.10 m north-south by .60 m
east-west and began 7 cm below ground level. The post had a diameter of 8 cm. It was located 1.95 m north and 1.36 m within the unit.

A post hole was uncovered in unit 85N9U. It was located 3.28 m east and .65 m north. The hole was found at 32 cm below the surface and continued to at least 73 cm below the surface.

In unit 85N9W no fence posts or post holes were uncovered. The only feature was a very tenuous soil change in the floor of the unit at 2.30 m north. At this point the dark greyish brown mottled clay of the north half became very moist and less mottled.

Artifacts
Units 85N9C, 85N9G and 85N9H contained mostly small hardware items while units 85N9P, 85N9U contained large amounts of ceramics and glass. Unit 85N9W had no artifacts.

Interpretation
The fence post in units 85N9G and 85N9H was so well constructed that it was probably the corner post for the gateway at that end of the barn-yard. Both the rocks and the lengths of board would have provided the extra stability needed for such a post. Informants suggested that near the bottom of the post there would be two more boards nailed perpendicularly to the first two and that the intervening space would be filled with rock but this was not verified.

This post was 5.4 m northwest of the post hole in unit 85N9C. The angle between these fence posts was in accord with the line of the fence line in that area as seen in the 1946 air photo of the site (Figure 20).

The fence post in unit 85N9P was also particularly well constructed. This fact in conjunction with the location of the post indicated that the post may have been the south fence post of the gate leading from the farm road into the barn-yard.

The soil change in unit 85N9W was thought to represent the line of the high board fence as it began to encircle the dugout well. The mottled
appearance of the clay in the northern area of the unit may have been caused by animals disturbing the ground of the barn-yard, particularly in wet weather. The moist unmottled clay to the south would then represent the beginning of the north end of the dugout yard.

The two ends of the fence line were located by means of photo interpretation. A circa 1914 photograph (Figure 59) of the north side of the barn included a visible section of a high board fence adjacent to the northeast corner of the barn. This fence appeared to angle southeast, on a line with the post excavated in units 85N9G and 85N9H. A 1945 photograph (Figure 60) taken on the south side of the barn looking north had a high board fence in the foreground. In this photograph the fence emerged from the southeast to a point midway into the barn-yard, southeast of the feeding floor doorway. At that point the fence angled west to join the page wire fence which separated the dugout area from the barn-yard. The photograph also indicated that there was a gateway, possibly of double thickness, just before the fence angled west. Positioning of this corner was confirmed by the 1946 air photo (Figure 20).

Other historical photographs contained only vague views of the barn-yard fence line. There was no evidence, historical or archaeological, to indicate any further fence lines within the barn-yard area.

Work-yard Fence

Introduction

According to the site reports a six-strand page wire fence ran from the Men's Cottage to the northeast corner of the barn segregating the cottage from the rest of the work-yard. At one stage this fence line sat inside the maple shelter belt, probably to protect the nascent trees from grazing animals. The "as found" information indicated that at some point the fence line was removed to beyond the trees (Clarke 1977:104-105).

There were two excavation units which contained evidence of the fence line. Unit 85N2M, located on the east side of the work-yard, measured 3 m north-south by 10 m east-west and was 8 m south and 1 m east of Station 9D.
Unit 85N15E, located on the west side of the Men's Cottage measured 2 m north-south by 4 m east-west, and was 8 m both south and west of Station 7. Unit 85N2M was excavated by shovel. Unit 85N15E was excavated by shovel and trowel with some screening (Figure 61).

Stratigraphy
Unit 85N2M lay in cultivated soil. The soil of the plough zone was a very dark grey clay. Below this was a dark olive clay which was sterile.

The stratigraphy in unit 85N15E consisted of four soil levels some of which related to the construction of the Men's Cottage. The topsoil was a 4 to 23 cm thick very dark greyish brown clay. The second level was another 1 to 8 cm thick very dark greyish brown clay. Below this was a very dark brown clay 10 to 66 cm thick. The area overlay a dark yellowish brown sterile clay.

Feature Description
Two wood posts were excavated in unit 85N2M. Both were 4 cm in diameter and the bottoms were pointed. The posts were in a north-south line, 1.8 m apart, and were located 1 m from the west wall of the unit in sterile clay. The north post was set into a small pit 25 cm wide and 25 cm deep. The other post had no distinct pit.

Inside the unit beside the Men's Cottage a similar upright wood post was uncovered. This post was the same size as the others and was also pointed at the bottom. It was located on the north-south line, 1.9 m from the west wall of the unit. The post had been driven through a 2.5 cm thick piece of planking into the soil level of the cellar fill.

