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ARCHAEOLOGICAL INVESTIGATIONS AT THE SITE OF THE LONGLAC HISTORIC TRADING POST THUNDER BAY DISTRICT, ONTARIO

INTRODUCTION

The purpose of this report is to present the evidence from an archaeological excavation of the historic longlac trading post site, carried out in 1964.

Longlac was evidently an early French trading post, built at the north end of Long Lake, and the predecessor of a North West Company post and of a later Hudson's Bay Company post at that place. It received but brief mention in contemporary literature.

Although Long Lake was an important area in the westward expansion of the fur trade, no detailed critical history of it has been written. For this reason, the historical facts have been sketched here in order to provide some background to the fur trading activities in the area between Lake Superior and James Bay along the Albany River route, and hence to an understanding of the archaeological record. No claim is made, however, to a critical evaluation of these facts.

The report describes the site and the artifacts, and summarizes the archaeological field work. Since the artifacts relate apparently to three traditions at the site, they are of inestimable importance, and since it was not easy to arrange those of European origin, a functional classification was made, following closely that used in the River Basin Surveys. (Woolworth and Wood, 1960).

HISTORICAL BACKGROUND

The historical records, (Thwaites, 1901; Crouse, 1930), suggest that the area was well known to the French from the middle of the seventeenth century. Creuxius's map of 1660, (Thwaites,

1901, Vol. LVIV, p.243) indicates a canoe route from Lake Nipigon (Alimibeg) to the Albany River and thence to James Bay. Two routes are suggested (Voorhis, 1930:7) a northerly one via the Ogoki and Albany Rivers and a southerly one via the Kenogami and Albany Rivers. (Fig. 1). The Kenogami River, formerly known as the English River, drains Long Lake to the north. In 1684 the French built two posts on Lake Nipigon and the same year Daniel Greysolon Sieur de Lhut advised the Governor of New France that he would build a post on the Albany River the following year. These actions were taken to offset the loss of furs to the Hudson's Bay Company, (Innis, 1956).

After the French capture of the English posts on the bay in 1686, control of the fur trade stabilized, except in the area north of Long Lake for the Hudson's Bay Company retained the post at the mouth of the Albany River. Intensive rivalry was renewed following the 1713 Treaty of Utrecht which saw the bay posts returned to the Hudson's Bay Company. The latter, in 1720, built a post 100 miles up the Albany, Henley House, in an endeavour to capture the trade going south. Meanwhile the French, under La Verendrye, headquartered on Lake Nipigon, continued to maintain a few outposts to the north in the Nipigon Country (Voorhis: 1930) while vigorously expanding trade westward. These activities continued to about 1753.

With the fall of New France to the British in 1763 and the subsequent surge of new traders out of Montreal, there is once again a struggle for control of the area's fur trade. The Hudson's Bay Company diaries for the period 1775 to 1781 record correspondence urging the Master of Henley House to get into the inland country and head off the poachers, (Switzer, 1964). The struggle intensified with the formation of the North West Company in 1783. By 1814 the Hudson's Bay Company established a post at Long Lake, one furlong south of an existing North West Company post. (Switzer, 1964). It is suggested that the latter post was built prior to 1800 on the site of an old French post (Bell, 1870).

The North West Company's operations continued until the 1821 union with the Hudsons Bay Company, after which date their buildings probably continued to be used as a local encampment. This location may also have been that used by Father Dominique du Ranquet who reached Longlac in 1864. (Cadieux, 1961). The post is shown on a series of maps published in 1823, (Voorhis, 1930), and a description is provided by Donald McIntosh in 1827. (Nute, 1948).

The Hudson's Bay Company continued to operate a post at the site until after construction of the Grand Trunk Pacific railway line north of Long Lake. Portions of the site were cleared and cultivated and cattle were brought in (Ontario 1893; Macfie, 1963). On the east side of the lake the railway town of Longlac was attracting new traders. Revillon Frere established a post in 1906

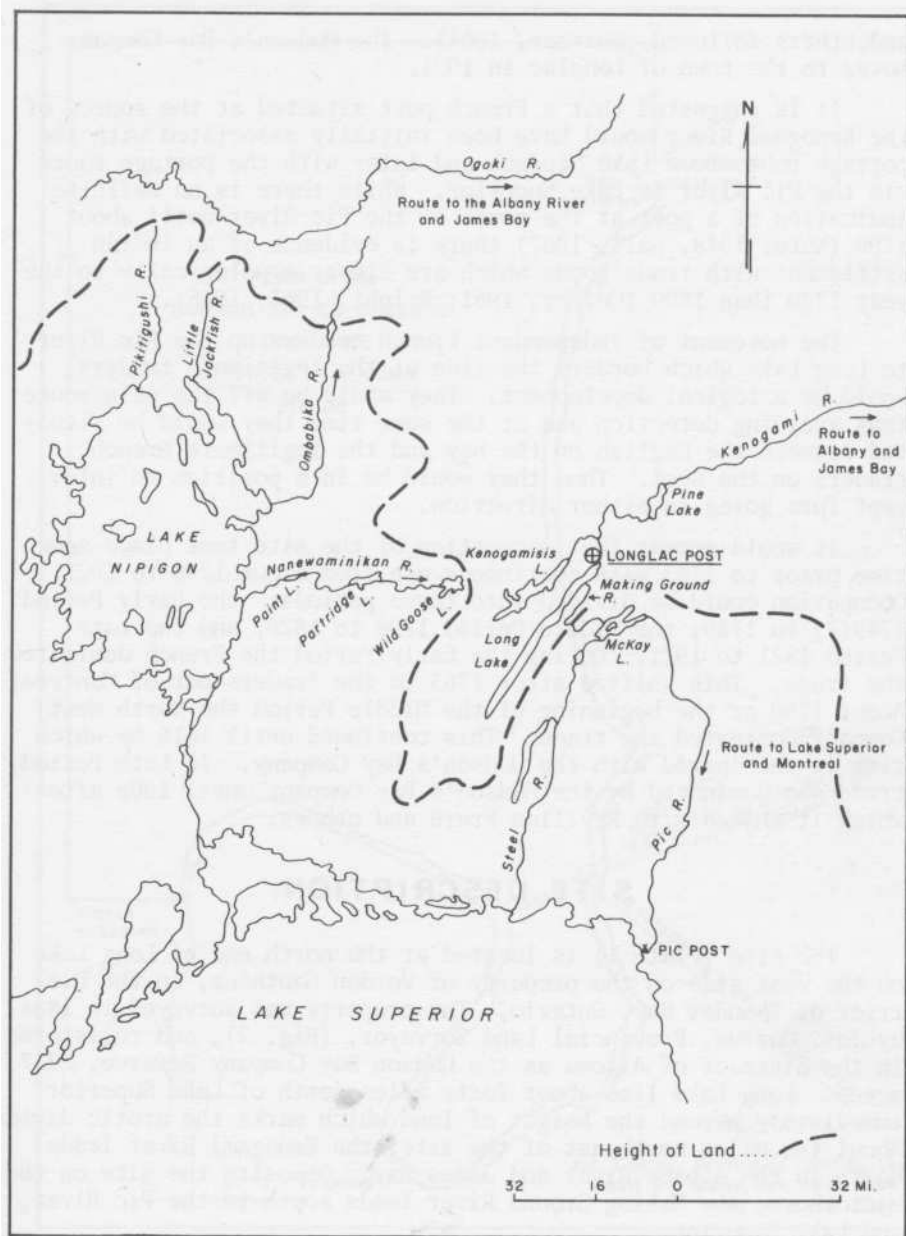


FIGURE 1

MAP OF LONGLAC AREA

and others followed (Switzer, 1964). The Hudson's Bay Company moved to the ton of Long lac in 1921.

It is suggested that a French post situated at the source of the Kenogami River would have been initially associated with the portage route from Lake Nipigon and later with the portage route via the Pic River to Lake Superior. While there is no definite indication of a post at the mouth of the Pic River until about 1790 (Nute, 1948, Gall, 1967) there is evidence of an Indian settlement with trade goods which are closer typologically to the year 1700 than 1800 (Quimby, 1901; Wright, 1963, 1966).

The movement of independent French traders up the Pic River to Long Lake which borders the line of the legitimate traders, would be a logical development. They would be off the main route thus avoiding detection and at the same time they would be situated between the English on the bay and the legitimate French traders on the west. Thus they would be in a position to intercept furs going in either direction.

It would appear that occupation of the site took place some time prior to 1763 with continuous use from about 1790 to 1921. Occupation could be divided into three periods: the Early Period 1740(2) to 1789; the Middle Period 1790 to 1820; and the Late Period 1821 to 1921. During the Early Period the French dominated the trade. This shifted after 1763 to the traders out of Montreal. About 1790 or the beginning of the Middle Period the North West Company dominated the trade. This continued until 1815 by which time it was shared with the Hudson's Bay Company. In Late Period, trade was dominated by the Hudson's Bay Company until 1906 after which it shared with Revillon Frere and others.

SITE DESCRIPTION

The site (Plate 1) is located at the north end of Long Lake on the west side on the property of Verdun Gauthier, in the District of Thunder Bay, Ontario. The property was surveyed in 1884 by Jos. Cozrus, Provincial Land Surveyor, (Fig. 2), and registered in the district of Algoma as the Hudson Bay Company Reserve, 22.7 acres. Long Lake lies about forty miles north of Lake Superior, immediately beyond the height of land which marks the arctic divide. About two miles northeast of the site, the Kenogami River leads north to the Albany River and James Bay. Opposite the site on the east shore, the Making Ground River leads south to the Pic River, and Lake Superior.

The site was first brought to the writer's attention in 1963 by Keith Denis of the Thunder Bay Historical Society. In the fall of that year, a cursory examination of the site was made. Low hummocks and depressions were evident towards the southerly end and building remains were found at the edge of a clay terrace

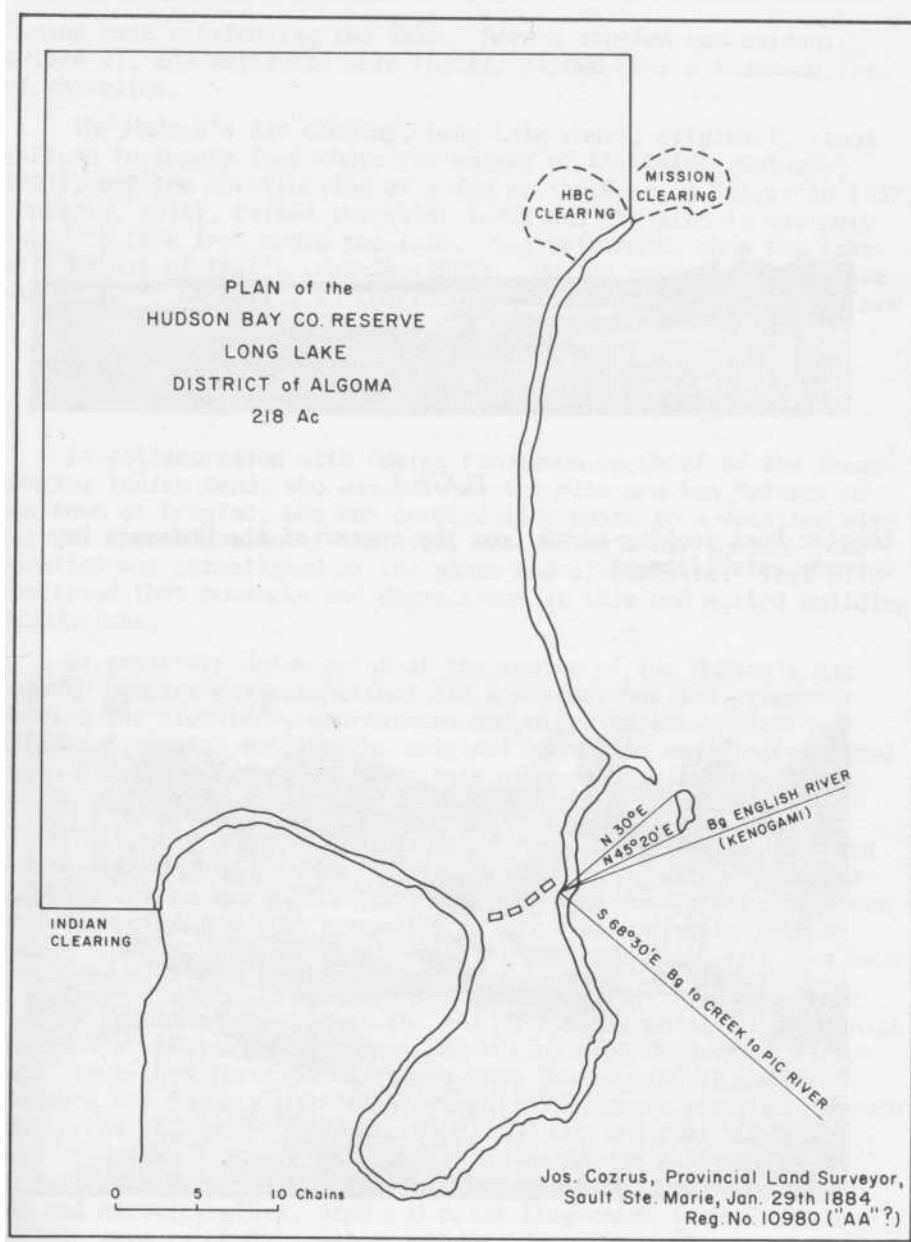


FIGURE 2

PLAN OF HUDSON BAY RESERVE



PLATE 1

Longlac Post looking north from the center of the Hudson's Bay Company establishment.



PLATE 2

Eroding bank at North West Company post location showing old building foundations.

facing east overlooking the lake. Severe erosion was evident, (Plate 2), and artifacts were thickly strewn over a thousand feet of shoreline.

The Hudson's Bay Company, Long Lake House, originally stood fifteen to twenty feet above the waters of the Lake, (Ontario, 1893), but the construction of a dam on the Kenogami River in 1939, (Ontario, 1948), raised the water level and the site is now only three to five feet above the lake. Map references show the lake at a height of 1025', (Canada, 1959). During excavation the lake was at 1028' according to the records maintained by Kimberly-Clark Pulp and Paper Company Limited, (Switzer, 1966).

