1975 ARCHAEOLOGICAL EXCAVATIONS AT ROCKY MOUNTAIN HOUSE NATIONAL HISTORIC PARK

by
DONALD N. STEER
and
HARVEY J. ROGERS

(1976)
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Abstract

In the summer of 1975, archaeological investigations were carried out at Rocky Mountain House National Historic Park by the National Historic Parks and Sites Branch. The investigations involved survey for site location and preliminary excavation toward site delineation and identification. Two new fur trade fort sites, designated 15R and 16R, were located and investigated. Excavations at site 15R tentatively identified the remains as those of the 1835-61 Hudson's Bay Company Rocky Mountain House fort, and provided information on fort size, and palisade and bastion construction. Excavations at site 16R identified a fort dating to the first quarter of the 19th century, company unknown, and provided details on fort size, palisade, building and bastion construction. Descriptions of the palisades and bastion construction and stratigraphy of both sites is presented, in addition to building construction of site 16R. Additional information on fort locations in the vicinity of the park as interpreted from historical and archaeological findings is discussed.
Introduction

For over four decades it has been recognized that the Rocky Mountain House area is of national importance. The area was first commemorated in 1931. Recognizing the existence of historic fur trade sites at Rocky Mountain House, archaeological investigations were carried out in 1962-1963 and in 1966. The Historic Sites and Monuments Board of Canada recommended that a National Historic Park be established at Rocky Mountain House in 1968. It was further recommended by the Board that the known sites (two) be incorporated into the interpretation of three major themes. These themes were the fur trade, David Thompson and the role of the Peigan (Blackfoot) Indians. With ministerial approval of the recommendation and the purchase of 541 acres of land in the area, Rocky Mountain House National Historic Park was created.

Stepped-up interest in the park and site development after 1971 saw the formation of a Rocky Mountain House Project Development Team consisting of research and interpretative specialists. A report, "Rocky Mountain House Conceptual Development Objectives and Plan," was prepared. The report outlined 'the collective resources, restraints, potentials, and proposals for the various aspects of the project development' (Project Team 1976: VI).

Archaeological and historical research were paramount to the up-coming development program.

Between 9 June and 8 October 1975, archaeological investigations were carried out in Rocky Mountain House
National Historic Park. These investigations were the first of an estimated three year research program in the area. The preliminary aims of the research were to locate, delineate and identify historic fur trade sites in the park and assess their potential as contributory elements to the forthcoming park development.

The first season of investigation involved intensive surveys of the park using various methods including ground survey, test excavation, airphoto and multispectral reconnaissance and infrared linescanning. These archaeological survey methods and the results of the survey are the subject of a separate report by the principal investigator (Steer 1976).

The park survey was not completed in 1975. However, two previously unrecorded fort sites were located. These sites were designated 15R and 16R (Fig. 1). Time allowed only partial excavation of the sites. An attempt was made to determine the extent of the sites and to obtain temporal identification and construction information about the sites.

This report presents the results of the 1975 excavations. The excavated structures and features are described and interpretations pertaining to the features are presented. Historical information and data pertaining to past excavations are considered in a discussion regarding the identification of sites 15R and 16R.
Historical Background

Any attempt to identify the forts found in Rocky Mountain House National Historical Park must rely on both historical and archaeological data. Historical information presented in this report was taken from reports written by D.E. Smyth and H.A. Dempsey. Dempsey presented *A History of Rocky Mountain House* in 1973. Since that time additional research has been conducted by Smyth, who in 1975 prepared *A Preliminary Report on the Location of the Sites and Descriptions of the Posts at Rocky Mountain House*. Smyth's research, along with the archaeological work of 1975, have provided evidence suggesting the need to re-examine some of the interpretations arrived at by Dempsey in 1973.

Chronology

In 1799, during a period of intense fur trade rivalry among the Hudson's Bay, North West and XY Companies, Acton House (Hudson's Bay Company) and Rocky Mountain House (North West Company) were established in separate locations along the north bank of the North Saskatchewan River, a short distance upstream from its confluence with the Clearwater River.

The main reason for establishing the forts was to draw trade from mountain dwelling Indians, notably the Kootenays. David Thompson used Rocky Mountain House as a base of operation between 1800 and 1802 while exploring mountain regions. The attempt to draw Kootenay trade from the mountains through the Howse Pass failed because of long
distances to be travelled from within the mountains and hostility of Peigan and Assiniboine Indians toward the Kootenays. This failure led to the closure of the forts after the 1801-02 trading season.

Acton House and Rocky Mountain House were reopened in the fall of 1805. One year later David Thompson wintered at Rocky Mountain House. In 1807 he established Kootenae House west of the Rocky Mountains. As a result of this, both Rocky Mountain House and Acton House were abandoned in 1807.

The forts were again occupied in 1810 when the North West Company used Rocky Mountain House as an excuse for taking supplies to Kootenae House. The traders hoped that the reopening would pacify the Peigans, who did not wish to trade at the more northerly posts and who threatened to disrupt transmountain trade because it supplied guns to their enemies. However, the danger of Peigan aggression slowly lessened and the discovery of the Athabasca Pass by Thompson led to another abandonment of both forts in 1812.

Disruptions in trade at more northerly posts, caused by skirmishes between Peigan and both Cree and Assiniboine Indians, as well as the decreasing number of Peigans frequenting these posts led to a re-establishment of both Acton House and Rocky Mountain House in 1819.

Amalgamation of the Hudson's Bay Company and North West Company occurred in 1821. There has been much discussion about what happened to the two posts at that time. Dempsey was of the opinion that Acton House was abandoned and Rocky Mountain House was retained (Dempsey 1973: 30). However, as he indicated, there is no concrete proof that this was the case. Whatever happened, the name Rocky Mountain House was used to refer to forts in the vicinity after the merger.

The lack of competition resulting from the merger, along with the great expense involved in maintaining forts in the Rocky Mountain House area caused closure of the fort
in 1823. This closure took place despite protests made by Peigan Indians since they did not wish to trade at Edmonton House. Thus, when American traders established themselves in the Snake River region of Idaho some Peigans shifted their trade to the Americans. Rocky Mountain House was reopened on a trial basis in 1825, partly the result of the American presence. This reopening was successful in retaining the Peigan trade for a number of years. However, when the American Fur Company opened Fort Peigan in Peigan territory, the Hudson's Bay Company countered with the closure of Rocky Mountain House and the establishment of Peigan Post on the Bow River in 1832. Peigan Post remained open until January of 1833 when hostile Blackfoot Indians forced the traders to move back to Rocky Mountain House. Peigan Post was reopened in the fall of 1833, but in January of 1834 it was permanently abandoned and replaced again by Rocky Mountain House.

At this time Rocky Mountain House was structurally very deteriorated and the construction of a new fort began in 1835. The fort which was built remained open during every trading season, except for the 1847-48 season, until the spring of 1861 when starvation, lack of trade and hostility of the Blackfoot forced abandonment of the fort. During the fall of that year a group of Blackfoot burned the unoccupied fort.

The gold rush in Montana drove the Blackfoot further north and in 1864 a temporary fort was constructed as a result of an increased desire of the Blackfoot to trade at Rocky Mountain House. This fort was occupied between 1864 and 1868 during the construction of a new fort. The "temporary fort" was inhabited while the last Rocky Mountain House was being constructed. Construction of the final fort began in 1865. The final Rocky Mountain House was occupied in 1868 and remained open throughout the year until 1875.
Factors such as the loss of exclusive trading rights by the Hudson's Bay Company in 1870, the diminished numbers of buffalo, the coming of the North West Mounted Police, and the movement of missionaries onto the plains led to a substantial reduction in trade at Rocky Mountain House, and finally to abandonment of the fort.

In summary, the historical information indicates the definite existence of five fur trade fort sites at Rocky Mountain House. It will be asserted that six forts stood on five sites and following conclusions arrived at by Smyth, that the extra fort dated from the merger of the Hudson's Bay Company and the North West Company in 1821 and lasted until 1835 (Smyth 1973: 6).

The six fort sites are as follows:
(1) Acton House (1799-1821)
(2) Rocky Mountain House (1799-1821)
(3) Rocky Mountain House (1821-35)
(4) Rocky Mountain House (1835-61)
(5) Rocky Mountain House (the "temporary fort") (1864-68)
(6) Rocky Mountain House (1865-75)

Fort Locations
Information regarding the locations of Acton House and Rocky Mountain House (1799-1821) was found in the journals and writings of David Thompson and Alexander Henry, who both spent time at Rocky Mountain House early in the 19th century.

References in the writings of both men indicated that Acton House was located downstream of Rocky Mountain House (Smyth 1975: 6). Thompson provided further information, which proved to be somewhat ambiguous when he departed by canoe for Fort George in 1800 and "Left the English with one boat & 2 Skin Canoes - with 50 Packs & 8 Bags of Pemmican
Tenting about 3/4 mile below the House, ready for the morrow morning" (Smyth 1975: 6). Since forts were sometimes referred to as 'tents' this probably meant that Acton House was located 3/4 mile downstream of Rocky Mountain House. It is also possible, however, that the Hudson's Bay Company employees mentioned were not at Acton House, but were camping 3/4 mile below Rocky Mountain House. It was the last night of that trading season and they were ready to leave on the next morning. Thus, the exact location of Acton House is uncertain.