Interpretation
The fence line indicated by the three excavated posts could not have been of a very permanent nature. The diameters were small and as such would
not have presented an obstacle to animals determined to graze on the other side of the fence. If a substantial protective fence did exist, it may have been located in the same vicinity but was replaced in later years by the excavated fence line. The fact that the third fence post was pounded through a piece of planking associated with the construction of the west addition to the Men's Cottage indicated a construction date for the fence line of post-1920 (Figure 61).

Coal and Gravel Concentrations

Introduction

Concentrations of coal, gravel and artifacts were noted during a surface survey of the ploughed area on the east side of the work-yard. As no structures were indicated for this area, excavation was initiated to determine the cultural relevance of these concentrations. The presence of coal led to an initial hypothesis that this area contained some form of home forge for minor blacksmith work while the gravel was thought to indicate a lane way from the main road to the Men's Cottage.

An examination of the various site reports indicated that a six-strand page wire fence at one time stretched across this area from the Men's Cottage to the barn. This would have segregated an entrance to the Men's Cottage from the work field (Clarke 1977:104). On the "as found" drawing and the 1946 air photo (Figure 20) of the site a small rectangular structure was located on the west side of the fence in the approximate area of the gravel concentration. It was an unknown feature.

To test the coal concentration, a grid of eight 2 m² units was laid out. At a point 20 m south of Station 9D five of these were excavated. The units were removed in stratigraphic levels by trowel until artifact numbers decreased; then they were shovel shaved. All back dirt was screened. Units 85N2D, 85N2E and the east half of 85N2F were located in the cultivated portion of the work-yard. Units 85N2G, 85N2H and the west half of 85N2F were located in uncultivated land (Figure 62).

Two units were excavated to obtain a profile of the gravel lens. From a point 36 m south of Station 9D a grid unit was laid out 4 m north-south
by 1 m east-west with a second unit 1 m north-south by 3 m east-west from
the northwest corner of the first unit. The units were excavated by shovel
to the sterile level. Unit 85N2K was located in the cultivated portion of
the work-yard. Unit 85N2L was located in uncultivated land.

Stratigraphy
In the cultivated excavation units, the plough zone was composed of a black
clay up to 22 cm thick though in the area of the gravel concentration this
appeared to be divided into two levels. This corresponded to two levels in
the uncultivated area. The upper level was a dark reddish-brown clay
which was 7 to 11 cm thick. Below this was a black clay which was 3 to
8 cm thick. The whole area overlay an olive grey coarse clay which was
sterile. It was between the reddish-brown and black levels that both the
coal and gravel occurred.

Feature Description
The overall dimensions of the irregularly shaped coal concentration were
approximately 10 m north to south and 8 m east to west. In the uncultivated
units this coal concentrated in the upper portion of the lower stratigraphic
level, while in the cultivated areas it was mixed throughout. It also
seemed to concentrate more in the north half of 85N2F, the northwest
corner of 85N2J and the east half of 85N2G. The irregularly shaped gravel concentration measured approximately
13.5 m north to south and 3 m east to west. In the uncultivated area
this gravel formed a lens between the two usual stratigraphic levels while
in the cultivated area it was mixed throughout the plough zone. The gravel
lens decreased in thickness from east to west, and disappeared 15 cm before
the west wall of 85N2L.
Artifacts
Within the coal concentration, the highest density of artifacts came from the sod level 2 cm to 10 cm below the surface of the ground in all units. The artifacts were mostly of a domestic nature—ceramics, bottle glass, bone, household items, pane glass, decorative artifacts, tin cans and personal items. There were also some tools and hardware. None of the artifacts showed evidence of having been heated or melted, an important fact in respect to the original hypothesis.

The artifacts from the gravel concentration were considerably more numerous than those from the coal. They included some ceramics and bottle glass but were mainly hardware items.

Interpretation
Initially, it was thought that the coal and artifact concentrations in association might suggest blacksmithing. However, after excavation, this was rejected on the basis that very few blacksmith related artifacts were found and that the artifacts showed no evidence of heat treatment.

The area was re-examined in terms of a domestic refuse pile. The nature of the artifacts suggested house related activities and the coal may have represented waste from stoves or furnaces. Minor concentrations of ash and cinder could have also come from similar sources.

There was no evidence of the page wire fence which ran through the excavated area. It would probably have passed through unit 85N2D.