ARCHAEOLOGICAL FIELD WORK

In collaboration with George Finalyson, a Chief of the local Longlac Indian Band, who was born on the site and Ken Switzer of the town of Longlac, who has devoted many years to a detailed historical investigation of the site, the Hudson's Bay Company post location was established at the south end of the site. Test pits confirmed that hummocks and depressions at this end marked building foundations.

An arbitrary datum point at the center of the Hudson's Bay Company complex was established and a contour map was prepared showing the elevation, depressions and other surface features, (Figure 3; Centre Fold). The original shoreline was plotted based on an estimated average erosion rate of two and a half feet per year.

For spatial control of the excavation, the site was laid out on a ten foot grid pattern. The site was photographed and a surface collection was made. Such items as saws, and pieces of stove were collected from the grassed area and small objects, such as beads, buttons, pipe fragments, glazed pottery, glass and shot were collected from the shore.

Excavation commenced at the end of a small point of Land which commands a view of the Kenogami and Making Ground Rivers. It was hoped that this location which was some 700 feet north of the Hudson's Bay Company post might reveal evidence of the early French post. The sod was cleared by shovel and two ten foot squares were excavated by trowel, in two inch levels, to sub-soil at a depth of ten inches. Rolls of birch bark were embedded in the sod and ceramic, glass, pipe and metal fragments, from the late period, were randomly scattered throughout. No post structure was evident.

Two circular yellow discolourations and a shallow V-shaped depression running obliquely across one of the squares were recorded. No artifacts were recovered in cross sectioning of the features. Two other extended oblique depressions were noted west

of the excavation. Verdun Gauthier reported that he cleared and burned the brush on the site in 1946 and in the following years ploughed and ditched it. This would account for the features and the scattering of the artifacts recovered.

Noting a preponderance of fire-weed (*Epilobium angustifolium*) and what appeared to be log foundations in the bank at a point 660 feet south and 250 feet east of the datum point, excavation was moved to this area. This is approximately one furlong south of the Hudson's Bay Company post, the reported location of the North West Company. Timbers and corner supports of a building were exposed, and a central dark discolouration appeared to mark a cellar pit. The latter was cross sectioned. Adverse weather conditions precluded attempts to effect controlled excavation of the pit by level. Recognizable specimens were recorded as to their level in the pit. Only five of fourteen ten foot squares opened in the area were completed to sub-soil at twelve inches. Profiles were virtually uniform, consisting of four inches of sod over eight inches of black light cultural refuse over brown to gray clay sub-soil. No other area of the site was excavated.

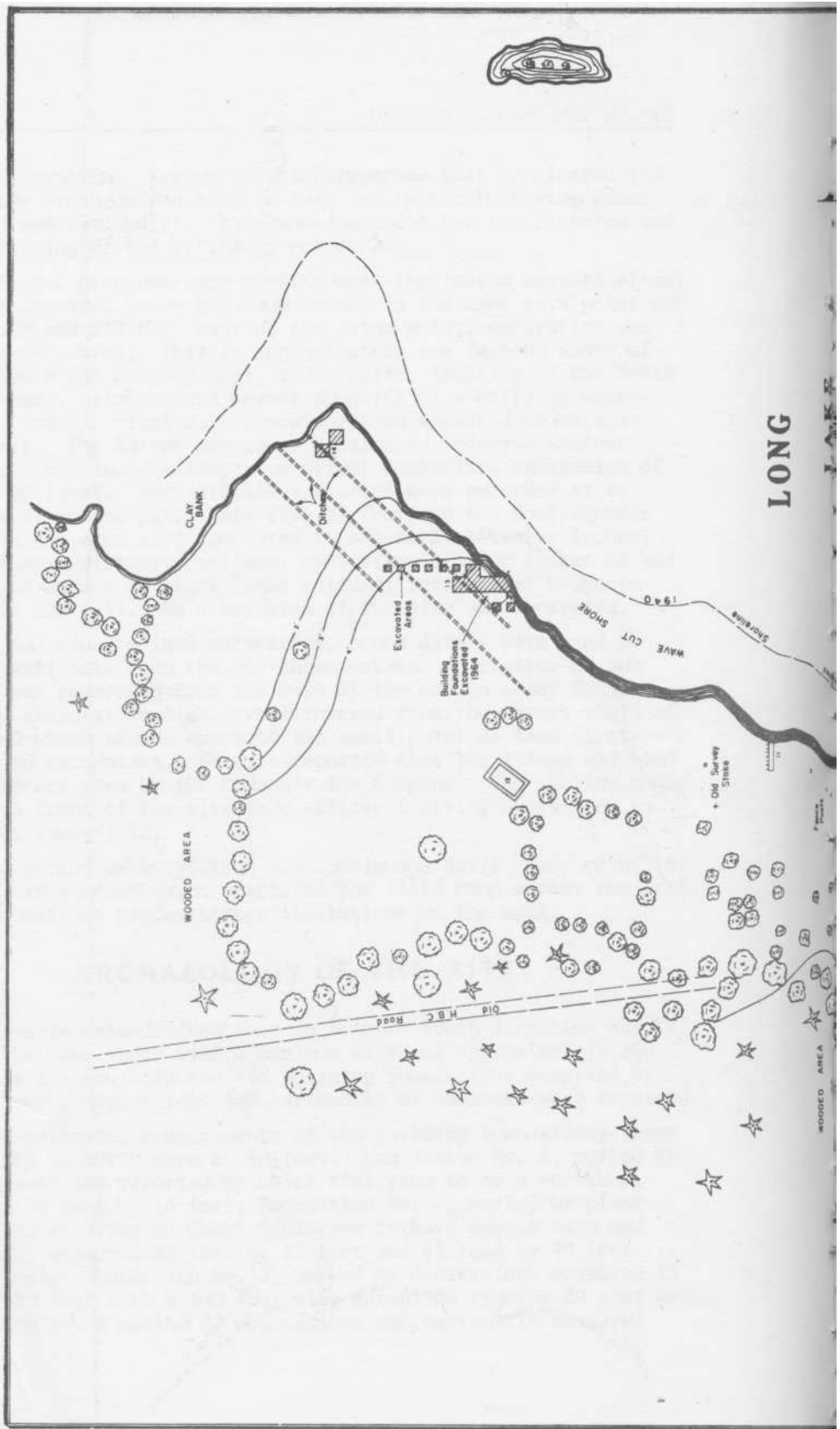
In addition to land excavation, scuba divers were used to salvage artifacts from the off-shore waters. A cluster of gun barrels was recovered from the cove at the Hudson's Bay Company post and skeletal remains were recovered from the waters south of an island which stands opposite the small point of land first subject to excavation. Switzer reported that the island was used as a cemetery area by the Hudson's Bay Company. The shallow muddy waters in front of the site made efficient diving operations in this area impossible.

The period of excavation saw continuous daily heavy rains terminating in a storm which scattered the field camp across the site. These conditions placed severe limitations on the work.

ARCHAEOLOGY OF THE SITE

The site extends 1000 feet in a north-south direction paralleling the lake shore with a maximum width of approximately 300 feet. At the southern end ten building foundations demarked by plant growth, depressions and earthworks or hummocks were recorded.

The estimated measurements of the building foundations taken from south to north were as follows: Foundation No. 1, marked by plant growth and reported by Chief Finlayson to be a workshop, measured 20 feet by 10 feet; Foundation No. 2, marked by plant growth and reported by Chief Finlayson to have been a barn and barn yard, measured 35 feet by 22 feet and 45 feet by 40 feet respectively; Foundation No. 3, marked by depressions measured 15 feet by 10 feet with a two foot wide extension running 20 feet west; Foundation No. 4 marked by depressions and earthworks measured



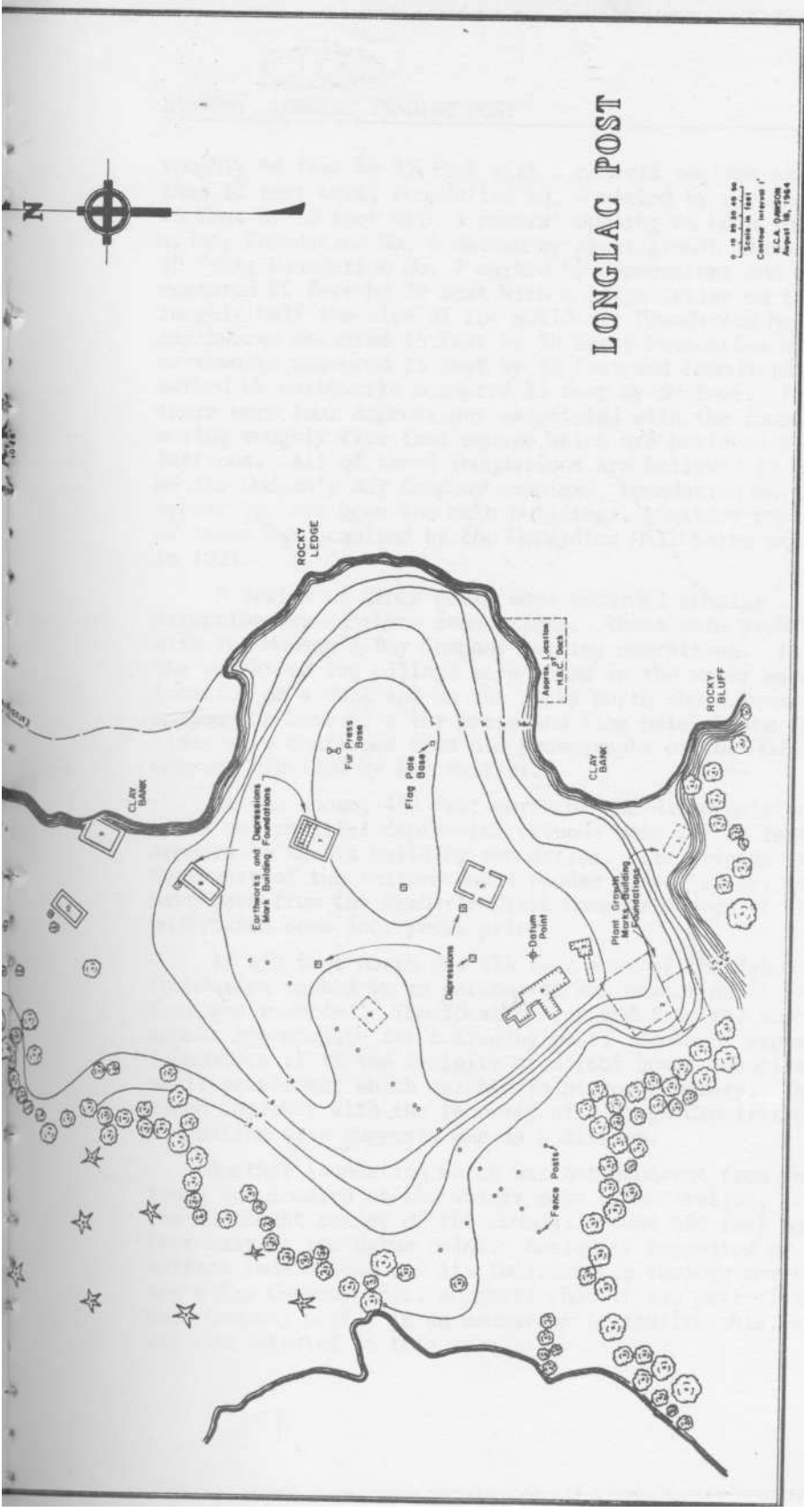


FIGURE 3
 MAP OF LONGLAC POST

roughly 50 feet by 12 feet with a central section extending a further 12 feet west; Foundation No. 5 marked by earthworks measured 25 feet by 30 feet with a central opening on both the east and west sides; Foundation No. 6 marked by plant growth measured 15 feet by 20 feet; Foundation No. 7 marked by depressions and earthworks measured 25 feet by 30 feet with a large cellar on the north side roughly half the size of the building; Foundation No. 8 marked by earthworks measured 15 feet by 30 feet; Foundation No. 9 marked by earthworks measured 25 feet by 30 feet and Foundation No. 10 also marked by earthworks measured 15 feet by 30 feet. In addition, there were four depressions associated with the foundations measuring roughly five feet square which are believed to have been latrines. All of these foundations are believed to have been part of the Hudson's Bay Company complex. Foundation No. 5 and No. 7 appear to have been the main buildings. Switzer reports that one of these was acquired by the Geraldton Mill Works and moved there in 1921.

A series of fence posts were recorded running in a northeast direction beyond these foundations. These were probably associated with the Hudson's Bay Company farming operations. In the cove at the south end log pilings were noted in the water marking the location of a dock and on the rocky north shore squared timbers marked the base of a fur press and flag pole (Plate 3). The positions were confirmed from old photographs of the Hudson's Bay Company provided by Ken Switzer.

At the shore, 450 feet north of the datum point a low earthworks and parallel depression extends west for 25 feet. This also appears to mark a building foundation. Its origins are unknown. Northwest of the feature was a wooden survey stake, believed to have been from the Kimberly-Clark Company survey of the lake shore undertaken some four years prior.

At 650 feet north and 135 feet east of the datum point, a foundation marked by an earthworks and measuring 25 feet by 30 feet was recorded. The location removed from the shore does not appear appropriate for a trading post. Gauthier reports that the foundation is in the vicinity of a root house associated with a small settlement which existed in historic memory. The location taken together with the recovery of a large crucifix east of the foundation also suggests use as a mission.

Another foundation which was not apparent from surface contours was located at the water's edge by excavation, (Figure 4). The southeast corner of the foundation was 650 feet north and 240 feet east of the datum point. Antiquity suggested by the lack of surface indications and its location one furlong north of the Hudson's Bay Company post, suggests that it was part of the North West Company post. In an endeavour to confirm this, excavation was concentrated in this area.