More conclusive information was found concerning the location of Rocky Mountain House 1799-1821. In 1800 David Thompson described Rocky Mountain House as being on the north bank of the North Saskatchewan River 1-5/24 miles above its confluence with the Clearwater River. Henry, during the 1810-11 trading season, indicated that the above distance was 1-1/2 miles. Henry mentioned that the fort was 1/4 mile below the first significant rapids before the mountains. He referred to a 'point' less than a mile above the fort and to the 'Monté' below the fort (Smyth 1975: 9).

Historical sources provided no reference to the location of Rocky Mountain House 1821-35. As was mentioned previously, it has been argued that Acton House was abandoned and Rocky Mountain House retained in 1821. However, because of a lack of direct evidence this cannot be taken for granted at present.

Several significant historical references provided information about the location of Rocky Mountain House 1835-61. J.E. Harriot in 1835 reported the erection of a new fort "...a short distance from the old one...." and that "....four men were employed making a road in the Hill at the water side..." (Smyth 1975: 12). Woolsey, in 1857, described the fort as being "...situated on an eminence..." and near a large fur traders' grave yard (Smyth 1975: 12).
Hector, in 1858, described a fort on a large plain about half a mile above the Clearwater and 300 yards above a rapid in the river. He commented on the area surrounding the fort:

The terrace level on which the fort stands is 20 feet above the river, and in proceeding back a slight descent is made to the "muskegs", which lie along the base of a second terrace like the first, composed of shingle....On reaching the hill I found it to rise about 80 feet above the second terrace level, and nearly 150 feet above the river (Smyth 1975: 15).

His drawing of the fort and the surrounding area placed the fort on a meander cut bank near a bend in the river (Fig. 2).

Reverend John McDougall visited Rocky Mountain House on two separate occasions while the temporary fort of 1864-68 was being occupied during the construction of the final Rocky Mountain House. He stated that a "...temporary fort was built in the woods nearby....on a low flat near the river [while] the new fort was to be placed on a higher bench..." (Dempsey 1973: 21).

Statements in the Rocky Mountain House journals of 1866 provided evidence indicating the location of the final fort of 1865-75. The reference to "working up at the fort" (Smyth 1975: 18) meant that the new fort was upstream of and/or on higher ground than the temporary fort. Visitors to the fort indicated that it was on a high northern bank of the North Saskatchewan River. Tyrrell, in 1886 described the ruins of this final fort as "situated on an alluvial grassy flat bounded on the south and east by the river and on the north and west by dense forests and swamps" (Smyth 1975: 18). Jean l'Heureux's sketch of 1873 (Dempsey 1973: 17; Fig. 3) corresponded well with Tyrrell's description.
Fort Descriptions
Both Dempsey and Smyth presented the available data pertaining to the description of forts in the Rocky Mountain House area (Dempsey 1973: 28-33; Smyth 1975: 26-62). This archaeological report presents those descriptions which are of relevance to the identification of the archaeological remains uncovered at Rocky Mountain House.

Historical records did not provide a good description of Acton House. The information available indicated that it was a small post which was constantly in need of repair.

Rocky Mountain House (1799-1821) was described by Thompson during the 1806-07 trading season and by Alexander Henry in 1810-11. Thompson referred to an elevated bastion over the gate and to a south bastion. Henry described a bastion over a gate, more than one other bastion (including a southeast bastion rebuilt on posts) and a west gate (Smyth 1975: 33, 34).

References to Rocky Mountain House (1821-35) were found in the post journals of 1828-31. There is some question about whether the construction work mentioned in these journals referred to the building of a new post. Dempsey and Noble felt that the construction involved renovation to the existing fort (Dempsey 1973: 15; Noble 1973: 159).

Descriptions of Rocky Mountain House (1835-61) were provided by the post journals of 1836-37 and the writings of visitors to and residents of the fort. Early descriptions indicated that it was a very substantial fort. An oil painting and water colour produced by Kane in 1848 (Fig. 3) illustrated a sturdy fort which appeared to be "...irregularly formed...somewhat quadrangular..." (Smyth 1975: 47) as it had been described in Woolsey in 1857. Reputable descriptions, sketches and paintings of the fort indicated the existence of inner separations, a gallery (elevated walk), and at least two bastions.
The "temporary fort" of 1864-68 was not a sturdy structure. Christie, in 1867, described it as a "...temporary small fort, which is anything but safe considering the number and character of tribes they have to deal with" (Smyth 1975: pers. com.). No further reference was made to the make-up of the fort.

The final Rocky Mountain House (1865-75) was probably the most substantial of the establishments in the area. Descriptions of this fort were found in post journals between 1866 and 1868 and in the writings of visitors to the fort. The Jean l'Heureux sketch of 1873 presented a detailed picture of the fort (Dempsey 1973: 17, Fig. 3). This fort was identified archaeologically as being the site designated 1R which was excavated by Vaucher in 1966 (Vaucher 1968).
Previous Excavations

Excavations have been sporadically carried out in the Rocky Mountain House National Historic Park since 1962 when Richard Forbis commenced test excavations a Site 13R, which was at that time designated FcPr-1 (Fig. 4). This was followed by complete excavation of the site in 1963 by William Noble (Noble 1973). Both excavations were under the auspices of the Glenbow Foundation of Alberta.

Noble interpreted 13R as representing two different fort building phases on the same site, one fort being a revamped version of the earlier fort. The first fort supposedly existed between 1799 and 1828. It probably was occupied by the North West Company prior to 1821 and by the Hudson's Bay Company between 1821 and 1828. He interpreted the last phase as being the construction mentioned in the post journals of 1828-31. The rebuilt fort was then occupied by the Hudson's Bay Company until 1834 (Noble 1973: 155-160).

In 1966, Claude Vaucher, under contract from the Department of Archaeology, University of Calgary, partially excavated site FcPr-2 (1R). His excavations, along with historical data, have confirmed the site as being the last fort at Rocky Mountain House (Vaucher 1968).

Mark Skinner, an undergraduate student from the Department of Anthropology, University of Alberta, excavated 13 graves from a historic burial site in the north end of the park. On the basis of the artifacts found he dated the site to the second quarter of the 19th century. He felt
that the graves were associated with the 1835-61 Rocky Mountain House (Skinner 1971: 1972).
Natural Setting

The historic fur trade sites designated 15R and 16R are located along the north bank of the North Saskatchewan River upstream of its confluence with the Clearwater River and within Rocky Mountain House National Historic Park (Fig. 4). The park occupies part of a large alluvial flood plain of the North Saskatchewan River. The entire park and surrounding area are marked by meander scars, high fluvial terraces, steep cut-banks and gentle slip-off slopes, evidence of past and present lateral shifting of the river channel. Significant river bank erosion by undercutting and slumping is evident and has caused the destruction of part of site 1R.

The alluvial flood plain on which the park is found consists of a cap of 30 cm to 2 m of sandy silt to silty fine sands and clays over sands, coarse gravels and cobbles. Buried lenses of organic matter and wood are found in the alluvial material. Although soils are generally well-drained, poorly drained areas are found back from the river in organic terrain, specifically in the southwest portion of the park. In most cases abandoned river channels are well-drained because the underlying gravels and sands are only slightly veneered by finer silts, sands and clays. In the southwest portion of the park this is not the case, for channels and sloughs are very poorly drained as a result of a high localized water table.

At the time when the North West Company and Hudson's Bay Company began construction of their forts in 1799, the
park and surrounding area were heavily forested. The availability of trees suitable for fort construction was an important consideration for fort construction. The flood plain probably was covered predominantly with stands of White Spruce (Picea glauca), Englemann Spruce (Picea engelmannii), Jack Pine (Pinus banksiana), Trembling Aspen (Populus tremuloides), Lodgepole Pine (Pinus contorta) and Balsam Poplar (Populus balsamifera). A sprinkling of Ponderosa Pine (Pinus ponderosa), Western White Pine (Pinus monticola) and Douglas Fir (Pseudotsuga menziesii var. glauca) were likely found as well. Many of these species have been identified in the archaeological remains. In the less well drained areas Black Spruce (Picea mariana) and Tamarack (Larix Laricina) predominated.

The post-1799 period evidenced general denudation of the forest near the fur trade posts. Consequently, by the time of the last fort abandonment most of the park was surfaced in natural grass cover and deciduous trees, notably Trembling Aspen and Poplar. Although not historically documented, grass and forest fires did occur from time to time in the area. This was supported by archaeological findings.

Site 16R is located near the edge of a high fluvial terrace with a level surface expression. The highest elevation point in the park is situated on this terrace near the site (970.90 m A.M.S.L.). The base of the steep cutbank at the edge of the terrace is approximately 200 m (656 ft.) from the edge of the river.

A 20th century farmyard is located upon the site remains. Except for two farm buildings, much of the present cover is grass. A few trees in the form of planted wind breaks are also present. A municipal gravel road passes over the eastern portion of the site. The presence of the farm yard and road have resulted in much disturbance and
destruction of the site.