The initial suggestion of a gravel lane way proved to be equally incorrect. This idea was rejected when it was found that the gravel concentration was confined to a limited area. Interpretations altered with some information presented by Mr. Jim Poag. According to Mr. Poag this area was where they dumped gravel in 1935 to build the chicken coop floor.

There was no evidence of the page wire fence which probably passed to the east of the excavation. There was also no evidence of the unknown rectangular structure.
Dugout Quadrant

The dugout quadrant was completely oriented toward water collection, retention and utilization. It was bordered by the outer perimeter of the farmstead to the west and south, by the barn-yard fence to the north and by a line of trees and a drainage ditch to the south.

Excavations within this quadrant were minimal but units were dug to investigate the stratigraphy of the dugout hills, the filtering system of the well and the north fence line. Other units were excavated to locate the southeast extension of the barn-yard fence and the east tree lines but these are covered in other sections of the report (Figure 63).

Dugout Filter System

Introduction
According to the site report the wells on the site were fed solely by the dugout. The water was filtered and purified while percolating through a sand and gravel vein between the dugout and the wells (Clarke 1977:96-97).

An excavation unit was dug to investigate the nature of this lens. It measured 1.1 m north-south by 1.1 m east-west and was located 14.6 m south and 16 m west of Station 24. The unit was excavated by shovel to a depth of 1.4 m below ground level.

Stratigraphy
The topsoil was a dark grey sandy loam 4 to 6 cm thick. The second level was a 24 cm thick black clay. Below this was a layer which consisted of clay, brick, mortar and stones, 10 to 25 cm thick. The whole area overlay a very moist greyish brown clay which was sterile.
Interpretation

A diagram on sand vein technology in the site report suggested that the sand and gravel vein should have been located at a depth of 3 feet (Clarke 1977:97). However, the third soil level in the excavation unit was much coarser than a sand and gravel vein and only went to a depth of 55 cm.

As the soil below this level was sterile it was assumed that this level represented Motherwell's application of sand and gravel technology, and as such did not seem to be as efficient as it might have been.

Dugout Hill

Introduction

A trench was excavated into the side of a hill on the west side of the dugout to determine the stratigraphy. According to the site report, earth removed from the kidney-shaped dugout was piled to form flanking hills on the northwest and southeast sides of the dugout. The largest of these were seven to eight feet above ground level. The mounds were planted with willow trees, to complete the snow catching features of the area immediately surrounding the water hole (Clarke 1977:95-96).

A trench, 5.5 m north-south by 1.5 m east-west, was excavated into the northwest hill flanking the dugout. This trench was 32.5 m south and 9.5 m east of Station 25. It was excavated to ground level, a depth of 2.3 m at its deepest point.

Stratigraphy

The stratigraphy of the dugout hill consisted of a sod level 8 cm thick, and alternating layers of brown sandy fill and black clay. The second, fourth, and sixth layers were fill, from 12 to 40 cm thick. The third, fifth and seventh levels were black clay, 4 to 13 cm thick. Below these levels was a thick layer of black clay 1.0 m thick. The whole hill overlay a dark greyish brown clay.

The black clay had a blocky structure and was very hard packed. The brown sandy fill was also hard packed but not as much as the clay.
Interpretation
The alternating levels of soil which made up the dugout hill did not seem consistent with the original theory of the hill's construction. In that construction the expected stratigraphy would have the black clay topsoil of the dugout underneath the clay fill from the lower soil levels of the dugout. Instead, alternating levels of loam and fill indicated either the building up of the hill over a period of time or the procurement of the soils from several different areas with only the lowest levels of loam and fill representing the dugout excavation.

Dugout Tree Line and Fence Line
Introduction
An excavation area was opened at the boundary of the dugout quadrant and the west half of the barn-yard. The purpose was to determine the location and extent of a shelter belt visible on the 1946 air photo (Figure 20) and to locate the boundary fence line.

Other than the 1946 air photo there was no information which indicated that a tree line had been planted on the north end of the dugout quadrant. According to the site report this end of the dugout was left treeless so that snow could pass into the quadrant and be trapped for spring (Clarke 1977:96). The only feature indicated for the area was a page wire fence which was part of a complete fence line around the dugout to avoid the tragedies often associated with farm dugouts (Clarke 1977:98).

The excavation area measured 5.0 m north-south by 4.0 m east-west. Station 25 was located on the south wall of the area, 2.0 m east. The area was excavated by shovel.