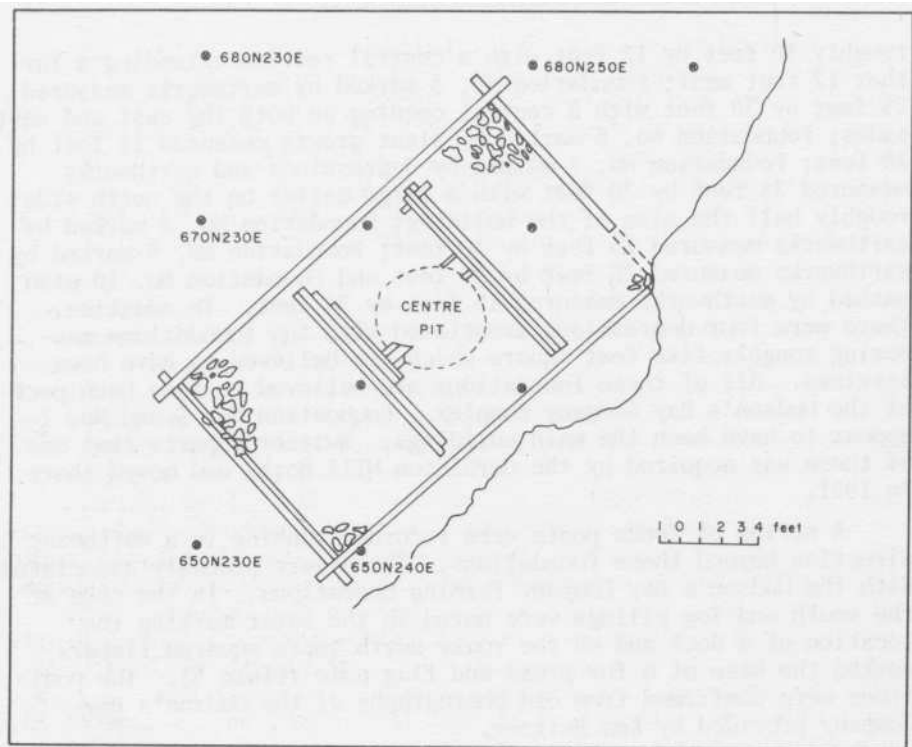


FIGURE 4

Building Foundations

The foundation measured fifteen by twenty-four feet. Actual measurements exceeded this by about one foot; this was accounted for by evidence of spreading marked by a space between the outside walls and butt ends of the cross joists. The wall sub-structures were made from roughly squared timbers fashioned with an axe. Bark was still adhering to them. They measured approximately six inches square. Except at the corners they appear to have been placed directly on the ground. They were notched at the corners but not spiked. On the inside at the corners of the foundation there were stone supports or footings forming a triangle with sides measuring about two feet (Plate 4). The stones roughly oblong in shape and from four to fifteen inches across were from the local area. They had been interlaid so as to align the corners. It was not ascertained whether they had been recessed into the ground. There was no evidence of the use of mortar. While they do not now extend under the timber remains, it would appear that the timbers were originally placed on the support and as a result of spreading they have slid off.

The central section of the building appears to have been covered by a plank or hewn slab floor covering a cellar. These planks, some of which were bark covered on the lower side, varied from two to four inches in thickness and were about six inches in width. They ran under six inch squared timbers which extended from wall to wall paralleling the cellar. Iron nails found associated with the flooring suggests that it was nailed to the joists. The flooring appears to have collapsed into the cellar pit.

The cellar or pit was roughly circular having a diameter of eight feet and a depth of sixteen feet with rounded corners, con-convex sides, and a flat base. Stratigraphically the fill showed no clear association. Beneath a darkened clay refuse deposit occurs a layer of wood fibres, below this there was only a mass of darkened clay refuse and wood fibres interlaced with lenses of light brown clay. The lensing is suggestive of the results of discontinuous rain action. A prolific array of artifacts occurred from the top to the bottom of the cellar pit. These included trade beads, lead shot, gun parts, window and bottle glass, ceramic and metal fragments, cutlery, lead sheeting, brass and wooden buttons, and files and axes. The mixture contained an abundance of mammal, bird, and fish bones as well as fish-scales. This confusion of materials also characterizes the occupational debris excavated in the squares immediately to the north of the foundations. Two artifacts recovered from the bottom of the pit give an indication of the chronology of deposition, one is a seven hole brass butt plate characteristic of Northwest guns and the other is a French-type clasp-knife.

Apart from a central cellar, no chimney recess, fireplace, or other structural features were present. While evidence of a door was absent, assuming the building faced the lake, it would have been favourably positioned in a southeast direction.

We have only the foundation to give us any indication of the type of construction. The horizontal positioning of the timbers indicated that they were bearing walls. The corners were simple notched and unspiked with about a two foot extension at the ends. While it is evident that the floor was divided into three roughly equal quadrangles measuring fifteen feet by eight feet, whether this represents interior partitioning cannot be determined. It is suggested that this would be unlikely, as small trading post buildings were generally open areas with nothing more than a counter to divide the area. Beneath the central portion was a cellar pit probably used for storage of trade goods and food. The nature of the upper portions of the building are undeterminable although it could be speculated, that the roof would be low and thatched with birch rind or cedar bark. It had one or more small windows based on a recovery of window glass. The size of the building is the same as that reported as a shed of the "old firm's" at the mouth of the Pic (Nute, 1948).

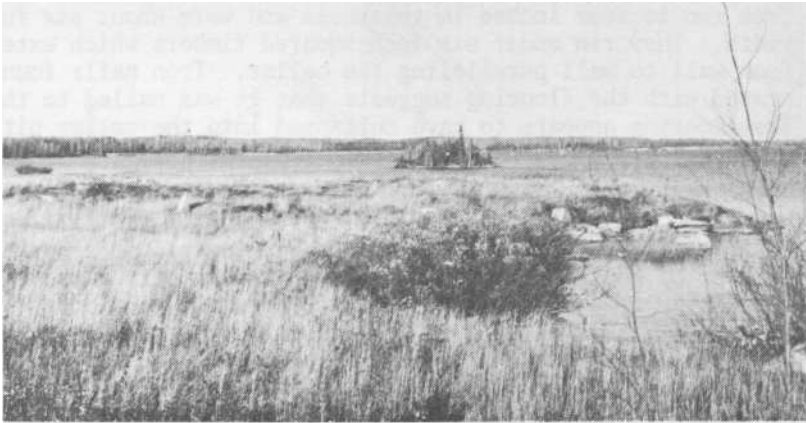


PLATE 3

Hudson's Bay Company post looking north, cove on right and flag pole and furpress base on left.



PLATE 4

Stone corner support structure of building believed to be of the North West Company period.

Thinking material recovered showed square timber markings but the quantity found suggests that it was not extensively used. It does not appear to be fired clay. The probability is that the building would be chinked with moss then covered with mud.

While some evidence of fire was present in the cellar possibly as a result of grass fires, the building does not appear to have burned, although fires were a hazard and as early as 1801 the Hudson's Bay Company records record assisting the Northwesters in putting out a fire in their building (Smith, 1965). It was probably simply abandoned, perhaps at times pirated for timber and subsequently what was left merely collapsed, with cellar pit being used as a refuse dump.

ARTIFACTS RECOVERED

Over four thousand items were recovered from the site, of this number more than half have been identified. Classification by period was limited for various periods of occupation and the uses to which the site was put merge into one another thus many objects have no clear provenance. Further, the lack of prior archaeological information from the area precluded a detailed seriation study.

Based on written listings of artifacts known to have been present at trading posts, the assemblage is incomplete. This reflects both the extensive erosion and the limited area excavated during this initial investigation of the site. The situation was further aggravated by the fact that the bulk of the artifacts recovered did not come from the excavated area but rather they were from the surface or the waters of Long Lake.

The objects have been grouped as far as possible according to logical relationships, rather than by the nature of the material of which they are made, (Table 1). It has not always been possible to achieve a completely satisfactory arrangement, for some objects obtained had served more than one purpose, or have relationships other than those of the most obvious. In addition an attempt has been made to provide an attribute analysis of distinctive artifacts which it was felt, warranted a more complete description. This has been done in the belief that it would allow more ready comparisons with later data. Since this resulted in a mass of descriptive data which inhibits communication it has been placed at the end as an appendix to the report. Comparisons when possible have been drawn under conclusions.

TABLE 1

DATA ON MATERIAL RECOVERED

TRADE GOODS AND HUNTING ACTIVITIES

Beads	
small seed beads	228
medium beads	10
Sub-total	238
Gun Accessories	
flints	100
cartridge cases	46
lead shot	22
musket balls	12
shot gun cases	10
bullets	4
gun worms	2
shot flask top	1
percussion caps (box)	1
melted lead fragments	
Sub-total	198
Gun Parts	
barrels	9
trigger guards	4
lock plates	3
frizzens	3
butt plates	3
side plates	2
miscellaneous	11
Sub-total	35
Fish hooks	10
Animal traps	5
Half-axes	3
Leadbale seals	3
Bangles	2
Harpoons	2
Sub-total	25
Total	496

PERSONAL POSSESSIONS

Kaolin pipes	
bowls	144
stems	180
Sub-total	324
Tobacco Labels	37
Personal items	
safety pins	6
jewelry	3
religions articles	3
coins	2
hair pin	1
thimble	1
button hook	1
needle	1
bees' wax	1
collar stud	1
pipe howl cover	1
watch fragment	1
Sub-total	22
Small tools	
clasp knives	4
scissors	3
strike-a-lights	3
awls	2
Sub-total	12
Musical	
instrument fragments	5
harmonica plates	2
concertina plates	2
Jew's harps	2
Sub-total	9
toy fragments	6
Total	<u>409</u>

CLOTHING AND FOOTWEAR

Buttons	95
Buckles and Fasteners	16
Leather fragments	8
Cloth fragments	6
Total	125

TOOLS AND EQUIPMENT

Axes	9
Files	6
Chains and links	4
Farm tools	4
Saws	3
Measuring tools	2
Land tools	2
Propeller	1
Lead sheeting fragments	47
Miscellaneous metal	-
Wire fragments	-
Total	78

HOUSEHOLD GOODS

Ceramics	
pearlware	160
other	39
Sub-total	199
Glass	
fragments	341
bottles	2
stoppers	2
Sub-total	345
Knives	19
Container fragments	18
Kettle fragments	12
Corkscrews	6
Spoons	5
Dishes and Cups	4
Stove fragments	4
Pots and pans	3

HOUSEHOLD GOODS - cont' d

Drawer-pull	3
Forks	2
Lamp	1
Sub-total	77
Total	621

HOUSING AND CONSTRUCTION MATERIALS

Nails	427
Window glass	115
Spikes, bolts and screws	11
Locks and keys	10
Door hinges	6
Door pintle	1
Bolt catch	1
Strapping fragments	-
Chinking sample	-
Wood fragments	-
Total	571

OBJECTS OF NATIVE MANUFACTURE AND MISCELLANEOUS

Copper arrowpoint	1
Copper awl	1
Worked flint	18
Sub-total	20
Human bone	87
Faunal remains	-
Birch bark fragments	-
Shell fragments	-
Total	107

CONCLUSIONS

In the summer of 1964 the author directed an exploratory excavation and collection of materials from the old fur trade post at Longlac. This eighteenth century post was believed to have been first used by the French as early as the fifth decade of the century. Late in the century it was taken over by the North West Company and by the third decade of the Nineteenth century the Hudson's Bay Company took over. The primary purpose of the work was to recover material and evidence concerning the early occupancy of the site.

Archaeological evidence clearly marks the location of the Hudson's Bay Company establishment and a building one furlong south which may have been associated with the North West Company. Evidence of an early French post was not uncovered although axes and gun parts recovered support its presence.

Because of the number of specimens and the variety of materials, cleaning and conservation of specimens was a major under-taking. Inadequate recovery as a result of erosion and limited excavation undertaken precluded a good workable sequence. This combined with the fact that historical sites in the area have not received archaeological attention also precluded a comparative analysis. Nevertheless, based on broad comparisons with material from the Upper Great Lakes the results do indicate a sequence in time corresponding with the presumed occupational periods.

Axes (Plate 6) recovered clearly show a sequence reflecting the changing periods of occupation. Early hand forged wrought iron half axes which predate the North West Company are believed to be from the early French period. Welded seam, bit axes with a notch at the pole are considered to be from the North West Company period. Axes with crescentic impressions on the blade face and blades extended parallel from the pole are considered to be from the late Hudson's Bay Company period.

Beads, all of which were recovered in or associated with the cellar pit are post 1710. They occur in a variety of sizes and colours and appear to be from the late period of a type used primarily for clothing decoration. Blue, the most common colour, is characteristic of western trading posts, (Woolworth and Wood, 1960).

Buttons (Plate 7) recovered reflect a sequence in time characteristic of the site, (Olsen, 1963). These include spun-back buttons in use from about 1760 onwards, plain-back brass button used between 1785 and 1800, triple gilt buttons of the period 1812-1820 and bone buttons common in the period 1750-1830. Two piece buttons and other types which came into use after 1830 are also present.

Copper bangles, iron harpoon heads and a copper projectile are suggestive of the early Middle period. Iron fish hooks present may be from any period while the traps recovered are from the most recent period.

One clasp knife recovered is of French design while three others appear to be of British. A cross-hatched decorated bone handled kitchen knife has the same design as some recovered at Lower Fort Garry, (Chism, 1966). A scrolled handled knife and fork are identical to one found at Lake Abitibi, (Ridley, 1965). (Plate 6).

Gun parts (Plate 5) while predominantly from the 19th century include one butt plate from a French muskatoon, introduced about 1730 (Hamilton, 1966) parts from a Brown Bess (c.a. 1760-1770) and a lock plate and frizzen from the 18th century (Gooding, 1966). The wide flats of the gun barrels recovered are suggestive of 18th century trade guns as is one of the trigger guards. Two side plates, one with a serpent design are from Northwest guns which predate the formation of the North West Company. Musket balls are predominantly of a large size which characterizes early guns found south of the Great Lakes, (Hamilton, 1960 c.). In contrast, the small calibre of the gun barrels is suggestive of French trade guns. Gun flints are post 1750 British rectangular black flint. Other accessories appear to pertain to the late period.

Lead hale seals recovered from the refuse of the cellar pit are characteristic of the middle period of occupation, (Figure 5) (Calver & Balton, 1950). One with the Hudson's Bay Company fox design is from the recent period.

Ceramic and glassware all appear to relate to the late period. While nails reflect a sequence in time from handwrought nails used prior to 1830 to cut nails to the modern wire nails (Nelson, 1963). White kaolin pipe fragments recovered are from the middle to late period. (Omwake, 1965). There are a number of TD types from the period 1812-1860, (Figure 6), but most are more recent plain types with manufacturers' identification marks of the period 1848-1876 and carry such names as W. White, Glasgow and Henderson, Montreal.

Objects of native manufacture apart from those fashioned from trade goods were not recovered with European goods but were from the off-shore area. They are considered to predate the site and are not reported upon. Further, in anticipation of a separate reporting, the extensive collection of faunal remains and the skeletal material recovered have not been reported upon.