Site 15R is located approximately 140 m (459 ft.) north of site 1R and 984 m (3228 ft.) northeast of site 16R. It is situated upon a level portion of the flood plain, approximately 70 m (230 ft.) back from and 8.2 m (27 ft.) higher than the river. Immediately east of 15R is a lower terrace which is approximately 4.6 m (15 ft.) above the river level. As is the case at 1R and 16R, the river bank near 15R is a steep cut-bank.

Most of the site is within a hay field which had been cultivated for more than a quarter of a century previous to 1968, when the present cover of hay was sown. A municipal gravel road passes over an eastern portion of the site. The cultivation and road construction caused much damage.

The physical locations of the sites are important in comparison with historical documentation. Historical records concerning forts at Rocky Mountain House often described locations in terms of distance up or down the river and often the confluence of the North Saskatchewan and Clearwater Rivers was used as a reference point. Site 16R is currently approximately 2.3 km (1.4 mi.) and 15R is 1.2 km (.75 mi.) upstream from, or above, this confluence.
16R Excavations

Excavation Procedure
A permanent datum point consisting of a concrete pillar and lead plug was placed near the southern edge of the site. This datum point was used to establish a site 16R baseline and was tied into station 5 of a master control baseline situated within the park (Fig. 4). An arbitrary grid system was subsequently established running perpendicular and parallel to the site baseline. It contained 3 m by 3 m grid squares (Fig. 5).

All measurements were recorded in the metric system. Surveying, contour mapping and 'as found' drawings were done by a Restoration Services extant recording team aided by members of the archaeological crew. Site related elevations were calculated through the use of the permanent datum point (971.69 m A.M.S.L.).

The National Historic Parks and Sites Branch system of recording was utilized (Swannack 1973). Since little was known about the nature of the features to be excavated, horizontal control was maintained by the arbitrary grid system. 'Operations' and 'suboperations' were described in terms of grid coordinates. Vertical control was maintained by designating 'lots' in terms of distinct soil strata. A 'lot' also represented the precise location of a specific feature, artifact or grouping of artifacts (Swannack 1973).

Crews of 10 to 15 members worked at the site between 23 June 1975 and 1 October 1975. Fifty-one 3 m by 3 m excavation units or 'suboperations' were partially or fully
excavated (Fig. 5). Normal excavation procedures were used. A field laboratory handled the cleaning, numbering, sorting, recording and packaging of artifacts preceding shipment to Ottawa for analysis.

Stratification
Preliminary excavations at site 16R gave a reasonably complete picture of the overall stratigraphy associated with the site. It was found that surficial 19th and 20th century occupation layers, overlying undisturbed soils, ranged from between 15 cm to 40 cm in thickness over much of the site. The occupation layers reached greater depths (40 cm to 140 cm below present surface) in depressions such as cellars and palisade builders' trenches.

With few exceptions, the entire site had been disturbed, particularly the upper 15 cm to 40 cm. The disturbance was mainly the result of farm activity and road construction. Most of the southeast corner of the site was completely obliterated by a road cut. Soil layers, lenses and artifacts of the 19th and 20th century were often mixed.

The upper 15 cm to 40 cm of soil consisted of three ill-defined layers. The uppermost layer consisted of a weakly developed topsoil surfaced in grass. This layer reached a depth of 7 cm to 8 cm below ground level in the northwest corner of the site. Here, additional topsoil had been brought in for a lawn associated with the farmhouse. The remainder of the site evidenced a 4 cm to 5 cm sod layer. Twentieth-century refuse was recovered in quantity from this layer.

A layer of medium brown sandy silt was situated below the topsoil. This layer averaged 11 cm in thickness and reached a maximum depth below ground level of 17 cm. Most of the fort-related structural remains were found at the base of this layer. This layer evidenced much mixing. Although
20th century material predominated, 19th century fort-related artifacts were also recovered. Most of the artifacts found were incomplete, and in most cases, in a very fragmentary condition.

The third, and lowest cultural layer consisted of a light brown sandy silt. In many cases this layer was practically indistinguishable from the layer above. Nineteenth century material was common-place, but farm-related late period artifacts were often present. This layer averaged 10 cm in thickness and reached a maximum depth of 40 cm below ground level in the west one-third of the site. However, in other areas it was thin or almost non-existent.

Undisturbed soils were encountered below the third cultural layer. The undisturbed horizon consisted of very light brown silty clays and silts, overlying a thick layer of gravels and rounded cobblestones. The silty clays and sandy silts reached depths of approximatly 1.5 m below ground level.

As an example of the stratigraphy associated with the site, an east-west profile associated with the central cellar within the building 1 (Figs. 6, 15) will be discussed in detail. The profile illustrated 20th century fill and disturbance features, as well as 19th century flooring remains and fill. Fourteen layers and lenses were represented. They were designated numbers 1 to 14 in Figure 6.

The upper layer represented the thin topsoil and was designated layer 1. It overlay a layer of medium brown sandy silt which graded into a lighter brown sandy silt (layer 2). This layer was found an average of 3 cm below ground level, reached a maximum depth of 35 cm, and averaged 17 cm in thickness. The two upper layers spanned the entire cellar depression and were continuous over
the site.

Isolated in the cellar fill was layer 3, which was the first of two refuse layers found in the depression. This layer was attributed to 20th century deposition and consisted of a dark brown silty sand. The minimum and maximum depths of this layer were 17 cm and 30 cm respectively and it averaged 11 cm in thickness.

Below layer 3, a layer of light brown compact sand fill (4) and lenses of light brown sand (6) and medium brown sandy clay (7) appeared. These represented 20th century fill. Fill layer 4 varied between 6 cm and 29 cm in thickness and had been used to level off the depression.

Below layer 4 was a prominent refuse layer of dark brown organic silty sand, which was designated layer 5. This layer reached a maximum depth of 72 cm below surface level and had an average thickness of 27 cm. Many 20th century artifacts and several large rocks were found in this layer.

In the west half of the depression and below layer 5 was a lens of medium brown redeposited sandy clay (9). Artifacts found within identified it as a 20th century deposit.

Layer 10 consisted of a medium brown silty clay mottled with some bone and chinking. Although disturbance prevented complete delineation of this layer, it appeared to extend beyond the confines of the cellar depression. Peripheral to the depression it rested upon undisturbed soils, whereas within the depression it was situated directly upon 19th century cultural deposits. Twentieth century artifacts were recovered in quantity from this layer. Some 19th century material, notably trade seed beads, was found as well. The beads and chinking lenses suggested disturbance. Within the depression the layer averaged 19 cm in thickness and reached a maximum depth of 1.18 m below ground level.
An isolated rectangular depression, labelled 11, was approximately 100 cm long, 80 cm wide and 80 cm deep. It was found northeast of the large cellar depression. Although only two seed beads were recovered from within it, the stratigraphic picture indicated that it had 20th century origins. The lens was excavated through the central sleeper within building 1.

The most important layer associated with the cellar fill was layer 12. It was situated directly below layer 10 and represented fort occupation and immediate post-occupation deposition. It was not disturbed by farming activity. The layer rested on a loosely packed sandy silt layer of the cellar floor and was composed of dark brown organic clayey loam mottled with chinking ash lenses. Thin lenses of wood originating from collapsed floor boards appeared throughout the layer. This layer averaged 31 cm in thickness. Its maximum depth below the modern ground level was 1.4 m (the floor of cellar). Only 19th century artifacts were recovered: a string of 34 large white opaque and 12 dark green translucent, oval shaped wire-wound beads, turquoise seed beads, blades from two French clasp knives, powdered vermilion, clay pipe fragments, a stone pipe bowl fragment of native manufacture and a basal fragment from a dark green liquor bottle.

A sandy silt layer and sandy clay lens designated 13 and 14, respectively, were undisturbed and non-cultural. In all areas of the cellar, the undisturbed horizon was exposed.

Structures and Features
Several major structures were partially excavated. These included two buildings, a northwest corner bastion, north, south, and west palisades and an interior north palisade. For descriptive purposes, the two buildings were designated
building 1 and building 2.

Palisades
Although sections of the north, south, west and interior north palisades were exposed in 17 excavation units, the east side of the fort enclosure was not delineated because it was situated under a municipal gravel road (Fig. 7). The east palisade will be subject to excavation in 1976, however. Only the upper levels of the palisade trenches were exposed, except for a 2.5 m length of the interior north palisade, which was completely excavated.

The south and interior north palisades were oriented northwest-southeast and were perpendicular to the west palisade. The orientation of the north palisade was uncertain since only a 1.2 m long portion of it was exposed at the west end of the palisade. However, it did appear to have paralleled the interior north and south palisades.

The south palisade joined the west palisade in the southwest corner of the fort enclosure (Fig. 7, 8). There was no evidence for a bastion in that corner. The north and west palisades abutted a bastion in the northwest corner (Fig. 9). The interior north palisade met the west palisade 9.4 m south of the north palisade. The area between the interior north and south palisades appeared to have formed a main compound of the fort. The area between the north and interior north palisades may have been associated with an expansion of the fort. It also may have been a garden area or animal compound. Further excavation will be needed to show whether or not expansion took place.