Stratigraphy
The natural stratigraphy occurred only at the extreme north and south ends of the excavation area. The topsoil was 1 to 20 cm of very dark grey clay. The second level was a 7 to 17 cm thick very dark grey clay. The whole area overlay a dark greyish brown sterile clay.
In the middle of the excavation area the ground level inclined into a small mound (Figure 64). There were five soil levels associated with the mound. The topsoil on the mound was the same as the very dark grey clay found on the ends. The second level was a 1 to 6 cm thick dark grey mottled clay. The third level was a 1 to 15 cm thick grey clay. The fourth level was a brown mottled clay fill 2 to 36 cm thick. The fifth soil was located in a small pit 30 cm wide and 32 cm deep and was a dark grey clay.

Feature Description
Two tree stumps were uncovered during excavations. Set on an east-west line, the stumps were 1.45 m apart and approximately 50 cm below ground level. Their diameters averaged 15 cm. The first stump was located 1.6 m north and 1.5 m east. The second stump was located 1.45 m north and 0.0 m east (in west wall of excavation area).

A fence post was uncovered 2.4 m north of the tree line. It was 43 cm below ground level and 11 cm in diameter. Within the excavation area the fence post was located 3.9 m north and 1.9 m east (Figure 64).

There was no indication of a preparation pit for the fence post.

Artifacts
A very large number of artifacts was recovered. The largest percentages were of ceramics, bottle glass, leather fragments and tin cans. A preliminary examination of the bottles gave an approximate dating of 1880 to 1915 for the main artifact concentration.

Interpretation
The excavations within this area uncovered an east-west tree line with an east-west fence line nearby. It was not known if the tree line and fence line were placed at the same time.
The mound located between the fence line and tree line in the area appeared to have been a small midden. Most of the artifacts were associated with this mound. The overall east-west dimensions of the midden were unknown but it likely did not extend much beyond the limits of the excavated area. This midden was largely of a domestic nature and probably deposited between 1896 and the early 1900s.
Garden Quadrant

The garden quadrant actually contained two separate features. These were the garden and the implement shed. It was bordered on the south and east sides by the farmstead perimeter, on the north by the farm road and on the west by some tree lines between the garden and dugout quadrants.

Archaeological investigation in this area was minimal. Aside from some tree line location exercises, the only features that were examined were the garden hotbed and farm road. The tree lines on the north and west borders of the quadrant, the south side of the implement shed and the centre of the garden were all studied. However, the possibility of the existence of a tree line through the centre of the garden was rejected (Figure 63).

Farm Road

Introduction

An examination of historic photos (Figures 20 and 65) suggested that the farm road or working driveway ran west along the north side of the implement shed, through a gate in the board fence, then into the barn-yard. The road was strictly utilitarian and provided access for farm machinery from the municipal road to the implement shed and the barn-yard beyond. The decoration of the front fence line ceased south of the farm road gateway and the road was hidden from the house quadrant by a caragana hedge and a row of trees bordering the tennis-court. The front gateway of the road was flanked by two white spruce. The farm road was dated by a photo to pre-1922.

An excavation unit, 5 m north-south by .5 m east-west was located just east of the front gateway and spanned the road-bed. The unit was 10 m south of the Station 11 and was excavated by shovel.
Stratigraphy
The stratigraphy of the farm road contained eight soil levels. The topsoil was a dark grey clay 4 to 16 cm thick. The second level was a 1 to 6 cm thick gravel lens with light yellowish brown sand. The third level was a dark grey clay 1 to 18 cm thick and the fourth was a mottled olive clay and dark grey clay 10 to 40 cm thick. Below this was a 1 to 14 cm thick gravel lens with grey clay and a fine light brownish grey sand, at one point only, 2 cm thick. The seventh level was a 6 to 16 cm thick very dark grey clay. The area overlay a sterile dark brownish grey clay. The last two soil levels, very dark grey sterile clay, were part of the natural stratigraphy of the area. The upper levels related to the construction and maintenance of the road-bed (Figure 66).

Feature Description
The farm road-bed had a width of 3.5 m north-south. The first gravel lens extended from the surface to 10 cm below ground level, and was 2.8 m north-south. The gravel lens was made up of three sections, each one approximately 90 cm wide with the level of sandy loam filling the intervening gaps. The second gravel lens was 26 to 50 cm below ground level. It was 2.5 m wide and was offset to the south of the upper gravel lens.