Unlike many commercial establishments of the frontier, the Longlac post does not appear to have had a timber enclosure. Presumably good relationships existed between trader and Indian in the area.

The history of the site appears to follow the characteristic pattern. At the outset a solitary French trader residing with the local Indian group, he is replaced by a small group of traders, the North West Company, with a semi-permanent house and they are in turn replaced by the Hudson's Bay Company with a true post and a formal organization of personnel, trade and transportation.

ACKNOWLEDGEMENTS

The survey and preliminary archaeological explorations which are reported here were made possible through the interest and assistance of many individuals and institutions, and the author takes pleasure in acknowledging them.

Foremost, thanks must go to the Ontario Department of Tourism and Information, and to the Ontario Department of University Affairs, who provided the funds with which the work could be done. Supplementary assistance in the form of supplies and equipment loaned came from the Ontario Department of Lands and Forests, Lakehead University, the Lakehead Freightways Limited, Armstrong Van and Storage Limited, and Great West Timber Limited.

A hard-working volunteer crew consisting of Messrs. Raymond "Malo, Jack Redden, Carl Hagen, Robert Denis, Dane Dawson and Miss Caroline Phillips was under the archaeological supervision of Mrs. Irene J. Dawson. Mr. Richard Martin was responsible for administration. Additional weekend labour was contributed by members of the Thunder Bay Historical Society, headed by its President, Mr. Keith Denis. A scuba diving team comprising Dale Lockhart and Dr. John Siren and Dr. Ray Lane did valuable work.

Advice on the identification of certain artifacts was received from Messrs. Walter A. Kenyon, associate curator, Royal Ontario Museum, Toronto, T. M. Hamilton, research associate, The Museum of the Great Plains, Lawton, Okla., S. J. Gooding, head, 'Museum Section, Canadian Historic Sites Division, Ottawa, and James V. Chism, research associate, University of Manitoba, Winnipeg. Mr. A. L. K. Switzer, assistant woods manager, Kimberley-Clark Pulp and Paper Company Limited, of Long Lake, aided in historical research.

Donations of specimens from the site were made by Mr. A. L. K. Switzer and by Mr. Verdun Gauthier, Mr. Antoine Bouchard, and Mr. Hugh Cummins. Miss Ruth Tracy performed the pain-staking tasks of cleaning and cataloguing the specimens.

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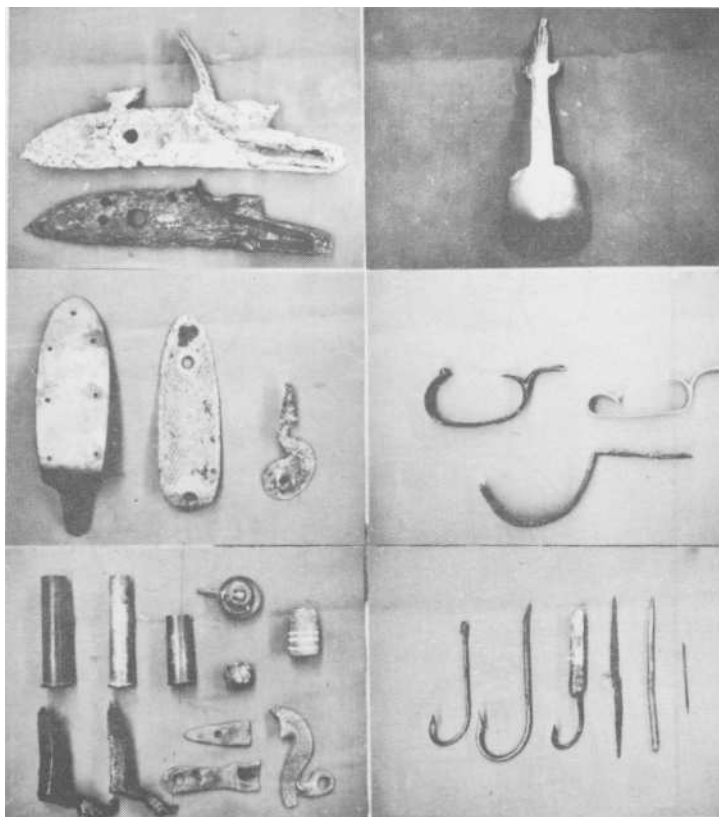


PLATE 5

(left to right) Lock plate, possibly from a Brown Bess, Lock Plate pre 1800, Butt plate from a French Muskatoon, Brass butt plate, Iron Butt plate, cock.

Iron trigger guard as early as 1840, 19th century brass trigger guard, Trigger guard from a Northwest gun, Cartridge cases, 45-70 or 45-60, 38 55 and 44, Lead bullet from a 577 Snider, Musket ball, pine fired shot gun case, fish hooks and awls.

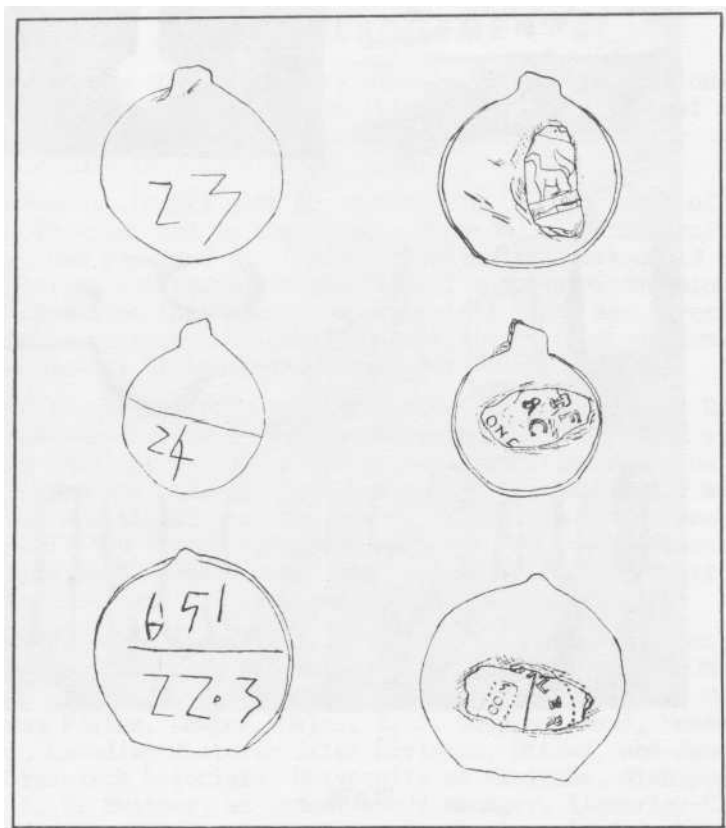


FIGURE 5

Bale Seals

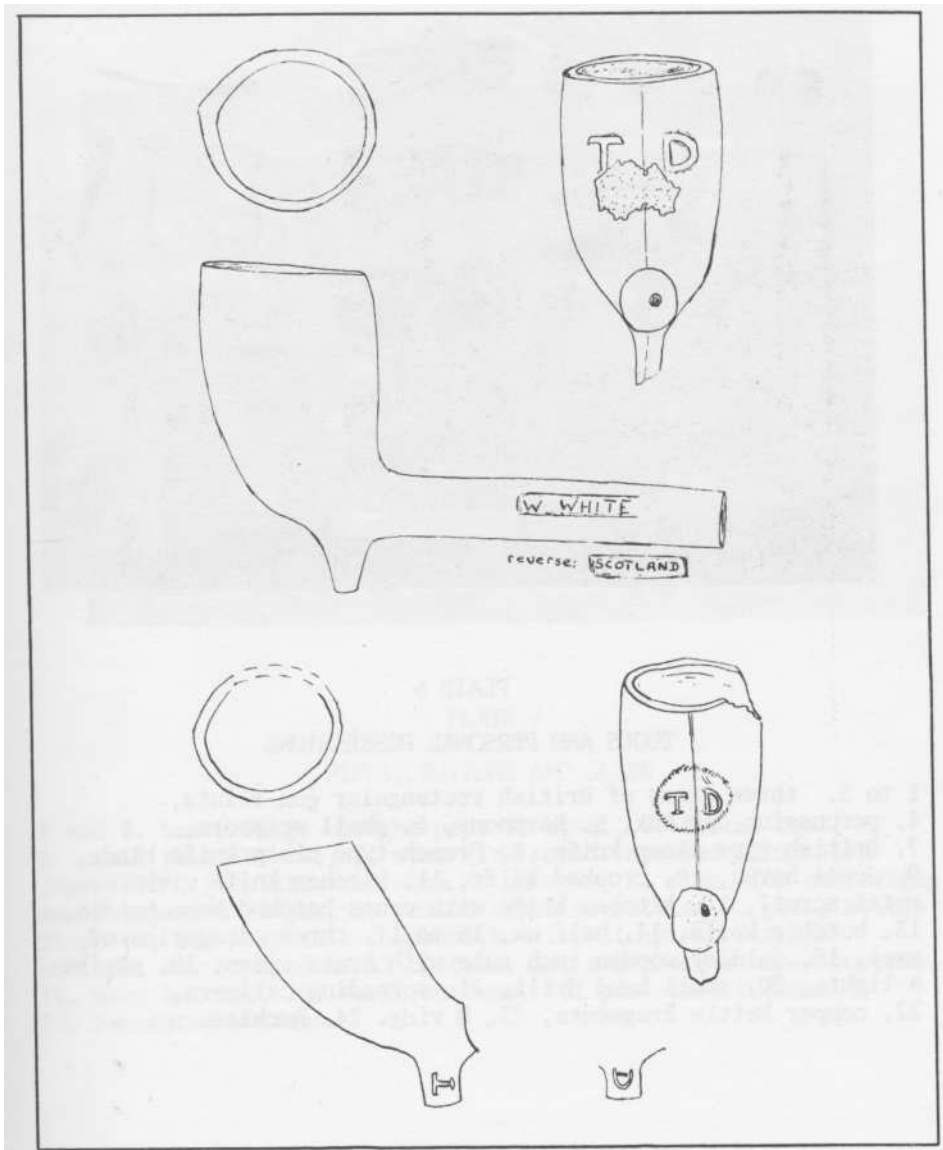


FIGURE 6

TD Pipes

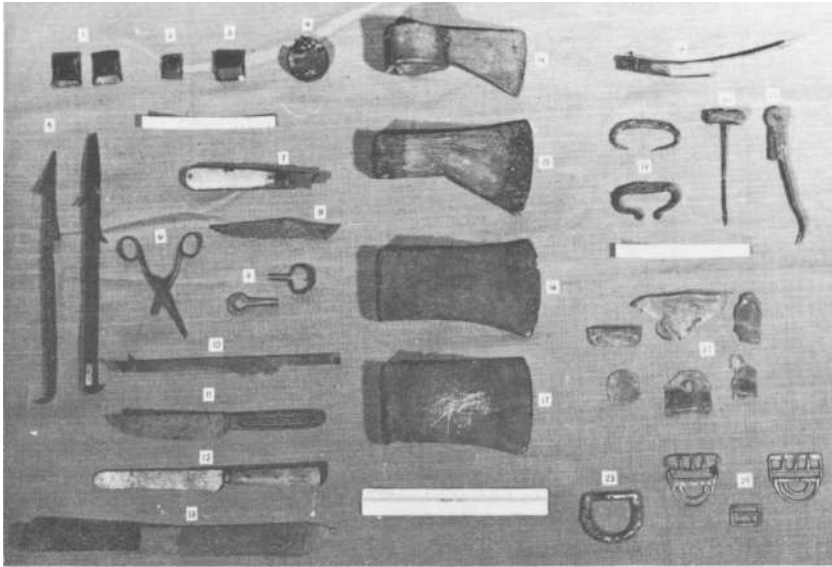


PLATE 6

TOOLS AND PERSONAL POSSESSIONS

1 to 3. three sizes of British rectangular gun flints,
 4. percussion cap box, 5. harpoons, 6. small scissors,
 7. British-type clasp knife, 8. French-type clasp knife blade,
 9. Jew's harps, 10. crooked knife, 11. kitchen knife with metal
 scroll, 12. kitchen knife with cross-hatched bone handle,
 13. butcher knife, 14. half ax, 15 to 17. three categories of axes,
 18. folding wooden inch rule with brass sides, 19. strike-a-lights,
 20. small hand drill, 21. spreading calipers, 22. copper kettle
 fragments, 23. D ring, 24. Buckles.

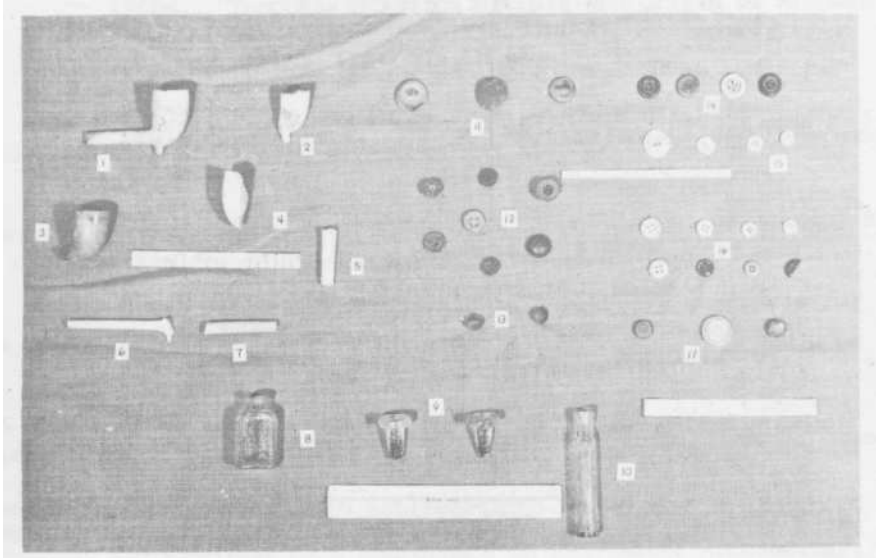


PLATE 7

PIPES, BUTTONS AND GLASS

1 and 3. heavy large upright pipe TD bowls, 2. fluted bowl, 4. small thin TD bowl, 5. stem with mould imparted chain-like impression, 6. plain stem with TD on spur, 7. stem with encircling mould imparted ridges, 8. patent medicine bottle, 9. glass bottle stoppers, 10. vegetable compound bottle, 11. plain stamped buttons, 12. stamped metal buttons, 13. two-piece stamped buttons, 14. bone buttons, 15. shell buttons, 16. porcelain buttons, 17. decorated buttons.

owner of the site, generously permitted the excavation to be carried out. To all of these individuals and institutions the author acknowledges a debt of gratitude.