The total length of the west palisade was 51.2 m. Lengths of the north, interior north, south and east palisades were unknown since the northeast and southeast corners of the fort were not located. The minimum lengths
of the interior north and south palisades were 29.4 m and 27.8 m, respectively. The situation of the fort in relation to the steep cut-bank southeast of the fort suggested that the fort was rectangular in shape and that the maximum length of its short side was approximately 40 m. The major structural features associated with the palisades were trenches and posts. No palisade support or entrance features were found. There was no evidence for an elevated walk (gallery).

Palisade trenches averaged 51 cm in width at upper trench levels. Trench fill consisted of a medium brown silty loam containing a few mammal bones.

As was mentioned previously, only a 2.5 m portion of the palisade trenches was completely excavated. This portion was located along the interior north palisade (Figs. 9, 10, 11). A cross-section of the south palisade was located along the edge of a ditch associated with the gravel road along the east side of the site (Fig. 12). Sides of the trenches tapered toward a somewhat concave-shaped trench bottom. The exposed trench floors averaged approximately 75 cm in depth below present ground level. Site disturbance prevented calculation of the exact palisade trench depth below the fort's occupation level. However, this depth was estimated to be between 60 cm and 65 cm.

Very few palisade post remnants were exposed. Those exposed were in a poor state of preservation. Sixteen such posts were located in a single row within the south palisade trench (Fig. 13). Most of the posts were situated along the south edge of the trench. Two more palisade posts were found near the northwest corner bastion and may have been associated with that bastion. Palisade post remnants averaged approximately 9 cm in diameter. The one post cross-section exposed, had a flat post bottom (Fig. 12). The original height of the palisade posts is unknown. Nicks
used a ratio of one to six between the portion of posts below the ground and the portion above the ground to calculate the height of palisades (Nicks 1969: 35). This ratio was based on known heights of palisades and depths within trenches at Fort Carlton. Using the ratio, the representative palisades at site 16R would have been approximately between 3 m and 3.25 m in height above the ground level during the fort occupation period.

An analysis of palisade post wood samples indicated that they were either of the White Spruce (*Picea glauca*) or the Englemann Spruce (*Picea engelmanni*) species. The number of posts available for analysis was limited to only a few better preserved specimens found along the south palisade near the southeast corner of the fort. Analysis was carried out by J. Moore, Conservation Division, National Historic Parks and Sites Branch, Ottawa.

Post and trench related measurements indicated that the palisades were not very substantial. The lack of posts found within the trenches suggested their removal following fort abandonment.

Northwest Corner Bastion
The northwest corner bastion was situated at the corner junction of the north and west palisades (Figs. 7, 9). It protruded 2.2 m north of the north palisade and 3.44 m west of the west palisade. This extension would have offered a full peripheral view of the outer faces of the fort's north and west palisades. The four walls of the structure were of different lengths: the north wall 3.86 m, the south wall 4.06 m, the east wall 4.20 m and the west wall 3.60 m.

The bastion was not totally excavated. However, the portion excavated gave a good indication of its
architectural configuration. The four walls were constructed by placing round vertical posts, averaging 12 cm to 13 cm in diameter, in a prepared trench (Fig. 14). The trench averaged a fairly uniform 25 cm in width. During the construction of the west palisade, the prepared palisade trench was simply continued past the northwest corner of the fort. Therefore, part of the northern end of the west palisade and the west half of the east wall of the bastion were common elements. The construction technique involved in the building of the bastion has been referred to as "en pile" architecture style (Jefferys 1939: 375).

Two large, round posts 25 cm in diameter were uncovered just inside of and midway along the north and south walls of the bastion. They were each situated within a large posthole, approximately 35 cm square. The two large posts probably supported an upper raised floor associated with the bastion.

The size of the vertical wall posts and the presence of the two larger posts suggest that the bastion was a substantial and well-built structure. No lower level (ground floor) wooden flooring remains were found, suggesting a dirt floor. The structure may, or may not have had a roof. The absence of large corner posts suggested that no roof existed.

No strong evidence for an entrance to the bastion was found. A 1.06 m gap in the west wall of the structure near the southwest corner suggested a possible entrance from the outside. Though no posts or postholes were located, it was found that the builder's trench associated with the west wall continued across the gap. Occupying the gap was a horizontal plank, 84 cm in length, 20 cm in width and 2.5 cm in thickness. The plank may have formed part of a door sill or jamb.

An entrance into the bastion from the interior of the
fort probably existed near the southeast corner of the structure. However, the absence of posts along the entire east wall of the bastion removed any chance of determining precisely where or how the probable entranceway was constructed.

In addition to the major feature of the bastion, an unidentifiable feature was found central to the structure; an oval-shaped depression which was only partially excavated (Fig. 9). The depression was filled with white ash and burnt soil, and measured 1.4 m (NE-SE). No artifacts were recovered during the excavation of the feature.

Artifacts found in the bastion area included a basal fragment from a Robert Turlington's Balsam of Life bottle, two seed beads, two musket balls, one lead shot, a clay marble, a mother-of-pearl button and some powdered vermilion.

Archaeological data gleaned from excavation of the bastion did not indicate any renovation of the structure or of the northwest corner of the palisade. If further excavation reveals that the interior north palisade was the original north palisade of the fort and not a separation erected to form a garden or animal compound area, and that the fort was extended at a later date, then the bastion would have also been associated with a final building phase.

Building 1
Building 1 was only partially excavated in 1975 (Figs. 7, 15). Therefore, complete information about the dimensions of the structure cannot be provided at this time.

It was located in the northwest corner of the fort's main compound and faced southwest. The north wall was 8 m from and approximately parallel to the interior north palisade. The structure was less than 8 m from the west
palisade. It was not possible to determine the exact
distance since the west wall of the building was not found.
The northeast corner of the building was indicated by soil
staining. This was the only corner exposed. There was no
evidence for the south wall of the building. The minimum
dimensions of the building were 11.8 m (NW-SE) by 6 m
(NE-SW). The north and south walls likely formed the
structure's long side.

Several features were found in association with
building 1. These included two fireplaces, three cellar
depressions, a north basal sill and flooring remains. The
two fireplaces were located along the inside edge of the
north basal sill and for descriptive purposes were labelled
the east and west fireplaces. The three independent cellar
depressions were designated the east, central and west
cellars.

Central Cellar
The central cellar depression was completely excavated. It
was somewhat irregularly shaped (Figs. 15, 16). The maximum
outer dimensions were found to be 4.8 m (N-S) by 4.6 m
(E-W). The depth below ground level during fort occupation
was estimated to be 1.0 m. The cellar was uncribbed. Walls
and floors were of lightly packed, sterile, light brown
sands, silts and clays. Cellar walls sloped toward an
undulating floor (Fig. 6).

Two step-like features were associated with the central
cellar. One of these may have been a single step into the
cellar. It was located approximately halfway up the north
face of the depression (Figs. 15, 17). Its presence
suggested the location of a trap door opening into the
cellar. The second step-like feature appeared along a
portion of the south side of the cellar approximately
halfway up its face. This feature was about 3 m long, followed the curvature of the cellar outline, and recessed 30 cm into the cellar wall face. It may have represented a shelf (Fig. 15).

Remnants of floorboards were haphazardly scattered in the dark brown organic clay loam layer directly above the floor and along the sloping walls of the cellar (Fig. 6). These were the most substantial of the floorboards found in the building. Preservation was poor nonetheless. The relatively intact samples were plank remnants 10 cm to 15 cm in width and approximately 3 cm thick.

The strata associated with the cellar were discussed in the stratigraphy section of this report. The central cellar showed several stages of disturbance, filling and levelling by 20th century occupants of the farm (Fig. 6). The west and east cellars had been affected in the same way.

West Cellar

A somewhat oval-shaped depression was separated from and a minimum of 20 cm west of the larger central cellar depression (Fig. 15). It was also completely excavated. The maximum length (NW-SE) of this feature was 2.8 m, the maximum width (NE-SW) was 1.4 m. The floor was approximately 1.1 m below the estimated ground level during the occupation of the building. The walls and floor were of packed and sterile sand and clay. The walls were steeply sloped toward a flattened cellar floor. The stratigraphy of the west cellar was much the same as that found in the central cellar. The upper layers of the fill had concentrations of 20th century refuse. Below a collapsed ground floor layer, 19th century materials were encountered. They included a large quantity of hand wrought nails, clay pipe stems, two mirror glass fragments, an olive green bottle glass fragment, a copper fragment and a tin fragment,
as well as numerous bison, deer and beaver bones. The material indicated refuse and gave no hint as to the original function of the depression.

East Cellar
The west edge of a depression was located approximately 40 cm east of the central cellar and appeared to be part of another cellar (Fig. 15). Identification as such was only tentative, however, since it was only partially excavated.

East Fireplace
The base of a single-hearth, stone fireplace was situated 2.8 m from the northeast corner, just inside and adjacent to the north wall of building 1. It appeared to have been within an east room of the building (Fig. 15).

The fireplace had been greatly disturbed and only the bottom one to three layers of stones were found in situ. These were of rounded and crudely cut fieldstone (Fig. 18). A small concentration of burnt clay chinking lay over top of and among rocks located midway along the inner edge of the back wall of the fireplace. This chinking probably was used as a bonding material for the rocks. Chinking appeared only in this one area of the fireplace.