Interpretation
The stratigraphy suggested at least two possible construction sequences. The first involved two major phases of construction. The first, original construction period consisted of a fine layer of sand followed by a layer of small gravel being laid over the natural level of clay. At some later date the road-bed was rebuilt. Over the old bed a mixed layer of clays was laid, followed by another level of clay. On top of this new road-bed a layer of medium-sized gravel was spread, approximately 70 cm further north than the original. After the farm was abandoned a layer of topsoil began to form on top of the gravel.

The second alternative was that there were three construction phases. In this scheme the two gravel beds were separated by a bed of olive clay
and dark grey clay. Then level three, the dark grey clay, would have been a natural deposit. Under this building sequence, there may have been a period of disuse.

Hotbed
Introduction
An excavation unit was placed on the south side of the implement shed to locate the hotbed.

Historical records indicated that the implement shed was built in 1908 (Clarke 1977:158). Therefore, the hotbed must have been constructed sometime thereafter. Since the hotbed was essential to the Motherwell garden it would have likely been built shortly after completing the implement shed which provided the shelter and warmth needed (Figure 67).

The unit behind the implement shed was four metres east of the datum Station 24 and was 15 m long by an average 1.8 m wide. An extension of 1.5 m was added when it was found that the hotbed was further south than expected. Work was carried out by use of shovel, shovel shaving and trowel.

Stratigraphy
The sod layer was very thin in areas since ploughing had come close to the implement shed. The sod layer was a clay with a very dark brown root mat. Beneath the sod was a layer of very dark brown clay. The dark greyish brown sterile clay was from 35 cm below surface to an undetermined depth.

Feature Description
Within the unit was a wood frame, parallel to the shed, its northeast corner 1.2 m south and 1.2 m east of the shed. The frame was 2.28 m east-west by 1.5 m north-south. A maximum width of the wood was 15 cm wide and 4 cm thick (2 inch by 6 inch lumber). The boards were lying on their edges forming a box-like structure. The uppermost portion of the boards lay 20 cm below the ground surface. A layer of vegetable matter 3 cm to 5 cm thick
was found inside the box structure near the top of the boards, 22 cm from the surface. Along the north edge of the frame was a small layer of vegetable matter 10 cm below the upper layer. There was no evidence of how the boards were attached at the corners (Figure 68).

A board laying on its edge, north-south, was located between the implement shed and the hotbed frame. There were no other boards in association, nor was there a layer of vegetable matter.

Three major stumps and a few small ones were located .50 m south of the shed. Another 1.2 m south again was another row of trees in the south wall of the unit. A large stump 1 m east of the hotbed was 50 cm in diameter (Figure 69).

Artifacts
Large amounts of pane glass were found next to the implement shed north of the hotbed. It seemed likely that a pane of glass was located over the area between the shed and the hotbed.

Interpretation
The wooden frame structure containing the vegetable matter was concluded to be the hotbed. A box structure was constructed by placing boards on edge, however, no corner fastenings were found. A shallow pit was likely dug first, as indicated by a slightly deeper than normal level for the sterile clay.

The board between the hotbed and implement shed was first believed to be another hotbed, however it contained no vegetable matter or related features. If this was an auxiliary frame then it functioned differently from the one to the south of it.

The tree plantings to the west of the hotbed appeared to follow the four by four grid pattern Motherwell used for planting. To the east of the hotbed was a large tree which must have shaded the hotbed considerably. This suggested that the hotbed may have been moved out from next to the implement shed.
Garden Tree Lines

Introduction

According to the site report the shelter belts around the garden were completed by the addition of a single row of maple trees. Clarke stated that "except for the orchard which was planted around 1930, these are among the last of the major tree plantings at Lanark Place." By examining the size of the stumps left and the height of the trees in the 1922 panoramic photograph, Clarke dated the planting of the maples to around 1903 to 1905, the same time as the two rows of younger maple north of the house (Clarke 1977:54).

At some point when the garden tree lines were established, Motherwell took advantage of the shelter to transplant wild fruit bushes. The exact location of the fruit bushes was not shown in the site report. However, on the data research map in the Landscape Development Study, McBain and Stewart (1977) suggested the possibility that the fruit trees were used to separate the growing garden area from the area lying fallow.

The western shelter belt of the garden consisted of loosely planted willow and Russian poplar and was, in a sense, a continuation of the belt of trees which extended south from the northern edge of the property. This shelter belt was designed to protect the garden area "from the parching winds of summer with its dense foliage" (Clarke 1977:51).