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APPENDIX

DESCRIPTION OF ARTIFACTS

TRADE GOODS AND HUNTING ACTIVITIES

BEADS (238). Beads were present in a variety of sizes, forms, and colours; most were found within the cellar pit. They can be divided into two sizes; medium, from 2.0 mm to 5.0 mm in length, and 3.0 mm to 5.6 mm in diameter, and small or seed beads; 0.8 mm to 1.8 mm in length and 1.5 mm to 2.5 mm in diameter. They are all of a type probably used as decoration for clothing and typical of the period after 1710 (Pratt, 1961).

SMALL SEED BEADS (228). All of the beads recovered in this category are oblate monochromatic glass beads of the wire-wound variety made by twisting a glass frit around a spindle. They are all flattened eye to eye and tend to be spheroidal or subcylindrical in form. Colours present are blue, green, red, white, and yellow. Blue is by far the most common. This appears to be characteristic of western trading posts, as noted by Woolworth and Wood (1960).

There are three sizes: small, diameter of 1.5 to 2.0 mm oval in shape with very narrow eyes; medium, 2.1 to 2.2 mm in diameter, oval in shape, and large, 2.3 to 2.5 mm in diameter and oblate in shape.

MEDIUM BEADS (10). These beads were manufactured by the same process as the seed beads, except one which is a two-piece bead. Of these beads, three larger blue beads might have been used in necklaces; the balance would be used for clothing decoration.

Four are opaque white, flattened eye to eye, round in cross-section and ovoid in vertical section. There are two sizes; two measure 2.0 mm and 2.5 mm in length and 3.0 and 3.1 mm in diameter, and the other two measure 2.5 in length and 3.4 mm and 3.7 mm in diameter.

Three are translucent blue, round in cross-section and ovoid in vertical section, flattened eye to eye, measuring 2.2 to 2.8 mm in length and 3.2 to 3.5 mm in diameter.

A single purple-blue bead which measured 3.0 mm in length and 3.9 mm in diameter, was round in cross-section and somewhat flattened at the top and bottom, or ovoidal.

One blue bead with flattening in the form of a splayed ridge on two sides, measured 4.3 mm in length and 4.5 mm in diameter, and was round in cross-section.

One large gray-blue bead was round in cross-section and somewhat tubular in vertical section, measuring 5.0 mm in length and 5.6 mm in diameter. It was made of two pieces and glued vertically.

TABLE 2

COLOUR FREQUENCY OF BEADS

Colour	Medium	Small	f	%
Blue	6	117	123	51.7
Green	0	38	38	16.0
Red	0	37	37	15.5
White	4	24	28	11.8
Yellow	0	12	12	5.0
Total	10	228	238	100.0

GUN ACCESSORIES (198). Recoveries include British type gun flints, cartridges and shot. None of the items appear to pertain to the early period of occupation.

GUN FLINTS (100). All appear to be of a type from the post 1750 period, but since design has remained unchanged since then, they cannot otherwise be dated. They are typical British rectangular dead black or dark grey in colour. Fourteen show evidence of burning and 15 were fragments only. Of the 85 analizable flints they are roughly categorized as musket size, rifle size, and pistol size.

TABLE 3

DATA ON GUNFLINTS (PLATE 6, NOS. 1 TO 3)

Musket size:	Range in mm	Mean
Length	29.6 - 38.3	32.9
Width	21.3 - 29.9	25.7
Thickness	4.8 - 11.4	6.8
Length	7.0 - 20.5	13.1
Number in Sample		62
Rifle size:		
Length	26.5 - 31.9	29.5
Width	21.3 - 27.8	24.1
Thickness	5.7 - 12.5	8.0
Length	8.0 - 16.9	12.8
Number in Sample		15
Pistol size:		
Length	19.2 - 26.4	23.2
Width	18.4 - 22.3	20.0

Pistol size: Cont'd.	Range in mm	Mean
Thickness	6.3 - 7.3	6.8
Length of bevel	7.6 - 13.4	10.7
Number in Sample	8	

CARTRIDGE CASES (46). Forty-four of these cases were centre-fire, while two were rim fired. All were internally primed cartridges a type in use from about 1873 onward. Details respecting the finds are as follows:

Centre-Fire Internally Primed Cartridges (44):

- 1 marked W.R.A. Co (Winchester Repeating Arms Co.) 45.70U. S.G.;
- 2 marked U.M.C. Co (Union Metallic Cartridge Co.) 46.70;
- 5 unmarked, straight brass case, length 2 3/32 inches with raised base, appear to be Rabbeths Pat. 45.70, which was manufactured by the Winchester Repeating Arms Co. for use in all rifles chambered for 45.70 U.S.G. cartridges (Logan 1948);
- 1 unmarked straight brass case, damaged, without distinguishing features or marks, appears to be 45 calibre;
- 1 unmarked straight, brass case, length 2 3/32 inches, no distinguishing features or marks, also appears to be 45 calibre;
- 9 marked WRAC 44 WCF, brass case 1 5/16 inches, slight collar. This type fits 1873 Winchester and Colt single action revolvers (Logan 1948);
- 9 marked Kynock (Kynock Cartridge Co., England) 44 CF: appears identical to WRAC 44 WCF;
- 2 marked D. C. Co. (Dominion Cartridge Co.) 44-40 had the same measurements as the WRAC 44 WCF;
- 2 marked 38-55 DCCO, 2 1/8 inch straight brass case;
- 1 marked 38 W.R.A.C. Co 38 s. & w. 3/4 inch straight brass case;
- 1 marked WRAC Co. 32 s;
- 1 marked SACE (Savage Arms Co.) SAV 303;
- 8 marked 30, of which 6 were WRAC Co. WCF and 2 were WRAC Co. USC. The latter had 2 9/32 inch brass cases, necked, while the former were 2 1/32 inch;
- 1 marked 30-30 DCCO with 2 1/32 inch necked brass case; and
- 1 unmarked straight brass case 11/32 inch in length.

Rim-Fire Internally Primed Cartridges (2);

- 2 unmarked straight brass case, one 25/32 inches in length and one 9/32 of an inch in length, probably 22 calibre.

LEAD SHOT (22). All shot recovered was off-round. The following tabulation details their attributes, and shows their probable standard shot size number after Logan (1948).

TABLE 4
DATA ON LEAD SHOT

Diameter in Millimetres	Probable Standard Size		No.	f	%
	Millimetres	Inches			
3.0	3.02	.12	5	1	4.5
3.5	3.53	.14	3	4	18.2
4.0	4.06	.16	1	4	18.2
4.6	4.57	.18	BB	3	13.6
5.0	5.08	.20	T	4	18.2
5.5	5.59	.22	F	5	22.7
9.0	9.14	.36	000	1	4.5
				22	99.9

MUSKET BALLS (12), Eleven were off-round and two had casting marks. The following tabulations detail their attributes and shows their probable standard shot size.

TABLE 5
DATA ON MUSKET BALLS

Diameter in Millimetres	Inches	Fractions	Probable Gauge	f	%
14	.551	35/64	27	9	75.0
15	.591	19/32	22	1	8.3
18	.710	23/32	12	1	8.3
				12	99.9

SHOT GUN CASES (10). All were paper cases with brass bases. Nine were 12 gauge, of which two were pin fire. These were marked "E.B. No. 12 London." The others were marked "Nobels Ely Balls Steel", "Dominion Regal", "Rem-UMC", "Remington", "EBL Eley London" and "Eley's Gran Prix". One case was marked "D.C.Co. No. 15 Crown".

BULLETS (4). Three were lead shot and one was steel.

TABLE 6 DATA ON BULLETS

Diameter	Length	Crimped Horizontal ridges	Vertical Rifling Marks
14 mm	23 mm	4	5
9mm	12mm	1	5
5 mm	13 mm	4 (?)	4 (?)
8 mm	24 mm	1	6

The 14 mm diameter lead bullet probably came through the bore of a 577 Snider Enfield rifle according to Gooding (1966). It has a wooden centre and a hole in the rounded head. The 8 mm diameter bullet is steel with a rounded lead nose.

GUN WORMS (2). One of these is a small gun worm of a type sold by the Hudson's Bay Company, while the second which is much larger is not positive of identification for the size and shape appear unusual.

SHOT FLASK TOP (1). This is made of brass with heavy grooves around the top and an apparent hinging mechanism down the side. It is warped and bent, thus preventing accurate measurements. Positive identification could not be made.

PERCUSSION CAPS (1). One box, manufactured by Ely of London was recovered. They are of a type invented about 1818 and used on muzzle loading guns until the present day, (Plate 6, No. 4).

MELTED LEAD FRAGMENTS. About one pound of melted lead fragments and rivulets were found. Most were irregular blobs of metal.

GUN PARTS (35). The majority of these finds appear to be from the 19th century or the period of the Hudson's Bay Company occupation of the post. A lock plate and frizzen appear to be 18th century or the period of the North West Company and one find, a butt plate from a French muskatoon introduced around 1730 suggests the early period of French occupation of the post. Unless otherwise noted, identification of these finds was provided by S. J. Gooding, (Gooding, 1966), (Plate 5).

GUN BARRELS (9). None of the nine barrels recovered came from the excavation; all were found on the shore or were recovered by divers in the cove at the Hudson's Bay Company dock. All appear to have had a rounded muzzle section. Seven were complete barrels with octagonal breech sections. Two appear to have been pistols.

One heavily eroded barrel had a rounded breech section. One portion of barrel was only a fragmentary. They all measure in excess of one inch across the flats of the breech which suggest that these were not Northwest guns, (Hamilton, 1960c).

TABLE 7

DATA ON GUNBARRELS

Length of Barrel	Bore Measurement	Probable Gauge	Probable Caliber
9 1/2	9/16	28	.55
12 3/4	9/16	28	.55
25	1/2	36	.50
29 1/2	9/16	28	.55
30 1/2	1/2	36	.50
35 1/2	1/2	36	.50
40	5/8	20	.62
42	5/8	20	.62
?	5/8	20	.62

TRIGGER GUARDS (4). Of the four trigger guards recovered, one is of a type in common use after 1740 until the end of the 19th century. This type was used on the Northwest gun as was a front end fragment. The two others, one of which is brass, are from 19th or 20th century shotguns.

LOCK PLATES (3). One lock plate may be from the pre-1800 period, based on three screw attachments; however, the overall design was in use until the last third of the 19th century. One lock plate, possibly associated with a frizzen, may be from a British Brown Bess, if the two finds were actually from the same piece. The third was only a fragment of the tail of a flintlock plate.

FRIZZENS (3). Two of these frizzens were not identified as to piece or period. The third was associated with a lock plate considered to possibly be from a Brown Bess. This would be of a date 1760-1770. Gooding expresses this view, although he comments that the frizzen is much thinner than one would normally expect. In any event, the lock plate and frizzen appear to be from a flintlock gun of the 1760 to 1800 period.

BUTT PLATES (3). One of these is brass and was fastened in eight places by square nails which suggests it is from the period 1860 to 1870. Another is of iron from a rifle or shotgun made after 1870. The most interesting, identified by T. M. Hamilton (1966), was from a French muskatoon introduced around 1730. It has a crossed bow and quiver on the tang just above the heel of

the plate. The plate has been cut down, presumably to make a ladle, and as a result, the chasing on the find is different.

SIDE PLATES (2). Two portions of brass side plates were identified as from Northwest guns. One is a cast serpent design which is characteristic of the 19th century trade gun (Hamilton, 1960c). The second has a plain carved design.

MISCELLANEOUS (11). Of these eleven pieces assumed to have been gun parts, one is a sear from a right hand lock from either a flint, percussion, or breech loading gun, and one is a tumbler from a similar piece. The collection also includes a hammer from a percussion gun, and breech parts from a muzzle-loading double barreled shotgun. The six remaining pieces could not be identified.

TABLE 8

DATA ON GUN ACCESSORIES

Accessories	f	%
flints	100	50.5
cartridge cases	46	23.2
lead shot	22	11.1
musket balls	12	6.1
shot gun cases	10	5.1
bullets	4	2.0
gun worms	2	1.0
shot flask top	1	0.5
percussion caps, 1 box	1	0.5
Total	198	100.0%
Parts		
barrels	9	25.7
trigger guards	4	11.4
lock plates	3	8.6
frizzens	3	8.6
butt plates	3	8.6
side plates	2	5.7
miscellaneous	11	31.4
Total	35	100.0%

TABLE 9

DATA ON FISH HOOKS (PLATE V)

f	Description
2	3" bent wire, barbed, with eye
3	3 1/2", barbed, flat end
3	4", barbed, flat end
1	4 1/2", unbarbed, with eye
1	3", barbed, lead weight bale end
10	

ANIMAL TRAPS (5). One small complete iron animal trap with a single spring, 4 1/2 inch jaw and 6 inch arms was recovered. Two portions of jaw, one three inches and four inches and two extension arms were also recovered. One of the latter is the same length as the complete trap. It carries the stamped lettering "...IFWIIHSE" over "...MUINITY" over "N.Y.". The other is approximately twice the size.

HALF AXES (3). These are hand forged wrought iron axes folded around a form to shape the eye and welded along the blade edge. The blade of one was broken. The other two had a blade length of 140 mm and 159 mm and a width of 67 mm and 62 mm and weighed 575 grams and 453 grams. No identification markings were evident. Relative proportions, differing in the position of the notch and the slope of the blade suggests they were two different types, (Plate 6, No. 14). All were found in the off-shore waters.

LEAD BALE SEALS (3). Three roughly circular lead fur bale seals were recovered. They are slightly flattened on the bottom and have a small boss on the top. The fronts are flat and carry an incised inscription. The backs have a somewhat ovoid boss which carries lettering which appears to be part of a longer inscription.