The outer dimensions of the fireplace, excluding the exterior portion of the hearth, were approximately 1 m (NE-SW) by 1.63 m (NW-SE). The firebox was broadly U-shaped and approximately 50 cm deep at hearth level. Its opening was 63 cm in width and the inner walls curved to an interior width of 50 cm. As a result of this curvature, the cheeks of the fireplace varied between 50 cm and 56.5 cm in width. The average width of the back wall was 50 cm. The outer edges of the cheeks paralleled each other and were
perpendicular to the back wall.

Excavation of the fireplace was not completed. However, it appeared to have been built on the original soil surface. A hard-packed sandy clay hearth formed the base of the firebox and extended beyond the front of the firebox forming a rectangular exterior hearth area approximately 1 m (NE-SW) by 1.6 m (NW-SE). Sleepers appeared to have bordered the cheeks and exterior hearth of the fireplace (Figs. 15, 18). The hearth most likely had been built up to the same level as the floorboards surrounding the exterior hearth. Some ash and 19th century artifacts were found on the hearth floor within the firebox. However, most artifacts were recovered just west of the fireplace hearth apron and not within. They included a blade gunflint, two brass straight pins with wire-wound heads, an offset awl, hand wrought nails, turquoise seed beads, clay pipe stems and lead shot.

Because of the lack of structural evidence, there was little information pertaining to the upper levels of the fireplace. However, evidence did suggest that clay was used in the construction of the chimney stack.

**West Fireplace**

The base of a second single-hearth stone fireplace was located approximately 3.8 m northwest of the east fireplace. The west fireplace was situated just inside and adjacent to the north wall and along the north edge of the central cellar (Fig. 15, 17). The presence of two fireplaces suggests that there were at least two rooms associated with the building. The west fireplace was associated with the more westerly of the two rooms. The entrance to the central cellar was most likely located in this room.
This fireplace was also greatly disturbed. Two to three layers of stones remained in situ. It appeared to have been constructed similar to and with the same materials as the east fireplace.

The outer dimensions of the fireplace, excluding the exterior portion of the hearth were approximately 85 cm (NE-SW) by 1.4 m (NW-SE). The firebox was broadly U-shaped and approximately 45 cm deep. Its opening was 60 cm wide and the inner walls gradually curved to an interior width of 45 cm. The cheeks and back wall averaged 40 cm in width. The outer edges of the cheeks paralleled each other and were perpendicular to the back wall.

A hard-packed clay hearth covered the floor of the firebox and extended 40 cm in front of the fireplace opening in the form of a semi-circle. The burned floor of the firebox was covered with some ash, charcoal and 19th century artifacts. The latter were limited to turquoise seed beads and two hand wrought nails. The west fireplace quite probably had a chimney stack constructed of clay.

**Basal Sills**

Wood remains and soil staining marked the most northerly extent of the building in the form of a basal sill (Fig. 15). It ran in a northwest-southeast direction and averaged 17 cm in width. An 11.8 m length of the sill was exposed. Soil staining marked the west end of the sill in the northeast corner of the building. The east end was not located.

A vertical post remnant approximately 20 cm in diameter was situated along the north basal sill approximately 5.7 m from the northwest corner. Wood remnants of the sill were not found 10 cm on either side of the post. This was the only such post found along the sill.
It is possible that further excavation will reveal more posts and indicate a "post-in-ground" method of construction.

No substantial sill remnants were located along the east side of the building. Only soil staining indicated the presence of an east sill. The west wall was not delineated. There was no strong evidence for a south basal sill. Wood remains approximately 5.6 m southwest of the north sill may have represented portions of a south sill (Fig. 15). However, it appeared more likely that these were associated with a major cross member or sleeper.

**Flooring**

Flooring remains associated with building 1 were very poorly preserved. Portions of floorboards and sleepers were scattered throughout the structure, but no complete elements were uncovered. Site disturbance and collapse into cellar depressions following fort abandonment appeared to have destroyed or altered the location and orientation of some of the floorboard and sleeper sections.

At least three sleepers or major cross members appeared to have been associated with the building (Fig. 15). These ran parallel to the north basal sill. The most northerly sleeper abutted the inner edge of the north basal sill. The exact original locations of the other two sleepers were uncertain. However, on the basis of the 'as found' remains the central and south sleepers were estimated to have been 2.25 m and 5.6 m respectively, southwest of the north sleeper. The sleepers ranged between 12 cm and 15 cm in width and averaged 6.0 cm in thickness. They were no doubt originally more substantial. They appeared to have been rectangular in shape and laid directly on the ground. As was mentioned previously, additional cross members were used
around the east fireplace.

Floorboards exposed were in a state of disarray. They appeared to have been nailed to the sleepers and to parallel to the east wall. Individual boards were finished planks 3.0 to 4.0 cm thick and averaging 15 cm in 'as found' width.

Building 2
Building 2 was only partially excavated (Fig. 19). Information pertaining to the structure is therefore incomplete.

The building was situated in the southwest corner of the fort and faced northeast. Only one wall of the building was located. The remains of a basal sill marked the south wall (Fig. 20). This sill was likely situated along the long side of the structure. It was approximately 1.75 m from and parallel to the south palisade. Although the west wall was not located, excavations revealed that it had to be less than 5.8 m from the west palisade. The outer dimensions of the building are not known. It was, however, at least 5.3 m (NE-SW) by 9.7 m (NW-SE).

The major features associated with building 2 were a cellar depression, a fireplace, a south basal sill and flooring remains.

Cellar
Only the upper level of a portion of a cellar was exposed (Fig. 19). It was situated a minimum of 4.25 m from the south basal sill and 10.2 m from the west palisade. Further excavation will be needed to provide more information about the feature.
Fireplace

The base of a single-hearth, stone fireplace was found within building 2 (Fig. 21). The back wall of the fireplace abutted the south wall of the building. The west edge of the feature was approximately 10.6 m from the west palisade. It had likely been situated in the same room as the entrance to the exposed cellar. The room was probably the most westerly room within the building.

Excavation progressed no lower than the upper levels of the hearth. The east cheek of the fireplace was not revealed. This cheek may have been located in the unexcavated balk of an excavation unit (Figs. 19, 21). However, it appears more plausible that it was disturbed and removed following fort abandonment.

Two large, elongated stones formed the bases of the west cheek and back wall of the fireplace (Fig. 21). Several flat sedimentary rocks were situated inside of the back wall. These were set on edge and embedded in the clay hearth. Another such rock was located inside the west cheek. These flattened rocks appeared to have outlined the walls of the firebox. The remainder of the lower portion of the fireplace was probably constructed with rounded and crudely cut fieldstone and bonded with chinking, similar to the fireplaces associated with building 1.

Because the east cheek of the fireplace was not located, some dimensions associated with the fireplace could only be estimated. The outer dimensions appeared to have been approximately 1.1 m (NE-SW) by 1.8 m (NW-SE), excluding the exterior portion of the hearth. The firebox probably was rectangular. It was 60 cm deep and approximately 80 cm wide at hearth level. The cheeks and back wall were approximately 50 cm thick. The cheeks likely paralleled each other and were perpendicular to the back wall.
The fireplace was built on the original soil surface. A hard packed burnt clay hearth formed the base of the firebox and was covered with much ash. The dimensions of the clay exterior hearth area were not determinable.

It will be assumed that the chimney stack associated with the fireplace was constructed chiefly with clay.

South Basal Sill
Only the south basal sill of building 2 was located (Fig. 20). Wood remains and soil staining marked this most southerly extent of the building. Wood remnants were more substantial than those associated with building 1. The south sill ran in a northwest-southeast direction and averaged 21 cm in 'as found' width. A 9.7 length of the sill was exposed. The ends of the sill were not exposed.

As was the case in building 1, a large vertical post, 25 cm in diameter, was situated along the sill. It was approximately 13.8 m from the west palisade. Sill remnants ran up to the post. No other vertical posts were found along the south sill. The possibility of "post-in-ground" construction was suggested.

Flooring
Flooring remains associated with building 2 were in a better state of preservation than those associated with building 1 (Fig. 19). Despite this, some floorboards and portions of sleepers appeared to have been removed or altered in location and direction.

At least two sleepers, or major cross members were associated with building 2 (Fig. 19). These paralleled the south basal sill. The most southerly sleeper abutted the inner edge of the south basal sill. The other sill was
approximately 2.6 m northeast of the sill. The sleepers averaged 15 cm in 'as found' width and 6 cm in thickness. They appeared to have been rectangular in shape and laid directly upon the ground.

Some complete floorboards were exposed in the form of finished planks 3 cm to 4 cm thick, averaging 18 cm in width and approximately 2.6 m in length. The planks ran between and were perpendicular to the sleepers. The ends of the planks had been nailed to the sleepers.
Site 15R Excavations

Excavation Procedure
The approximate location of the perimeter of the site was estimated through the use of a low oblique black and white aerial photograph taken in 1966 (Fig. 22; Vaucher 1968: Pl. 2c). An arbitrary grid system was established containing 3 m by 3 m grid squares. Thirty-one 3 m x 3 m units were partially or fully excavated. Elevations were established in relation to a permanent datum point (968.55 m A.M.S.L.) (Fig. 23).