To locate the maple trees east of the implement shed, an excavation unit, 5.30 m north-south by 2.0 m east-west with a southwest 2 m by 2 m addition, was opened 20.4 m east and 1.2 m north of Station 24. A unit 2 m north-south by 3 m east-west was opened 27.4 m south and 29 m east of Station 24 to explore for fruit bushes in the centre of the garden. At a point 4.2 m south of Station 24, a unit, 3 m north-south by 11 m east-west, was located to reveal the original west side tree lines (Figure 69).

Stratigraphy

The unit in the centre of the garden was located in cultivated soil. The dark grey clay plough zone was 15 cm thick. Below this was a dark greyish brown sterile clay. The other two units had similar stratigraphies. The
very dark grey clay topsoil was 5 to 6 cm thick. The second level was also a very dark grey clay, 10 to 40 cm thick. Both areas overlay a sterile dark greyish brown clay.

Feature Description
In the unit east of the implement shed two tree stumps were uncovered. The first stump was 2.5 m east and 2.0 m north of the southeast corner of the implement shed. The second stump was located 2.5 m due east of the first.

The unit in the centre of the garden contained no tree or bush remains and there was no indication of previous plantings in the soil levels.

The unit within the western shelter belt area spanned the drainage ditch which ran south through the unit. On the west side of the ditch, a large tree stump was uncovered. This stump was 30 cm below ground level and located 1.6 m to 2.5 m east and 1.18 m to 1.89 m north within the excavation unit. Approximately one metre east of this stump, in the south wall of the unit, several roots were exposed. The root concentration was found 21 cm below ground level. On the east side of the drainage ditch, a 3.5 m long section uncovered no features.

Artifacts
No artifacts were found in the centre of the garden and only a minimal number were found east of the implement shed. A large percentage of domestic artifacts were found in the western half of the unit within the western shelter belt.

Interpretation
The excavations in the centre of the garden showed no evidence that fruit bushes were planted in that area.

In the western shelter belt area one original tree line was located and possibly a second.
The row of maple trees east of the implement shed appeared to have been planted on an 8 foot grid which seemed somewhat large for the area which was supposed to be heavily sheltered. However, it was possible that an intervening sapling failed to take root.
Permission was granted by the Steucks to excavate outside the farmstead so two different operations were conducted west of the property. The first excavation was located outside the northwest corner to locate and identify a tree line that had enclosed an experimental field in that area. The second operation was originally instigated to investigate a possible implement grave-yard immediately west of the barn-yard. Though this grave-yard was never located a wooden feature was discovered and partially excavated (Figure 1).

Experimental Field
Introduction
The small plot of land referred to as the experimental field sat outside the western edge of the Barn Quadrant and was surrounded by a caragana hedgerow. Informants' memories about this plot of land were sketchy but Clarke suggested that "such a carefully delineated plot would have been entirely consistent with Motherwell's experimental approach to farming" (Clarke 1977:109). The 1946 air photo (Figure 20) also gave a reasonable impression of the size and shape of the field.

An excavation unit was opened in the area of the former experimental field to locate and identify the hedgerow which formed the boundary of the field. The northeast corner of the unit was located 1 m west and 2 m south of Station A. The 4 m north-south by 3 m east-west unit was excavated by shovel.
Stratigraphy
The excavation unit was located in cultivated land. The plough zone consisted of a very dark grey clay and was 14 to 24 cm thick. Below this were sporadic lenses of a thin layer of woody material. The whole area overlay a sterile dark greyish brown clay.

Feature Description
Excavations in the unit uncovered the remains of two posts and two small stumps. The posts and stumps were all in a single line running northeast to southwest. The posts were 15 cm and 9 cm in diameter and 2.67 m apart (9 feet). The tree stumps were 1.60 m (5 1/2 feet) apart. All the features were located about 20 cm below ground level and were imbedded in the clay level with no evidence of preparation pits (Figure 70).

Artifacts
Small metal objects such as fence staples and wire were found in the excavation unit.

Interpretation
The experimental field was bordered by a fairly substantial fence line given the spacing and diameter of the fence posts. Planted along this fence line was a hedgerow, probably caragana. The combination of fence and caragana appeared to be an effort to provide almost an inpenetrable fence line, probably to keep animals in or out.

Outside Perimeter
Introduction
During unsuccessful testing for the supposed implement grave-yard west of the barn-yard some fragments of a wood feature were uncovered. Excavation units were then laid out to further expose and explore this unknown feature.
The site report made no mention of a structure in this specific locality. It was thought that the wood could represent the remains of a log cabin, the first Motherwell home, which was only known to have been located somewhere on the homestead quarter section (Clarke 1977:8).