The largest is 30.5 mm in diameter and 1.5 mm thick. The front bears two sets of incised markings. The numbers "651" appear above a central horizontal incised line and the number "223" appears below. On the boss at the back the letters "LBR" occur on top and "COM" on the bottom. The medium sized seal is 28 mm in diameter and 1.9 mm thick. The front carries only the incised marking "23" on the lower half. The back has a raised sitting fox design on the boss. This appears to be the same type of design used on Hudson's Bay Company trade guns (Gooding 1960). The smallest seal is 23 mm in diameter and 2 mm thick. The front carries the marking "24" below an incised horizontal line. The letters on the boss appear to be, "TF", on top, "&C", on the centre, and "OND" on the bottom.

COPPER BANGLES (2). Two triangular flat pieces of copper, probably bangles or tinkling cones if folded, were recovered. The apex of one triangle has been cut off, the other has a flattened point with a 1/10th of an inch hole punched through it from one side. The first piece measures 1 inch across the base, and has a vertical height of 9/16ths of an inch. The second has a base of 9/16ths of an inch and a vertical height of 1 inch.

HARPOONS (2). Two iron harpoon trade pieces were recovered from the squares north of the excavated foundation, (Plate 6, No. 5).

One was 10" long and had a shaft which is circular in cross-section. The hasped end has been squared while the tip, for a distance of 4" is slightly flattened with lateral ridges tapering to a blunt point. Two barbs cut from the shaft project laterally from opposite sides 2 1/2" and 4" from the tip. The hasp end has been cut and bent to project on the same side as the upper barb.

The other was 9 3/4" long and had a circular shaft of a diameter of 3/8ths of an inch. It is flattened towards both ends. There are two barbs projecting laterally on opposite sides of the shaft, one at the tip and the other 3 3/4" up the shaft. The barbs are flattened triangular extensions of the shaft. The hasped end, has been bent to project on the same side as the lower barb. This harpoon appears to have been hand-wrought.

PERSONAL POSSESSIONS

WHITE KAOLIN PIPES (324). There were 144 bowl fragments and 180 stem fragments recovered, no complete pipes were recovered. All appear to pertain to the last period of occupancy of the post.

WHITE KAOLIN PIPES, BOWLS (144). There were four complete bowls and one hundred and forty fragments recovered. Of these, sixty-nine small plain fragments could not be definitely associated with the types of bowls represented. At least fourteen types of bowls were represented. These have grouped into four categories, Plain, "T.D.", Fluted, and Decorated.

1. Plain Bowls. The sample recovered amounted to thirty-five of which there are three types. They are probably all post 1850.

(a) Plain (apparently). Fragments recovered total thirty-one including four of which have a small portion of the base of the bowl. Two of these have a small spur and one has a large heavy spur. One is a fragment of spur with the number '2' on what appears to be the left side. There appears to be two types, one with a heavy large upright bowl almost at a right angle to the stem, and a smaller thin one with the bowl set at a slightly obtuse angle to the stem.

(h) Plain but having "Oak leaves" on either side of the front mould mark. Three fragments were recovered. O wake (1965) stated that plain bowls whose only decoration consists of oak leaves along the mould marks, while known in the 18th century in England, were common to the 19th century in England and were probably copied widely. They are post 1850.

(c) Plain with hatched line around the bowl below the rim. This single rim appears to have been from a relatively small, thin, smooth-textured well finished bowl. While this is only a small fragment, it does appear to be the type Omwake (1965) suggests belongs to the general period from 1850 to 1870.

"T.D." Bowls. The sample recovered amounted to twenty-five of which there are five types. They are placed in the period 1812 to 1860 after ()make (1965).

(a) Plain except for the letters "TD" on the back of the bowl or on the spur. There were twelve body fragments of bowl. Three had both letter, while five had the letter "T" and four had the letter "D". A faint mould line appears to separate the letters. Two complete bowls-(Plate 7, Nos. 1 and 3) were from white pipes with thick bowls at right angles to the stem. The spur and stem are missing in one while the other has a plain spur and a two inch section of stem with "W.WHITE" stamped on the left side and "SCOTLAND" stamped on the right. There were four other fragments of stem and bowl bases. Three had small spurs with the letters "T" on the left side of the spur and "D" on the right side (Plate 7, No. 6). The fourth had a letter "D" on the left side of a medium size spur below a heavy bowl base. The latter also has what appears to be letter stamping on the side of the stem.

(b) Three fragments with the letters "TD" encircled in stars and oak leaves on either side of the mould line.

(c) Two fragments have "TD" in a corded circle with oak leaves on either side of the mould mark.

(d) One complete bowl had "TD" in a corded circle but was otherwise plain (Plate 7, No. 4). It is small in size and thin in construction with a small spur with a letter "T" on the left side and "D" on the reverse side.

(e) "TD" in impressed half circles bifurcated by the mould line with faint peripheral hatching.

3. Fluted bowls. Six small fragments could not be definitely associated with specific types of bowls. Four include portions of stem, one with a thin medium size spur. Five others were typed as follows:

(a) Full fluted bowl with flutes separated by thin raised lines and oak leaves on the sides of the back and front mould mark. One complete small light weight bowl was recovered (Plate 7, No. 4). It had a very small plain rim and a medium size spur. The bowl is

set at a slightly obtuse angle to the stem. One other fragment which, while thinner, would appear to be from the same type of bowl. These are similar to the type Omwake (1965) states persisted in popularity (or most of the second half of the 19th century, circa 1850-1875. They differ slightly from Omwake's type in that the (luting goes to the rim rather than only half way tip the bowl.

(b) Lower three quarters of the bowl fluted with apparently plain top and no other decoration. The Flutes are also separated by thin raised lines but there are no oak leaves. Two fragments recovered. One large Fragment has a very small spur and a medium size bowl that appears to be at right angles to the stem. The second fragment appears to be from the same type of bowl.

(c) Lower three quarters Of the bowl fluted with unclear relief decoration on top and leaves along the mould mark. One fragment only was recovered.

4. Decorated Bowls. Four Fragments are grouped under this category solely on the basis of having ornamental decoration.

(a) Two Fragments of a light small bowl had a moulded decoration consisting of a rising sun-type motif quadrilaterally Framed and surrounded by embossed stars.

(b) One large heavy Fragment was recovered which had a moulded harp motif surmounted by a crown with clover leaves below and on the sides.

(c) One small Fragment of base and stem was recovered which had a very small portion of what appears to be scroll or leaf decoration.

TABLE 10

WHITE KAOLIN PIPES BOWL DATA			
Type		F	%
Plain	apparently plain	31	
	oak leaves	3	
	hatched	1	
		35	24.3
TD	plain	18	
	stars and oak leaves	3	
	oak leaves	2	
	corded circle	1	
	impressed circle		
		25	17.4

TABLE 10 - Cont'd WHITE KAOLIN PIPES BOWL DATA

Type	f	%
Fluted	full	2
	three quarters	2
	decorated	1
	undetermined	6
	11	7.6
Decorated	sun burst	2
	harp and clover	1
	other	1
	4	2.8
Unidentified	<u>69</u>	<u>47.9</u>
Total	<u>144</u>	<u>100.0%</u>

WHITE KAOLIN PIPES, STEMS (180). In light of the clouded contribution to dating based on bore measurements, such measurements were not taken. There were 112 plain unmarked pipe stem fragments. Five had small portions of bowl base attached. Three had spurs attached, all but one of the latter was water worn, and this one had a medium size spur. In addition to the above 26 other plain unmarked fragments were recovered which were tip ends. Of these 16 had rolled or pinched-in ends. Nine have been cut to make a bite probably after an initial break. Some of these show teeth marks. One had been compressed toward the bowl during manufacturing forming a terminal collar. These plain fragments were considered non-diagnostic. The other 42 have been grouped into three categories, Lettered, Decorated, and Numbered stems.

Lettered Stems. The sample recovered amounted to twenty-seven of which there are six types.

Eleven fragments originally carried the words "MCDUGAL GLASGOW SCOTLAND" clearly stamped on opposite sides without ridging. Four fragments may have had only the word "GLASGOW". One carries the number "326" while two carry the number "1". Two fragments show teeth marks.

Eight fragments originally carried the words 'W.WHITE - GLASGOW' stamped on opposite sides. Three are complete, but only one is distinct. Of the others only portions of lettering remain. All have "C78" embossed on the left side in front of the stamping near the bowl. Two have a plain small spur. W. White of Glasgow has been manufacturing pipes since 1806.

Four fragments originally probably carried the words "HENDERSON-MONTREAL" enclosed in a dentate pattern panel on its opposite sides, only "HENDE", "HENDER", and "N" and "ONTREAL", "REAL" and "M" are clear. Fitting (1965) records that such pipes,

according to an unpublished report by Omwake were made in Montreal between 1848 and 1870.

Two fragments were apparently plain with lower portion of the bowl and spur attached. Spurs are small and have the letters "f" or "P" and "I" or "T" on reverse sides.

One plain stem fragment has "DAVIDSON" clearly stamped on one side while evidence of stamping on the reverse side is not clear. One end has been cut down for a tip. One plain stem fragment has what appears to be the letters "CH" stamped in the left side with the moulded number "5" forward towards the bowl.

Decorated Stems. The sample recovered totalled nine of which there are two types. There were eight fragments of varying lengths which had a horizontal panel, approximately one inch in length, on either side composed of mould imparted chain-like impression looped at either end, (Plate 7, No. 5). Indistinct stamped lettering occurs in the side panels. Three had the following letters visible on one side: "GL", "SCO", "ASCO". These probably carried the word "GLASGOW". On the reverse side the letters appeared to be "McDOUGALL". Between the lettering and the chain there is a ridge. Towards the bowl two had the letter "D" stamped on the side beyond the horizontal panel, one of which had the letters "CC" on the reverse side.

One fragment has encircling mould-imparted ridges and oak leaves (2) with hatching along mould line and mould imparted raised word "ASPARNAA" in an open panel on one side, and "INGOUDA" on the reverse side, (Plate 7, No. 7). Omwake (1965) suggests that raised letter forms with oak leaves may be original Dorni and suggests a date 1850 to 1880.

Numbered Stems. The sample recovered totalled six of which there are three types. Four plain fragments have the number "1" stamped on the left side. One has a portion of howl with plain spur and a second has a portion of the bowl with "B" stamped on the spur.

One plain stein fragment has 376 stamped on the left side, and another 223 stamped on the left side and "L" stamped on a portion of the small attached spur.

TABLE 11

KAOLIN PIPE STEM DATA

Type	f	%
Plain	138	76.7

TABLE 11 - Cont'd KAOLIN PIPE STEM DATA

Type		f	%
Lettered	McDougall: Glasgow-Scotland	11	6.1
	W. White-Glasgow C78	8	4.4
	Henderson-Montreal	4	2.2
	F or P and I or T on spur	2	1.1
	Davidson	1	0.6
	CH and number 5	1	0.6
	Sub-total	27	15.0
Decorated	Horizontal chain-McDougall-Glasgow	8	4.4
	Encircling Asparnaa Ingouda	1	0.6
	Sub-total	9	5.0
Numbered	Single Number	4	2.2
	Multi Numbered	2	1.1
	Total	180	100.0%

TOBACCO LABELS (37). These are heart-shaped white metal tags with small prongs on the back for attachment to plug tobacco. All but three have a small heart-shaped cut-out in the centre. Most carry the words "W. C. MacDonald Montreal" on the front around the peripheral edge and the words "Prince of Wales" encircling the centre cut-out. The backs are plain.

PERSONAL ITEMS (22). Utilitarian and adornment pieces recovered were as follows: six safety pins, three jewelry items, a brass finger ring, a locket face and circular glass insert, two recent Canadian coins, three religious articles and one each of the following; hair pin, thimble, button hook, triangular needle, collar stud, pipe bowl cover, watch fragment and a cylindrical piece of bees wax. Attributes of the religious articles presumed associated with the mission are presented in detail.

A crucifix, religious pin, and one religious pendant were recovered. They are of Roman Catholic design.

The cross of the crucifix was machine-tooled cast brass. The front is hollowed with a rough cast surface and brass rivets at the distal ends. The latter probably retained a now missing inlay. The back and side surfaces are smooth with fine machine tool lines. It was suspended from a brass ring attached through a hole in a small rounded extension at the top. The image of a Christ figure of cast brass was riveted to the cross at the hands and feet. There is a circular stamped design of leaves and petalled flowers riveted at the centre of the cross behind the head of the Christ figure. The cross is 3 7/8" long 1 1/2" wide, and 1/8" thick. The figure is 1 3/4" long from head to foot and 1 5/16" from hand to hand.

The religious pin was made of enamelled bronze in the form of a white Maltese cross encircled by a royal blue band carrying the words "Adveniat Regnum Tuum". The two horizontal arms of the cross extend over the band while the two vertical arms extend under the band. In the centre of the cross is a symbolic sacred heart in red surmounted by a flaming red top composed of splayed extensions capped by a small cross placed at an oblique angle. In the centre of the heart is symbolic crown of thorns in green. The horizontal and lower vertical arms of the cross have a series of radiating lines. All elements of the design have been outlined in gold. It is 13/16th of an inch in length and width, and had a pin clasp on the back and the inscription "RD:05".

The pendant was a miraculous medal of Our Lady. It was cruciform in shape, of stamped aluminum. It has a small raised border on both sides. The figure of the Virgin Mary upon a hemisphere surrounded by bosses in the form of stars appears on the front while the reverse side has a large letter 'TT' with a bar across the top. The letter "M" is surmounted by a cross and surrounded by bosses forming stars while below there are two small hearts. It was suspended by a silver wire running through a circular loop extended from the top. In width and length it is 11/16ths of an inch.

SMALL TOOLS (12). Four clasp knives, three scissors, two awls, and three strike-a-lights were recovered.

CLASP KNIVES (4). One French-type clasp knife (Plate 6, No. 8) with a small horizontal flange at the top of the butt of the blade, was recovered. It is sharp pointed "sword shape" with the name of the manufacturer impressed in the blade. Rust pitting is so deep that the name could not be distinguished.

There are three other small clasp knives, probably of British type. One has a bone handle and two blades with "Progre..." stamped on the blade. The third is only a blade and portion of the clasp.

SCISSORS (3). Portions of two pair of small scissors of different sizes were recovered, (Plate 6, No. 6). One has slender rings for the finger holes and a ridge on the shank. Such a type is considered by Maxwell and Binford (1961) to be French. One complete pair of large shears was recovered. No maker's marks were visible.