Since the purposes of excavation were, first, to confirm the existence of a fort, and second, to delineate the outlines of the palisades, only those features associated with the periphery of the fort were purposely exposed. Only those excavation units containing no cultural features were excavated to completion. In the remaining units excavation ceased once the upper levels of the features were exposed. Completion of the excavation in these units was scheduled for the 1976 field season. Portions of north, south, east and west palisades, as well as northwest, southwest, and southeast corners of a fort were revealed.

Stratification
The stratigraphic picture of the site was somewhat incomplete because of the limited number of units excavated and because those units were spread out considerably and
located only along the periphery of the site. The site had been cultivated for over 25 years. Much of the stratigraphic evidence associated with the fort was thus destroyed.

For present purposes, three distinct stratigraphic levels were distinguished. The uppermost level was made up of a thin sod cover and a cultivation layer. The intermediate layer was associated with the occupation of the fort and with fort dilapidation following abandonment. The lowest level was an undisturbed subsoil.

The sod layer covering the site was not well developed. Directly below it was a cultivation layer, consisting of dark brown silty loam containing artifacts, charcoal and bones that had been fragmented and scattered by cultivation. This layer averaged 14 cm in depth below ground level (Fig. 24). Variations in depth of between 10.5 cm and 18.0 cm occurred. The depth of ground penetration of the farming implements had varied because of variations in the contour of the surface of the land on which the site was located.

The stratigraphic level associated with fort occupation and abandonment was situated below the cultivation layer. It was not found to be continuous over all the units excavated since it was often partially and sometimes fully obliterated by cultivation. Most commonly disturbed were features associated with ground level during the occupation of the fort. However, features such as the palisade trenches, which had extended below ground level, were relatively undisturbed.

The lowest level was a sterile, undisturbed subsoil of light brown silty to sandy clay. It was generally located below the fort related intermediate level. However, when farming had completely destroyed the intermediate level, the undisturbed subsoil was found directly below the cultivated layer. The subsoil was located an average of 16.8 cm below
ground level, although significant variations occurred over the site.

Structures and Features

Palisades
Eighteen excavation units contained portions of a north, an east, two south and three west palisades (Fig. 25). The three west palisade trenches found in the southwest corner of the fort were labeled the inner, central, and outer west palisades. The two rows of palisade posts along the southern extremity of the Fort were labeled the inner and outer south palisade lines (Fig. 26). On the basis of upper trench fill evidence these two rows appeared to be within one trench.

Palisade trench fill consisted of a packed light brown to light gray-brown silty to sandy clay. Generally found in the upper levels of the trench fill were bones, bone fragments, ash and small stones as well as some artifacts. Since only the upper levels of trench fill were exposed, trench depths were unknown. Average widths of the trenches varied between 46 cm and 104 cm.

The palisade post remains were in a poor state of preservation. Descriptions of these posts were based on the evidence found in the upper levels of trench fill thus far exposed. Further excavation will provide additional information about the posts.

Palisade posts were generally situated side by side, along single straight lines. The only notable exception to the above pattern occurred along the inner south palisade line where there was some overlapping of posts at irregular intervals. Also of note were several gaps consisting of one to five missing posts along the south palisade lines.
Approximately 85 per cent of the exposed palisade posts were longitudinally split with flattened post edges facing away from the centre of the fort (Fig. 27). The remaining 15 per cent were round or nearly round in shape. A majority of these rounded posts were located along the inner south palisade.

The longitudinally split posts averaged approximately 14 cm in 'as found' width and approximately 6 cm in thickness. The average diameter of the rounded posts was approximately 7 cm. Generally there were 1.0 cm to 3 cm gaps between palisade posts when exposed. These gaps were probably the result of post shrinkage and compaction since the palisade posts would most likely have been built touching or nearly touching each other.

Wood samples taken from each unit containing palisade posts and from each of the separate palisades within each of the units were identified as being of spruce species. These were quite likely either White Spruce (Picea glauca) or Englemann Spruce (Picea engelmannii). The only differing sample was a post which proved to be either Western White Pine (Pinus monticola) or Ponderosa Pine (Pinus ponderosa) (Moore 1975: pers. com.).

Northwest, southwest and southeast corners of the fort were exposed. In the northwest corner the north palisade joined the outer west palisade at an angle of approximately 83 degrees (Fig. 28). In the southeast corner of the fort the east palisade trench did not join the south palisade trench. Both trenches ended short of their projected point of intersection. This indicated that a bastion or bastions stood in the southeast corner of the fort. The projected angle of intersection of these palisades was approximately 100 degrees (Figs. 29, 30).

Similarly, in the southwest corner, the outer and
central west palisades did not join with the south palisade trench. This again indicated the former presence of a bastion or bastions in that corner of the fort. The projected angles of intersection of the south palisade trench with the central and outer west palisades were 91 degrees and 92 degrees, respectively. Also in the southwest corner of the fort, the inner west palisade trench joined the south palisade trench at an angle of approximately 89 degrees (Figs. 26, 31).

Since the angles of projection of the three west palisades varied slightly, distances between the trenches increased as the trench distances from the southwest corner increased. In the units thus far excavated, the average distance between the inner and central trenches was approximately 1.1 m. The average distance between the outer and central trenches was approximately 46 cm.

**West Palisades**

Three palisade trenches were exposed along the west side of the fort. This indicated three palisade building phases associated with that side of the fort. The inner west palisade trench was the most easterly of the three west palisade trenches. A total of five excavation units contained portions of the inner west trench. These units were all located in the southwest quadrant of the site (Figs. 25, 26).

The inner west trench ended in juncture with the south palisade trench. No noticeable soil change occurred in the juncture area. The north end of this trench was not exposed. Evidence for the continuance of the inner west palisade was not found in a unit midway along the west side of the site, nor was there evidence for a gateway associated with that trench (Fig. 25). Thus, indications are that the
trench was less than 27.5 m long.

The average width of the inner west palisade trench was 58 cm. Unlike other palisade trenches on the site, it contained only two palisade post remains. The rest of the posts had most likely been removed following westward expansion of the fort (Fig. 32).

The central west palisade trench was located between the inner and outer west palisade trenches. Six excavated units located in the southwest quadrant of the site definitely contained portions of the trench (Figs. 26, 33). A unit along the west side of the fort midway between the north and south palisades contained part of the outer west palisade and also a paralleling feature which appeared to be a palisade trench. This feature probably was part of the central palisade trench (Fig. 25).

The average width of the central west palisade trench was approximately 46 cm. Posts followed closely along the west edge of the trench (Fig. 26). Nothing definite was found regarding the distance it extended northward. However, the south end of the trench was located. Evidence indicated that this end had abutted a southwest corner bastion.

A small round ash and refuse deposit approximately 120 cm in diameter and contemporary with fort occupation was found over top of and extending into the central west palisade (Fig. 26). This indicated that this palisade was not associated with the final western palisade building phase.

Six excavation units contained portions of the outer west palisade. This palisade was approximately 57.7 m in length. It joined the north palisade and probably had abutted a southwest corner bastion.

The average trench width was 71 cm. Posts within the trench were centrally located in four of the units excavated. In two units located in the northwest corner of
the site the posts ran close to the west edge of the trench (Fig. 28). At the south end of the palisade was a trench enlargement accommodating three larger than average posts and a number of rocks probably used to provide extra support for the posts (Fig. 31). These larger posts likely bordered a southwest corner bastion. At the apex of the juncture of the outer west palisade with the north palisade was a large corner post remnant approximately 25 cm in diameter (Fig. 31).

The outer west palisade was most probably associated with the final palisade building phase along the west side of the fort. This was ascertained by studying evidence of the construction of the outer west palisade trench in relation to an ash concentration associated with the intermediate west palisade. The outer west palisade was dug through this ash concentration. Most of the concentration was outside of the palisade near the southwest corner of the fort (Figs. 24, 33).

South Palisades
Five excavation units contained portions of a south palisade trench (Fig. 25). Two rows of palisade posts were located on opposite sides of the trench. The distance between the east and west ends of the trench was 36 m. The palisade lines probably abutted bastions in the southeast and southwest corners of the fort (Figs. 26 and 30).

The south palisade trench was the widest of the trenches exposed, averaging 1.04 m in width. Only one trench was distinguishable at upper levels. Despite this, the two palisade lines probably were the result of two separate palisade building phases. The later trench was probably dug beside and partially into the other. Further excavation will probably indicate whether two trenches
existed and, if so, which was dug first.

A tentative assumption of the existence of two separate building phases along the south edge of the fort was made. The previously mentioned overlapping of posts along the inner south palisade may have been the result of repair work along that line. This repair work may have corresponded with one of the three west palisade building phases.

**East Palisade**

Three excavated units contained a portion of an east palisade (Fig. 29). This portion included the south end of the palisade, which probably abutted a southeast corner bastion. The trench averaged 75 cm in width. The row of posts exposed was centrally located within the trench. This palisade appeared to have been associated with a final palisade building phase. Indications were that it was the outermost palisade along the east side of the site.