From a point 12.0 m west and 6.0 m north of Station 3, a unit 3 m² with a 1 m² extension on the north side, was excavated. This unit was excavated by trowel only.

Stratigraphy
The excavation unit was located in a recently cultivated field. The plough zone was a very dark grey clay 10 cm thick. The second level was also a very dark grey clay and was 25 cm thick. The whole area overlay a dark greyish brown sterile clay.

Feature Description
The wooden feature in the unit lay immediately below and partially within the plough zone. The total extents of the feature were not determined during excavation. The wooden feature consisted of four 10 cm by 15 cm (4 x 6 inch) lumber beams running northeast-southwest, set 65 to 80 cm apart, with lengths of 2 cm by 10 cm (1 x 4 inch) lumber perpendicularly nailed to the beams by 7.4 cm (3 inch) round nails (Figure 71).

Artifacts
A large number of 6.5 cm (2 5/8 inch) round nails were found in the excavation unit.

Interpretation
The identification of this feature was speculative. Its construction was very similar to that of the north-south high board barn-yard fence as seen in historical photographs. The basic difference between the two was that
the barn-yard fence had at most three cross-beams while the excavated feature had four cross-beams. Therefore, this feature was not part of that section of the barn-yard fence but it is possible that it was part of another section or it may have been from another similar fence or corral.

A second speculation on the identification of this feature was the possibility that it was part of the original wood barn ramp. The supportive evidence for this theory was that the estimated width of the barn ramp, just over 3 m, was very close to the approximate lengths of the 1 inch by 4 inch lumber of the wooden feature. Also, the existence of four heavy beams suggested that this structure may have been used under considerable stress.
References Cited

Clarke, Ian
1977
"Motherwell Historic Park Landscape and Outbuildings, Structural and Use History Final Report." Manuscript on file with Historic Research Division, Parks Canada, Prairie Region, Winnipeg.

McBain, John and John Stewart
1977
"Motherwell Homestead, National Historic Site, Landscape Development Study." Manuscript on file with Engineering and Architecture Branch, Department of Indian and Northern Affairs, Ottawa.

Naftel, William
1969
Lanark Place, Abernethy, Saskatchewan Structural History. Number 114. Parks Canada, Ottawa.
Figure 1. Location map of Motherwell homestead (northern half).
(Drawing by D. Milton)
Figure 2. Soil profile on west side of house showing construction fill (Number 10) and related stratigraphy looking north.

Figure 3. Soil profile at front porch showing porch foundation and natural stratigraphy below.
Figure 4. View of house showing concrete borders and south lawns. Looking northwest (circa 1911). (Motherwell Collection)

Figure 5. View of house and front yards. Looking northwest (circa 1904). (Motherwell Collection)
Figure 6. Tennis lawn and house looking north (circa 1916). Note top of back porch on west wall of building. (Motherwell Collection)

Figure 7. Back porch looking east. (Motherwell Collection)
Figure 8. Plan view of back porch showing sill beams and supports. (Drawing by D. Milton)
Figure 9. Wooden barrel and oil drum filter systems partially excavated. Looking south.

Figure 10. Detail of wooden barrel filter system. Looking west.
Figure 11. Generator exhaust filter systems in plan and profile. (Drawing by D. Milton)
Figure 12. Plan view and construction details of wooden box feature. (Drawing by D. Milton)
Figure 13. Plan view and reconstruction of southwest corner of outside cistern. (Drawing by D. Milton)
Figure 14. Photo of house looking northwest (circa 1911). Note conduit and rock pile to left of automobile. (Motherwell Collection)

Figure 15. Flower garden looking north circa 1919. (Motherwell Collection)
Figure 16. South end of flower garden looking northwest (circa 1922). (Motherwell Collection)
Figure 17. Front flower garden. Note location of excavation units and reconstruction of garden (circa 1920). (Drawing by D. Milton)
Figure 18. Profiles of front flower garden units. (Drawing by D. Milton)
Figure 19. Cross-section profile of main road. (Drawing by D. Milton)
Figure 20. Air photo of site taken in 1946. Top is west.
(Dept. of Mines, Energy & Resources)
Figure 21. Map of orchard showing excavation units and interpretation of plantings. (Drawing by D. Milton)
Figure 22. Portion of panorama photo showing tennis-court in use. Looking west, 1922. (Motherwell Collection)
Figure 23. North side of tennis lawn showing excavation units and possible locations of court lines. (Drawing by D. Milton)
Figure 24. Entrance to tennis-court, looking southwest (circa 1922). (Motherwell Collection)
Figure 25. Back yard showing location of clothesline posts, elm trees and excavation units. (Drawing by D. Milton)
Figure 26. Back yard stratigraphy as revealed by clothesline post units. (Drawing by D. Milton)
Figure 27. Southwest clothesline foundation and tree remains. Looking north.