STRIKE-A-LIGHTS (3). Three iron strike-a-lights were recovered. Two are flat iron pieces elliptical in form with free ends curled. The one complete specimen measures 2 1/2 inches by 1 1/2 inches. The width of the iron at its widest or striking edge is 5/8ths of an inch. It tapers to a width of 1/8th" at the curled ends. The other one was rounded flat iron tapering into blunt end. It is 3 3/4" long and 1/8" thick, (Plate 6, No. 19).

AWLS (2). (Plate 5). One awl with double tapered shaft was square in cross section at the middle and offset. It is four inches in total length and pointed at both ends. The second was round, pointed at one end, squared at the other. The total length is 4 inches. Both are made of iron.

MUSICAL INSTRUMENT FRAGMENTS (9). Five plates from mouth organs, two plates from what appears to be a concertina, and two Jew's harps were recovered.

HARMONICA PLATES (5). Three of the harmonica plates are stamped brass, with body slits apparently covered by reeds which were either riveted or brazed to the plate. The slits are decreasing in length. The other two pieces are white metal, and are probably from one plate. They have brass reeds riveted alternate top and bottom and side to side.

CONCERTINA PLATES (2). These are machined white metal with copper reeds. There are four slits, with the reeds affixed in pairs to adjacent long and short slots on opposite sides.

JEW'S HARPS (2). Two types were recovered, one of iron with a large ovoid vibrating space and one of brass with a small vibrating space. Both were 1 7/8ths inches in length and missing the tongue. The iron type had a maximum width of the vibrating space of 7/8ths of an inch while the brass one was 5/8ths of an inch, (Plate 6, No. 9).

TOY FRAGMENTS (6). One white metal toy shovel, one 1/2 inch diameter marble, bearing traces of red paint, one ornate aluminum plate from a gramophone, and three fragments of a ceramic doll's face was recovered.

CLOTHING AND FOOTWEAR

BUTTONS (95). Various types of buttons were found. Manufactured from brass, bone, porcelain, lead, shell, and base metals. Little information has been published which would permit their identification within a temporal base.

TABLE 12

BUTTON DATA

	f	o
porcelain	24	25.3
plain stamped	22	23.2
stamped metal	18	18.9
bone	12	12.6

TABLE 12 - Cont'd BUTTON DATA

	f	%
shell	12	12.6
decorated	6	6.3
lead cast	<u>1</u>	<u>1.1</u>
	95	<u>100.0%</u>

PORCELAIN BUTTONS (24). All have four holes centered within a rolled rim. Twenty-one are milk-white porcelain or glass, of which three have a grey cast and three a yellowish cast. Three show evidence of painting around the rim; one is red, one blue, and one green. The remaining three are coloured; one black, one dark blue, and one brown. Diameter ranges from 7/16ths of an inch to 5/8ths of an inch and thickness ranges from 3/32nds of an inch to 5/32nds of an inch. Such buttons can still be purchased. (Plate 7, No. 16).

PLAIN STAMPED BUTTONS (22). Twenty-two buttons of brass or white metal were recovered. Since there is no evidence of a mould mark, all are considered to have been stamped, (Plate 7, No. 11). They show distinctive patterns as to means of attachment and have been grouped into five categories after S. J. Olsen (1963), spun-back, plain-back, bossed-back, one piece stamped, and two-piece stamped.

SPUN-BACK (10). These have concentric tool marks on the back and have flat bodies. Nine are white metal and have a brass eye set into a boss which appears to have been formed at the same time as the body. The edges around the top of the boss are slightly burred. Seven of the nine have concave backs and are 3/64ths of an inch in thickness. There are two sizes, five are 59/64ths of an inch in diameter, and two are 10/16ths of an inch in diameter. Two have rolled edges on the back which are approximately 1/32nd of an inch wide. These have a diameter of 35/64ths of an inch and a thickness of 1/32nd of an inch. One is a Coin-shaped disc of brass and has an iron eye set in to what appears to be an attached boss. It has a diameter of 59/64ths of an inch and is 1/32nd of an inch thick.

PLAIN BACK (5). These are coin-shaped discs of brass or bronze with a simple brass eye brazed to the back. The largest is an inch in diameter and 1/16th of an inch thick. The back has been stamped with an encircling chain design inside of which the words "Treble Gilt" appear below a St. Edward's Crown. The smallest is 9/16ths of an inch in diameter and 1/32nd of an inch thick, and has an indistinguishable small stamped letter impression on the back. Another, is 25/32nds of an inch in diameter and 1/16th of an inch thick, carries the words "Treble Gilt" on the

back inside a stamped circle surrounded by an expanding sun design of small line impressions. The fourth has a fine knurled impression encircling the front with small circular bosses in the centre. The eye has been torn out, destroying the over-all design pattern. It is approximately $51/64$ ths of an inch in diameter and $1/32$ nd of an inch thick. The fifth is plain and measures $15/16$ ths of an inch in diameter and $1/32$ nd of an inch thick.

BOSSED BACK (4). These have a brass wire eye set into a boss on the back. Burring around the edge of the boss is virtually absent. Two have bosses which appear to have been stamped at the same time as the body. These are brass. The other two appear to have bosses attached. One is brass and the other is white metal. The latter has a flat body and is smaller and thicker than the others, having a diameter of $45/64$ ths of an inch and a thickness of $1/16$ th of an inch. The three others are coin-shaped discs of brass. The largest is $13/32$ nds of an inch in diameter with a thickness of $3/64$ ths of an inch. It appears to have carried a circular stamping on the front. The decoration is indistinguishable. The other two are smaller: one is 1 inch in diameter and $3/64$ ths of an inch in thickness, and the other is $7/8$ ths of an inch in diameter and $3/64$ ths of an inch thick.

ONE-PIECE STAMPED (1). This is a brass button with a plain conical face. The back is concave with a boss which appears to have been stamped at the same time as the body. A brass wire eye is set into the boss with little burring. It is a small button with a diameter of only $31/64$ ths of an inch.

TWO-PIECE STAMPED (2). One is a brass button with a plain domed face. The back is flat with a ridge at the seam. A brass wire eye is attached. It is a small button, with a diameter of $31/64$ ths of an inch. The other has a flat body with a light ridge at the seam on the back. It carries the words "Gold Ace": An eye has been brazed on to the back but it has broken off. The diameter of the button is $37/64$ ths of an inch and the thickness is $1/8$ th of an inch, (Plate 7, No. 13).

Spun-back buttons appear to correspond to Olsen Type D, which were used by civilians from about 1760. The plain hack brass buttons, his Type G, are placed between 1785 and 1800. He considers these the most difficult to date because of their long period of use. None of the designs with bent-over ends of eyes were recovered, although the practice of stamping with such words as "Treble Gilt" was evident. These he places between 1812 and 1820. These may correspond to the type with the small boss attached. The two-piece stamped buttons approximate Olsen Type I which he dates from 1830 to the present. These buttons were often covered with fabric, although no evidence was noted.

STAMPED METAL BUTTONS (18). Six of these buttons are two-pieced iron buttons, (Plate 7, No. 12). The front is flat with impressed cross-hatched decoration and an open circular centre. The back is convex with a bar across the centre opening. Five have a diameter of $11/32$ nds of an inch, and one is $9/32$ nds of an inch.

Three others are manufactured from a single thin sheet of metal with a depressed centre and four holes. Five others are the common two-piece bachelor type buttons, three are $11/16$ ths of an inch in diameter and two are $9/16$ ths of an inch in diameter. One is a two-piece copper button of the bachelor type with the words "Carhartts Overalls Gloves" and an indistinguishable central heart design. The diameter is $11/32$ nds of an inch. One is a two-piece brass button of a clip-on type with a circular impression on the face. It is $30/64$ ths of an inch in diameter. Another is also a two-piece brass button carrying the words "Crow over all" and a bird impressed in the centre. Portions of dark blue cloth material are still intact between the front and back clip-on portion. The last is a two-piece bronze-type button $9/16$ ths of an inch in diameter, with a slightly concave face decorated with small *fleur de lis* in the centre. The back is broken but appears to have been a clip-on type.

SHELL BUTTONS (12). These buttons were probably made from fresh-water shells, and are commonly known as "mother of pearl". Six have two holes closely located in the centre. Three are turned and appear to be hand cut. Two of the latter have rims and one of the former has a rim. The largest has a diameter of $13/16$ ths of an inch and the smallest has a diameter of $11/32$ nds of an inch. The other six are turned, with four holes. One is without a rim. Diameter ranges from $3/8$ ths of an inch to $1/2$ inch, (Plate 7, No. 15).

BONE BUTTONS (12). There were eleven bone buttons recovered and one fragment of a bone button, (Plate 7, No. 14). All are $1/8$ th of an inch thick and ten are approximately $11/16$ ths of an inch in diameter. One is slightly larger at $3/4$ of an inch in diameter. All have the same basic design, four holes in the form of a square grouped around a central shallow depression to index the turning tool. The proportion of rim to center and the spacing of the holes vary slightly. Three were apparently dyed black. Ten have straight holes while one has holes placed at an angle and another has the holes drilled from both sides, leaving a slight ridging in the center. These appear to correspond to Olsen's Type J which he dates 1750 to 1830.

DECORATIVE BUTTONS (6). (Plate 7, No. 17). Two are $35/64$ ths of an inch in diameter made of white metal and are impressed with a stylized *fleur de lis*. The back is a separate piece with a small flat boss and a horizontal eye hole. A third button consists of

the back only of the first type. There are two button fronts, one of which is brass with a floral boss design. It is 7/16ths of an inch in diameter, and the other is 7/8ths of an inch in diameter. The latter is of silver or white metal with a heavy stamped over-lapping wavy design on a domed face. The last is a "mother of pearl" button recessed in a gold-plated ring, which has short line impressions running out from an embossed circular cording surrounding the shell. The back is a separate piece with a central slotted section. It is 9/32nds of an inch in diameter.

LEAD CAST BUTTON (1). This button is 13/16ths of an inch in diameter and 1/16th of an inch thick. It has a flat stamped-out lead body with two centre holes.

BUCKLES AND FASTENERS (16). Nine of these specimens are buckles. No two are alike. Four appear to be shoe or clothing buckles. Three are stamped white metal with a decorative spiral scroll impressions, (Plate 6, No. 24). Two rounded arches are inside, the other form the top. In the center there is a moveable cross bow with a three-pronged tongue. The tongue rests on a lower bar which forms the bottom of the buckle. Five others were considered canvas strap buckles. They are small, light and rectanguloid in form with either a central two-pronged tongue or a lower bar single-pronged tongue. Seven other items are classified as fasteners. These are staples, grommets, rivets and a garment hook. No possible recognized chronological types were distinguished.

LEATHER FRAGMENTS (8). Four fragments of children's shoes were recovered. One fragment is the upper portion of a high top leather boot with a minimum of eleven shoe string holes while three other fragments consist of laminated leather heels and soles. The heels are nailed with small square nails, while soles are stitched and nailed. The smallest has a continuous piece for the sole and heel, with a small heel lamination on the inside. Two are for the left foot, while one is for the right foot. Inside lengths are 5 1/4 inches, 5 3/4 inches, and 6 1/4 inches respectively. Three fragments are from two stitched high top male boots with 8 1/2 inch inside length. Two fragments are belt or strap leather one with attached white metal-plated buckle.

CLOTH FRAGMENTS (6). These fragments appear to be wool of plain weave with one element predominating over the other; whether it was predominant warp or woof was not determined. The weave is close and even, with no apparent thread size variation. There are thirty-eight to forty threads to the inch in one direction and forty-eight to fifty to the inch in the other.

TOOLS AND EQUIPMENT

AXES (9). These are rectangular steel axes with a welded seam along the blade and a small hard steel insert forming a splayed bit. Based on their attributes they have been grouped into three categories. Category 1 is similar in form to the earlier wrought iron axe with a notch where the blade meets the pole, (Plate 6, No. 15). One is much heavier and has the letters "J R" stamped on the blade face. Category 2 lacks a notch, the blade extending roughly parallel from the pole section, (Plate 6, No. 16). Both sides of the blade face have crescentric depressions forming raised All show pounding at the pole end as if used for wedges. The third category consists of one axe with a flat blade extending out parallel from the pole section (Plate 6, No. 17). It has been subjected to considerable battering at the Pole end.

TABLE 13

STEEL AXE DATA

Category	Length of blade in mm.	Width of blade in mm.	Pole length in mm.	Weight in grams
1	153	89	38	585
	161	95	41	680
	171	108	51	1128
	230	97	64	1992
2	158	98	61	885
	158	95	65	933
	157	95	69	932
	172	95	70	970
3	140	93	74	837

FILES (6). Four bastard files were recovered, two are eight inches long, one is seven inches, and one is six inches. Two are coarse cut, one is medium fine and one is fine. Two fine files were recovered, one triangular with a blade length of seven inches, and one half-rounded with a blade length of 6 1/4 inches. All files appear to be single cut machine-made.

FARM TOOLS (4). From the surface of the Hudson's Bay Company post area the following items were recovered: one four tined iron hay fork, one large iron meat hook, one brass plated tin cow bell and one unused horseshoe without cleats of a type used on a heavy draft animal. It has raised lettering at the top on the inner side which appears to be "W.R.M.".

CHAINS (4). Three iron animal chains were recovered. Two are seven feet long, with links $1 \frac{3}{8}$ inches long and one is four and a half feet long with links $1 \frac{1}{8}$ inch long. In addition, one figure-eight link was recovered.

SAWS (3). Three saw blades were recovered on the shore by local residents. One was 69 inches long and tapered from $11 \frac{1}{2}$ inches at the handle to 5 inches at the extremity. The second was 44 inches in length, $1 \frac{3}{4}$ inches in width at the handle, and $1 \frac{1}{4}$ inches in width at the extremity. The third was 82 inches long with a width at the handle of 7 inches and the extremity of $2 \frac{1}{2}$ inches.

HAND TOOLS (2). One small hand drill has a 1-inch iron bit with a wooden handle placed at right angles (Plate 6, No. 20) and one iron chisel has a blade length of three inches. Both were recovered on the surface.

MEASURING TOOLS (2). One broken pair of iron spreading calipers with a length of $5 \frac{1}{2}$ inches and a portion of a folding wooden inch rule, with brass hinges was recovered from the cellar pit, (Plate 6, Nos. 21 and 18).