Other east palisades very probably existed. They would have been located west of the exposed outer east palisade. There was some archaeological evidence suggesting that one such palisade may have ended 50 cm east of the exposed outer east palisade trench ending. Despite this, however, there was only conclusive evidence for the existence of one east palisade.

**North Palisade**

Sections of a north palisade were contained in two excavation units located in the northwest corner of the site. A single row of palisade posts was centrally located within the palisade trench (Fig. 34). The average width of the trench was 56 cm at upper trench levels. A clearly distinguishable thin orange and black discolouration along
the sides of the trench was probably the result of fire heating within the trench during winter construction, similar to the trench reddening found by Noble in 1963 (Noble 1973: 66). As was previously mentioned, a large post was located at the apex of the juncture of the north and outer west palisades.

This palisade was the site's most northerly palisade. It appeared to have been associated with the final palisade building phase, with the outer west palisade, and the exposed east palisade.

Support Posts and Post Holes
Several backfilled post holes (some containing posts) appeared to be associated with the west palisades. These features were quite likely related to elevated walk (gallery) support posts. However, interpretation as such was tentative. Some of the features thought to be post holes were practically undistinguishable from the palisade trenches which they were located beside or within (Figs. 26, 32). It is possible that some of the features could have been palisade support posts. Further excavation will clarify interpretation.

Four of the features were located approximately 1.4 m inside of the outer west palisade line. One of these was located in the northwest corner of the fort (Figs. 28, 32). The other three are labelled 1, 2 and 3 in Figure 26. They were thought to be related to elevated walk support posts associated with the outer west palisade.

Three features designated 4, 5, and 6 in Figure 26 also appeared to be related to elevated walk support posts. They were likely associated with the central west palisade and were located between 1.0 m and 1.1 m east of that palisade line. Similarly, the feature labelled 7 may have been
associated with the inner west palisade.

It was difficult to determine the exact boundaries of some post holes since they were associated with palisade trenches. However, these features appeared to average 50 cm in width. The posts exposed within the holes averaged 15 cm in diameter.

**Inner Separations**

One excavation unit located in the northwest quadrant of the site contained a 3 m long portion of a builder's trench which was located approximately at right angles to the outer west palisade (Fig. 25). Although not proven archaeologically, this trench probably met the outer west palisade approximately 8 m south of the large corner post located at the apex of the northwest corner of the fort. The trench averaged 32 cm in width and contained a light brown silty clay fill. Several slender vertical pickets were located along the north edge of the trench. Only the upper levels of the trench were exposed. The feature was likely an inner fort separation, consisting of a row of vertical pickets.

A 4.2 m long portion of another builder's trench was located midway along the west side of the site. It joined another builder's trench, believed to be part of the central west palisade, at an angle of approximately 90 degrees (Fig. 25). Since the north edge of this trench was located in the unexcavated balks of two units, no trench width was ascertained. However, the width appeared to be greater than 40 cm. Trench fill consisted of a gray-brown sandy to silty clay. Only one post remnant, 12 cm in diameter, was exposed. However, only the upper levels of the trench were excavated. This trench may also have been associated with an inner fort separation. It is also possible that it was
an early north palisade (associated with the central west palisade).

A 1.7 m long portion of another builder's trench was located in the southwest corner of the site. It had been dug through the inner west palisade, which it met at an angle of approximately 90 degrees (Figs. 25, 26). It thus postdated that palisade trench. The trench averaged 20 cm in width and contained a light brown silty clay fill. No post remnants were found within it. The function of the trench is uncertain, although it may have been related to a separation in the fort's interior.

Bastions
Palisade configurations in the southeast and southwest corners of the site indicated that bastions had existed in these corners (Figs. 26, 30). No structural remains of the bastions were encountered. It is therefore assumed that "post-on-sill" construction was employed. Cultivation had destroyed any evidence which had survived following fort abandonment.

Thus, only speculations could be made as to the number and characteristics of the bastions which existed in these corners during the period of fort occupation. Speculations related to the bastions were complicated because it was not known which south palisade was associated with each of the outer west, central west and east palisades. Further excavation may solve this problem.

For present, however, it may be said that 3.66 m (12 feet) to 4.57 m (15 feet) square bastions would most appropriately have been associated with the gaps in the southeast and southwest corners of the fort. Also, it is probable that there was more than one bastion associated
with each of these corners during the period of fort occupation.

Ash and Charcoal Concentrations
Several ash and charcoal concentrations were exposed along the palisades of the fort. Some of these are illustrated in Figure 26. Of special significance was the ash concentration labelled A. This feature was discussed previously. It appeared as a lens of white ash containing some small rounded stones, artifacts, charcoal and bone fragments. It was associated with the fort occupation period related to the central west palisade and had probably been formed by throwing ash and refuse over top of that palisade.

The outer west palisade had been dug through feature A (Figs. 24, 26 and 33). Fill associated with the outer west palisade had been spread out along the sides of the trench during trench construction and was located over top of feature A. This fill was overlain by another lens of white ash associated with the outer west palisade. This indicated that ash and refuse was also thrown over the outer west palisade after its construction.

The ash feature labelled B in Figure 26 is also of significance, since it extended into the intermediate west palisade trench. It therefore postdated that trench and probably was formed after the outer west palisade was built.
Summary

The 1975 survey conducted within Rocky Mountain House National Historic Park resulted in the discovery of two previously unrecorded sites. These were designated 15R and 16R. Both were partially excavated. An attempt was made to determine the extent of the sites and to obtain temporal, structural and identification information.

Site 15R was found along the north shore of the North Saskatchewan River approximately 1.2 km (.75 mi.) from its confluence with the Clearwater River (Fig. 1). Portions of north, south, east and west palisades, as well as northwest, southwest and southeast corners of a fort were delineated. The fort appeared to have been quadrangular, but somewhat irregularly shaped. The maximum lengths of the south and west sides of the fort were approximately 38 m and 60 m, respectively. Three separate palisade trenches along the west side of the fort indicated at least three palisade building phases associated with the fort.

Bastions were situated in the southwest and southeast corners of the fort. A lack of bastion remains indicated that these were built with a "post-on-sill" method of construction. Evidence for elevated walk (gallery) support posts was found along the west side of the fort. There was also evidence for inner fort separations. Since the purpose of excavation at site 15R was to outline the fort, no interior structures were excavated.

Site 15R was tentatively designated Rocky Mountain House 1835-61. The location of the site corresponded well
with historical data indicating the location of the fort. Both the 15R site and the 1835-61 fort were on an elevated terrace in a large plain along the steep-cut, north bank of the North Saskatchewan River between 0.8 km (.50 mi.) and 1.2 km (.75 mi.) from its confluence with the Clearwater River. Also, they were both situated along a larger meander bend of the river. The Seafort burial site (17R), near 15R, may have been part of the large graveyard noted by Woolsey in 1857.

Historical descriptions of Rocky Mountain House 1835-61 indicate that it was similar to the fort revealed at 15R. Both were substantial structures, irregularly formed and somewhat quadrangular. The characteristics of the fort corners illustrated by Kane in 1848 correspond with those thus far revealed at 15R.

Site 15R was the only excavated site at Rocky Mountain House revealing evidence of elevated walks. The 1835-61 fort was the only one of the documented forts known to have had elevated walks. Site 15R showed signs of a number of building phases. The 1835-61 fort was occupied for more than a quarter of a century and was known to have undergone extensive palisade renovations.

Artifacts recovered from site 15R were suggestive of a fort occupation period within the second and third quarters of the 19th century. Of principle interest were a large number of transfer printed earthenware fragments with a temporal span of approximately 1833-1867 (Sussman 1976: pers. com.).

The second fort, site 16R, was situated 2.3 km (1.4 mi.) upstream of the confluence of the North Saskatchewan and Clearwater Rivers. A larger portion of this fort was excavated than had been excavated at site 15R. Portions of north, interior north, west and south palisades, as well as northwest and southwest corners of the fort were revealed.
The fort appeared to have been rectangular in shape. The west palisade of the fort measured a maximum of 51.2 m in length. The fort's short side was estimated to have been a maximum of 40 m long. The palisade posts were less substantial than those at 15R.

Only one bastion was revealed. It was constructed of vertical posts with an en pile architectural style. Two buildings were located and partially excavated within the fort. "Post-in-ground" methods of construction appeared to have been utilized.

The lack of palisade posts and building remains suggested that upon abandonment, many of the useful materials were salvaged.