Figure 28. Back yard with remaining clothesline posts. Looking northeast.
Figure 29. Ornamental front fence looking west (circa 1911).
(Motherwell Collection)

Figure 30. Portion of panorama photo showing detail of relationship between the front fence and the sidewalk. Looking northwest, 1922.
(Motherwell Collection)
Figure 31. Front yard indicating location of excavation units and front fence lines. (Drawing by D. Milton)
Figure 32. Portion of panorama photo showing spruce trees behind tennis-court. Looking west, 1922. (Motherwell Collection)
Figure 33. Tree lines west of tennis-court lawn showing existing and former rows. (Drawing by D. Milton)
Figure 35. House front showing extensive tree line north side of house, 1911.
(Motherwell Collection)

Figure 34. Shelterbelt with driving loop. Looking west from Widows Walk (circa 1928).
(Motherwell Collection)
Figure 36. Widely spaced poplars on north side of house (circa 1910-12). (Motherwell Collection)
LOCATION OF FRONT SPRUCE TREES

Figure 37. Location of front spruce trees. (Drawing by D. Milton)
Figure 38. Location of excavation units around the barn.  
(Drawing by D. Milton)
Figure 39. North foundation of barn at location of possible foundation juncture.

Figure 40. Foundations at "L" of barn.
Figure 41. Detail of wood ramp. Looking southeast (circa 1914). (Motherwell Collection)

Figure 42. Profile of earth ramp after excavation. Looking northwest.
Figure 43. Plan view of wooden ramp indicating location of excavation units and interpreted outline of wood ramp. (Drawing by D. Milton)
Figure 44. Schematic drawing of possible ramp construction.  
(Drawing by D. Milton)
Figure 45. The Men's Cottage with caboose in foreground. Looking northeast (circa 1914). (Motherwell Collection)

Figure 46. Work yard looking northeast (circa 1939). Note Men's Cottage with additions, new location of caboose, chicken coop in centre and piggery in foreground. (Motherwell Collection)
Figure 47. Men's Cottage as it now stands in the town of Abernethy. Looking west.
Figure 48. Plan view and interpretation of Men's Cottage area. (Drawing by D. Milton)
Figure 49. Foundations of Men's Cottage after excavation.

Figure 50. Cellar of Men's Cottage looking north. Note notch and concrete step in foreground.
Figure 51. Rock border of flower bed south of Men's Cottage looking east.

Figure 52. Dry privy substructure and skids. Looking east.
Figure 53. Hogpen feeder looking north (circa 1939).
(Motherwell Collection)
Figure 54. Plan view of hogpen operation showing excavation units and feeder remains. (Drawing by D. Milton)
Figure 55. Post remains at north end of hogpen.

Figure 56. Post remains at south end of hogpen.
Figure 57. Barn yard showing location of excavation units and interpreted fence line. (Drawing by D. Milton)
Figure 58. Northeast corner post of barn yard fence.

Figure 59. Barn yard fence at east side of barn. Looking southeast (circa 1914). (Motherwell Collection)
Figure 60. South side of barn yard with fence in foreground (Circa 1945). (Motherwell Collection)
Figure 61. Diagram indicating proposed work yard fence line and relevant excavation units. (Drawing by D. Milton)
LOCATIONS OF COAL & GRAVEL CONCENTRATIONS

Figure 62. Location of coal and gravel concentrations and excavation units. (Drawing by D. Milton)
Figure 63. Location map of Motherwell homestead (southern half).
(Drawing by D. Milton)
Figure 64. Plan view of excavations north of dugout. Note tree line, fence post and mound locations. (Drawing by D. Milton)
Figure 65. Portion of panorama indicating entrance of farm road. Looking south, 1922.
(Motherwell Collection)
Figure 66. Cross-section profile of farm road. (Drawing by D. Milton)
Figure 67. Photo of garden. Looking north (circa 1930).
(Motherwell Collection)
Figure 68. Location of hotbed and expanded view of the feature.  
(Drawing by D. Milton)
Figure 69. Location of tree lines in northwest quadrant of garden. (Drawing by D. Milton)
Figure 70. Excavations at the north end of experimental field. (Drawing by D. Milton)
Figure 71. Plan view of wood feature outside perimeter. 
(Drawing by D. Milton)