PROPELLER (1). One large three blade propeller was recovered by divers from the Hudson's Bay Company cove area. It is brass, approximately two feet in diameter with one broken blade. The HBC steam ship "Kenogami" was used on the lake between 1900 and 1914, when the company was supplying goods to the railway construction crews. James Finlayson reports that during this operation a propeller on the ship was broken and the suggestion is that this may have been the one.

WIRE FRAGMENTS. One coil of very thin brass wire, $\frac{1}{32}$ nd of an inch thick and fragments $\frac{5}{16}$ ths of an inch and $\frac{5}{8}$ ths of an inch iron or steel wire were recovered. One piece has a looped end, as if it might have been placed over a bolt.

LEAD SHEETING. A quantity of lead sheet probably from tea chests was recovered. The fragments range in thickness from $\frac{1}{64}$ th of an inch to $\frac{3}{64}$ ths of an inch.

MISCELLANEOUS METAL (47). The function of these items are undetermined. They include: one folded iron strip; one semi-circular brass rod; four iron rods; ten circular shaped metal rings; two small copper rings; three roughly circular lead rings; and twenty-six fragments of machinery parts. In addition there were numerous pieces of iron corroded beyond recognition.

HOUSEHOLD GOODS

CERAMICS (199). Of the fragments recovered, the majority were monochrome pearlware (53.2%) of which 81.2% were blue with the balance being brown or wine. Transfer prints amount to 87%, the balance were undetermined. Floral designs or floral and geometric and/or scenic designs comprised 50.4% of the ware. Scenic designs constituted 33% of which occidental scenes predominated. The balance (7.6%) was geometric designs. Sixteen sherds had scalloped or feathered rims. The glaze was transparent in 72.6%; the balance was undetermined. Most appeared to have been plates, saucers, bowls, or cups of the most recent period. Heavy crocks or jugs of buff stoneware with exterior salt glaze and brown interior amount to 11%. All appear to pertain to the last period of occupancy.

TABLE 14

CERAMIC DATA

	f	%
Pearlware		
Monochrome	106	53.2
Polychrome	5	2.5
Undecorated fragments	49	24.6
Sub-total	160	80.4
Stoneware	22	11.0
Ironstone	5	2.5
Porcelain	4	2.0
China	1	.5
Creamware	1	.5
Unknown	6	3.0
		<hr/>
Total	199	99.9%

GLASS (345). The sample collected consists of fragments of bottle glass with a few exceptions which may have been lamp chimneys or tumblers. Evidence of heat alteration was present on forty-three sherds. These were not otherwise classified.

Two hundred and thirty-seven were thin fragments of white or shades of light green or pink glass. A number of the sherds were from dispensary-type bottles of clear glass with small mouths, mostly square in cross-section, probably for patent medicine use. Other fragments are from tumblers and two sherds show fluting; these may have been dessert glasses.

Twenty of the sherds carried moulded lettering, a process which came into common usage after the 1840's (Fitting, 1965).

Three show portions of the word "Davis". Four have portions of the lettering "Henri Jo...? Montr... EstD 18.." Others show the following lettering: "NORT:... 1..." "LYMAN"... "TORON.." "ECEEC..", "TE".;.."HOMA. " "RIC. -O"; "CHA. SEED & SON.B.." "...&...L...0.." ".L..S..." "P"; "IC"; "PA"; "SAA"; "N_";

Thirty-eight of the sherds were heavy, dark green or brown in colour and probably were spirit or wine bottles. Three others were varying shades of blue. Shapes represented include wine bottles, whiskey-like flasks and condiment jars, all appear to have been pressed.

BOTTLES (2). Two small bottles were recovered. One, circular, light blue-green in colour, and crudely moulded, has a diameter of 5/8ths of an inch and a length of 3 5/8ths inches. No maker's marks are apparent (Plate 7, No. 10). It appears to be of a type which contained Dr. Beach's Vegetable Compositions pre-pared by C. S. Harris of Manchester, Canada West which was in use between 1845 and 1855, (Spence, 1966). The other is a patent medicine bottle of plain glass, flat sided, 1 1/16ths inches by 1 3/16ths inches, and 2 1/8 inches long, (Plate 7, No. 8). It carries the moulded lettering "LOWELL MASS" on the back, "AYER'S" on one side, and "PILLS" on the other. The front is plain. Its moulded construction suggests a mid-19th century providence.

BOTTLE STOPPERS (2). Two clear glass stoppers of a type used in pharmaceutical bottles were recovered. They have a flat round grip, 1/2 inch thick and one inch in diameter with the moulded name "Holbrook & Co." on the top side. The shank is 1 inch long and tapered, (Plate 7, No. 9).

KNIVES (19). There were seven butcher knives (Plate 6, No. 13). Two are fragments of blade only. Two are complete, with wooden handles. One has three brass rivets holding the handle and is stamped "H.B.Co." vertically on the blade. The blade also carries lettering which appears to be a large "S" opposite three lines, which appear as "TACL" or "W..P.." over ". .AR. ." over "..HEFFIELD.." The other complete knife is unmarked. The handle is riveted with three iron rivets. Another butcher knife with a portion of the butt missing has a vertical stamping on the blade, which appears to be "P" over "B" over "T". Another has five holes for riveting, two at either end of the handle and a single one in the center, the lettering "A. WOOL" is stamped on the blade. Another has four evenly spaced holes for riveting and is stamped "ALEX FRASER & CO. SHEFFIELD".

Ten are kitchen knives. Two are fragments, eight are virtually complete. One has a wooden handle with three iron rivets holding it and what .appears to be "COULSON & SON CO., WEENBELL WORKS SHEFFIELD" stamped on the blade in three lines. Another has a cross-hatched bone handle rived with three iron rivets and a sitting animal design over the word "FOX" stamped on the blade. This

appears to be the sitting fox design of the Hudson's Bay Company, (Plate 6, No. 1). Both have expanded rims or flanges at the junction with the handle, as does a third one which carries the stamping "CAMBRIDGE ENGLAND SHEFFIELD" in three lines on the blade. It is pointed at the knife end rather than rounded as are the other two. Two others have two steel rivets to hold the handle and indistinguishable lettering on the blades, including the letters "CHA" over "LELD" on one and "CSERD" over "WCL" on the other. The latter has a white metal flange on the butt end. Another has an oval projection at the butt end of the blade to attach the handle and is stamped "SHEFFIELD" below an indistinguishable lettering. Two others have metal scroll work embossed on the handle, which is recessed in a well, (Plate 6, No. 11). One, which is somewhat shorter in the blade with a long convex sloping end, has the stamping "Providence Works" over "Sheffield" over "England". The other has a round end and is unstamped.

In addition, there were two crooked knives, (Plate 6, No. 10). One was virtually intact while the other is only a fragment of the blade.

CONTAINER FRAGMENTS (18). These fragments are pieces of metal cans or boxes varying in size and shape. A number are lids impressed with the manufacturer's name. Distinguishable names are: "Eley London", "Copenhagen" with "CW" monogram, "Best English Steel Needles Egg Eyed SO Sharps", and "O 6 Co."

KETTLE FRAGMENTS (12). Nine of these fragments are brass copper kettle, (Plate 6, No. 22) and three are iron. The iron fragments are rims one of which has a heavy rectangular handle.

CORKSCREWS (6). These are small rings of wire, one end of which is twisted into a flat circle, through which projects the other end of the wire. This end of the wire is pointed and twisted into a three-coil spiral. Only four are complete. Five have a ring diameter of 11/16ths inch. The flattened wire measures 1/16th inch wide by 1/32nd inch thick. The other specimen has a larger ring, diameter 7/8th inch. The wire diameter is 1/16th of an inch.

SPOONS (5). One complete plain silver plated teaspoon and two fragments of handles of teaspoons, one silver-plated with "900" over "WS" over "W" in raised letters on the back, and one of brass were recovered. All three have a double half-round raised section on the handle. Two others are large cooking spoons silver plated and unstamped.

DISHES AND CUPS (4). One enamelled iron plate and one enamel-lead iron cup in white with blue trim around the edges were recovered also. One badly rusted iron cup, with what appears to be mottled blue and white enamel commonly called granite-ware, and one tin cup, of approximately one pint size were recovered. All were from the surface.

STOVE FRAGMENTS (4). A number of parts of cast iron were recovered from the surface. One piece carries the words "Daisy the Western Fd'Y Co. Ltd. Wingham Ont". Another carries a large flour de lie design. Two others appear to be portions of legs.

DRAWER-PULLS (3). One hexagonal plain glass drawer-pull with a centre iron screw shaft, one curved iron drawer-pull with holes at the end for attachment were recovered.

POTS AND PANS (3). One small iron frying pan, one flat iron pot lid with ring handle and one white metal plated coffee pot lid, were recovered from the surface.

FORKS (2). A three-tined fork with a short shaft and rectangular wooden handle pinned through the width of the handle with a brass rivet and a two-tined fork with an iron shaft extending to the butt and an expanding double flange at the fork end pinned by two iron pins were recovered. The tines are missing.

LAMP (1). One brass mantle part from a lamp for use with kerosene or other liquid fuel, was recovered.

HOUSING AND CONSTRUCTION MATERIALS

NAILS (427). The sample recovered represented three types: hand-wrought, cut-nails and wire nails. There is a considerable variation in size and head form. While nails were recovered from all over the site, almost all of the hand-wrought nails came from the cellar pit.

Three hundred and twenty were rectangular or square in cross-section: a representative sample was cleaned and studied.

Hand-wrought square nails ranging from 3 to 5 inches in length with "rose" heads predominate. They were used for clinching. Others, appear to be flooring nails, 2 inches to 3 inches in length with the tops of the shaft flattened to form a slightly bulbous end with a ridge along one side. A few appear to have been made from two strips of iron, the head being formed by bending the ends of the strips to form a roughly rectangular surface. Their lengths are from 2 1/2 to 4 inches. None had been clinched.

The largest number of square nails are machine cut with machine made heads. One group of these nails has a rectangular, uniform head, slightly larger than the top of the shaft. These are regular cut nails, which can still be purchased today. The shaft, cut from opposite sides, is rectangular and tapering. These specimens date from after 1830 to the present day (Nelson, 1963). Three specimens of this general category have, in addition to the above characteristics, a ridge extending from the top of the head down the broad side of the shaft. There are also some nails cut from opposite sides with crude irregular shaped machine-made heads. A

few have hammered heads. The shafts cut from opposite sides, are more square than rectangular. They have irregular circular "rose" heads. These specimens probably date from 1810 to 1820 (Nelson, 1963).

A small number of cut nails with round flat machine-made heads were recovered as well as a few modern cut flooring nails with no heads.

One hundred and seven round wire nails were recovered, all with round flat heads and sharpened rectangular points. The majority are common building nails ranging from a length of 1 inch to 5 1/2 inches; a few are finishing and roofing nails.

WINDOW GLASS (115). One hundred and fifteen sherds of window glass were recovered. The majority were 1/32nd of an inch thick; a few sherds were thicker at 3/32nds of an inch.

SPIKES, BOLTS AND SCREWS (11). Four square iron spikes, two round iron bolts, two woodscrews, and three spike-like objects were recovered from the water. No building pins were recovered and none of these items recovered appeared to be made by a black-smith.

LOCKS AND KEYS (10). Two padlocks, one rectangular, one heart-shaped, one large rectangular lock, probably used on a heavy out-side door and seven household type keys were recovered. One large heavy iron key was of a type used in a rectangular lock. All keys have different tongue patterns.

HINGES (6). There was one complete H-hinge, with a height of 2 inches, a portion of one iron "butterfly" hinge, a long narrow hinge with a rolled bolt loop, a hinge with one tapered leaf, a rectangular leaf hinge and two large tapered hinges. All were iron collected from the surface.

DOOR PINTLE (1). One tapered wrought iron door pintle 4 3/4 inches in length with a short blunt end measuring 1 1/2 inches in length was recovered from the water.

BOLT CATCH (1). One large heavy iron rectangular plate door catch with four screw holes for attachment was recovered from the surface.

STRAP FRAGMENTS. Iron strapping, of widths of 1/2 inch, 1 inch, and 1 1/2 inches was recovered. Five fragments had folded, finished edges, and two fragments of narrow strapping had double parallel rows of bosses with crimp lines between them. This may have been used as decoration or as binding for packing cases.

CHINKING, FRAGMENTS. Approximately one pound of clay chinking was recovered from the cellar pit area. Some fragments are V-shaped

suggesting that they had been pressed between horizontal logs while still moist.

WOOD FRAGMENTS. Three fragments of wood were recovered. Two were probably pieces of planking, while one small piece may have been used as dowel. A bark sample was taken from the cellar pit. Three fragments were poplar bark and three were spruce bark. Thirteen were unidentifiable. All specimens were burned, making identification difficult.

OBJECTS OF NATIVE MANUFACTURE AND MISCELLANEOUS

COPPER ARROWPOINT (1). This is an oblong point with straight sides and base which has been made from kettle stock sheet brass. It has a length of 2 1/4", a width of 7/8" and a thickness of 1/6". The blade has been sharpened with a file or whetstone. It was recovered in association with a Jew's harp north of the cellar pit.

COPPER AWL (1). One native copper awl was recovered from the water. It is 3 5/8ths of an inch long, and is squared in cross-section with a thickness of 3/16ths of an inch. It has a slight light green patination, and is sharply pointed at one end.

HUMAN SKELETAL MATERIAL. These remains were recovered from the water at the eroding south end of the island off the point. Based on 18 crania; four were infants, two were juveniles, four were adults, and six could not be aged. Details respecting the finds, it is anticipated, will be covered in a separate report.

FAUNAL REMAINS. A large quantity of mammals, fish, and bird bones was recovered from the cellar pit and the excavated area. They appear to be indiscriminately scattered around the buildings. From the cellar pit a tremendous abundance of fish scales was also recovered. A separate report is being prepared respecting these finds.

BIRCH BARK FRAGMENTS. Several fragments of rolled birch bark were recovered from the sod at the end of the point. These were trimmed and fashioned pieces of bark. They showed no evidence of scratched or coloured figures. Two pieces appear to be intact: one measures seventeen inches in length, and the other twenty-eight inches. Both appear to be unpeeled sections with stitching perforations. The larger piece had portions of what was probably split root or watap stitching which was covered with gun. They were probably sections from birch bark canoes or wigwams.

SHELL FRAGMENTS. A number of shell fragments were recovered, probably mussel. None showed evidence of having been worked.