The quantity of artifacts uncovered was considerably less than the number recovered at site 15R. This occurrence may in part be related to the possible salvaging of all useful materials at the time the fort was abandoned. The artifacts suggest a fort dating to the first quarter of the 19th century. The materials included silver hair brooches and earrings, a silver crucifix, 213 hand wrought nails, 7 machine cut nails, one complete Robert Turlington's Balsam of Life bottle, one fragment from the same type of bottle, and a number of clay pipe fragments with no identifiable markings. Two hundred and fifteen seed beads, predominately turquoise or white in colour also appeared. Approximately 74.4 per cent were 3 mm or over, 24.2 per cent were between 2 to 3 mm and 1.4 per cent were less than 2 mm in diameter. The only other beads recovered were the 34 large white opaque and 12 dark green translucent, oval shaped wire-wound specimens from the central cellar of building 1. Other artifacts found were powdered vermilion, two French clasp knife blades, off-set awls, lead musket balls and shot, mother-of-pearl buttons, one metal projectile point, sheet copper fragments, a musket flash pan and a trigger, a
rat-tail file fragment, two spall gunflints and 10 blade gunflints. Ceramics and bottle glass fragments were noticeably lacking on the site. Specimens that were recovered included two dark olive green bottle glass fragments and two white salt-glazed stoneware sherds. Native industries included several pieces of worked antler, stone pipe bowl fragments and a large number of lithic flakes which lend support to the fort being of an early contact period in the area.

No definite trading company name could be attached to the fort remains. Site 16R could not be identified on the basis of historical and archaeological evidence available. There are several possibilities pertaining to this identification. The most likely of these will be presented. The interpretations resulting from the excavation of site 13R will be examined because Noble's interpretations are significantly related to the identification of 16R.

Site 13R also has not been positively identified. Although none of the interpretations arrived at by Noble have been disproven, some may be seriously questioned. Nicks (1969: 127-130) indicated that the structural evidence at the site was not necessarily indicative of the presence of a particular company or two different companies and that Noble's grounds for dating the extension of the fort to post-1821 on the basis of architectural remains, was questionable. Nicks saw a lack of evidence for palisade repair considering that the fort was interpreted as having spanned a period of 35 years. Nicks interpreted the artifacts as indicative of a pre-1821 fort rather than a fort occupied until 1835. It was felt that there was lack of evidence proving that the North West Company had occupied the fort.

Noble saw eight Hudson's Bay Company buttons found at site 13R as one of the principle indicators of a Hudson's
Bay Company occupation of the fort. The fact that buttons are extremely portable items and that Hudson's Bay Company buttons have been found on the North West Company sites in the past casts some doubt on this interpretation.

Thus the identity of site 13R is debatable. The most likely possibility at this time is that it was a pre-1821 North West Company post. Historical locational data suggests that it was the North West Company fort occupied by Thompson (1806-07) and by Henry (1810-11). However, Henry's description of the fort, if accepted as being accurate, precludes this possibility. As is the case with site 16R, there are several possibilities pertaining to the identification of site 13R.

Sites 13R and 16R appear to be pre-1821 forts and could have been occupied by either the Hudson's Bay or North West Company. Because the historical records are sketchy, the forts may not have spanned the 1799-1821 period, but may have been undocumented forts occupied for only a portion of this time span.

Interpretations pertaining to the identification of sites 13R and 16R will be very dependent on the archaeological work to be carried out in 1976. The completion of the park survey will uncover the remains of other fort sites, if existent within the park. The completion of the excavation of site 16R may provide the artifact and structural information required for a positive identification of the site.
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1  Historic site locations within Rocky Mountain House National Historic Park.
1858 sketch by Hector of Rocky Mountain House 1835-61.
3 1848 water colour by Kane of Rocky Mountain House 1835-61.
4  Archaeological master grid, Rocky Mountain House National Historic Park.
* IDENTIFICATION NOT CONFIRMED
Archaeological grid system and contour plan, site 16R.
Stratigraphy associated with the central cellar, building 1, site 16R. Profile of the south walls of excavation units 16R12D and 16R12E.

LEGEND

1 Sod layer-humus
2 Medium brown sandy silt
3 Dark brown silty sand and refuse
4 Light brown compact sand fill
5 Dark brown organic silty sand and refuse
6 Light brown compact sand lens
7 Medium brown sandy clay lens
8 Wood, sheet metal and tin can
9 Medium brown redeposited sandy clay lens
10 Medium brown silty clay
11 Light brown sandy silt
12 Dark brown organic clayey loam
13 Undisturbed very light brown silty sand
14 Undisturbed dark brown-black fine sandy clay lens

--- Limits of excavation
---------- Clay chinking

Stones
Wood

969.31 Elevation A.M.S.L. (metres)
Plans of site 16R archaeological remains.
Southwest corner of site 16R. Intersection of the south palisade and west palisade builder's trenches. View towards the southwest (16R-64M).
Plan of the northwest corner bastion and portions of the north, north interior and west palisades, site 16R.

**LEGEND**

- Post
- Ash
- Wood
- Posthole
- Stone
- Palisade and bastion builder's trenches (unexcavated)
- Palisade builder's trench (excavated)
- + Corner of 3 m by 3 m sub-operation
- -- Limits of excavation
- Sub-operation
- [z] True north
Portion of the north interior palisade builder's trench previous to excavation of fill, site 16R. View towards the east (16R-34M).
Portion of the north interior palisade builder's trench after excavation of fill, site 16R. View towards the east (16R-80M).
Cross section of the south palisade, site 16R, showing profile of builder's trench and palisade post. View facing west (16R-67M).
Portion of the south palisade, site 16R, showing the outline of the builder's trench and posts, sub-operations 16R1B and 16R1C. View towards the east (16R-77M).
14 Northwest corner bastion, site 16R, showing vertical wall posts and two support posts. View towards the southwest (16R-101M).
Plan of archaeological remains associated with building 1, site 16R, showing north basal sill, three cellar depressions, two fireplaces and flooring remnants.

**LEGEND**

- Wood
- Post
- Stone
- Posthole
- Cellar depression
- Soil Colour changes
- Sub-operation
- Corner of 3 m x 3 m sub-operation
- Limits of excavation
- Palisade builder's trench (North interior and west lines)
- True North
Northwest half of the central cellar depressions of building 1, site 16R. View towards the east (16R-26M).
17  Step-like feature situated along the north face of the central cellar depression of building 1, site 16R. Also showing is the west fireplace. View towards the northwest (16R-28M).
18 Partially excavated east fireplace of building 1, site 16R. View towards the southwest showing the collapsed firebox and sleepers bordering the exterior hearth (16R-8M).
Plan of archaeological remains associated with building 2, site 16R, showing the south basal sill, a fireplace, a partially exposed cellar depression and flooring remnants. Also showing are portions of the west and south palisades.

**LEGEND**

- Wood
- Post
- Stone
- Cellar depression
- Soil colour changes
- Sub-operation
- Corner of 3 m x 3 m sub-operation
- Limits of excavation
- Palisade builder's trench
- True North
Portion of the south basal sill, fireplace and flooring remains of building 2, site 16R. View towards the east (16R-21M).
Fireplace located just inside the south wall of building 2, site 16R. View towards the southwest (16R-24M).
1966 low oblique black and white aerial photograph, looking south, of sites 15R, 1R and 16R: palisade lines and depressions of site 15R highlighted by crop and shadow marks (foreground); site 1R during excavation (centre), and site 16R ("Old Brierley Farm" in background) (1R-241M).
23  Archaeological grid system and contour plan, site 15R.
Stratigraphy associated with the outer and intermediate west palisades, site 15R. Located near southwest corner of site. Profile of the north wall of excavation unit 15R8G.

**LEGEND**

1. Topsoil and disturbed dark brown silty loam
2. Disturbed medium gray-brown clayey loam
3. White ash lens
4. Light brown silty clay fill with some ash (associated with the outer west palisade)
5. White ash lens
6. Light gray-brown silty clay mottled with white ash (associated with the intermediate west palisade)
7. Black ash lens
8. Undisturbed light brown silty clay
9. Light gray-brown silty clay fill (associated with the intermediate west palisade)

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Limits of excavation

- Palisade posts
- Stones

968.43 Elevation A.M.S.L. (metres)
Plan of site 15R archaeological remains.
Southwest corner of site 15R showing the inner, intermediate and outer west palisade lines, support posts and postholes, double row of posts along the south palisade and ash concentrations.

**LEGEND**

- Limits of excavation
- Corner of sub-operation
- Palisade trenches
- Ash and charcoal concentrations
- Stones
- Posts
- Post holes
- Ash concentrations
15R10G Sub-operation
27  Longitudinally split palisade posts, and charred border of north palisade trench in sub-operation 15R26H. View looking down (15R-50M).
Northwest corner of site 15R. View towards the southwest (15R-78M).
Southeast corner of site 15R showing the east palisade trench not joining the south palisade trench indicating a bastion location. View towards the northeast (15R-81M).
Plan of the southeast corner of site 15R showing the configuration of the palisade builder's trenches.

LEGEND

- Limits of excavation
+ Corner of sub-operation
--- Palisade trenches
ഷ Ash and charcoal concentrations
○ Posts
15R8W Suboperation designation
Southwest corner of site 15R showing the inner, central and outer west palisade lines and double row of posts along the south palisade. View towards the southeast (15R-76M).
Portion of the inner west palisade, site 15R, a builder's trench lacking any traces of palisade posts. View towards the southeast (15R-22M).
Portions of the outer (to the left) and central west palisades, site 15R. Also showing is an ash and refuse layer (profile) which was associated with the central palisade. It was cut through during the construction of the later period outer palisade. View facing northeast (15R-71M).
Portion of the north palisade, site 15R, showing split posts and the charred red border of the builder's trench. View towards the east (15R-45M).