

Nova Scotia



Department of
Education

Nova Scotia Museum Complex

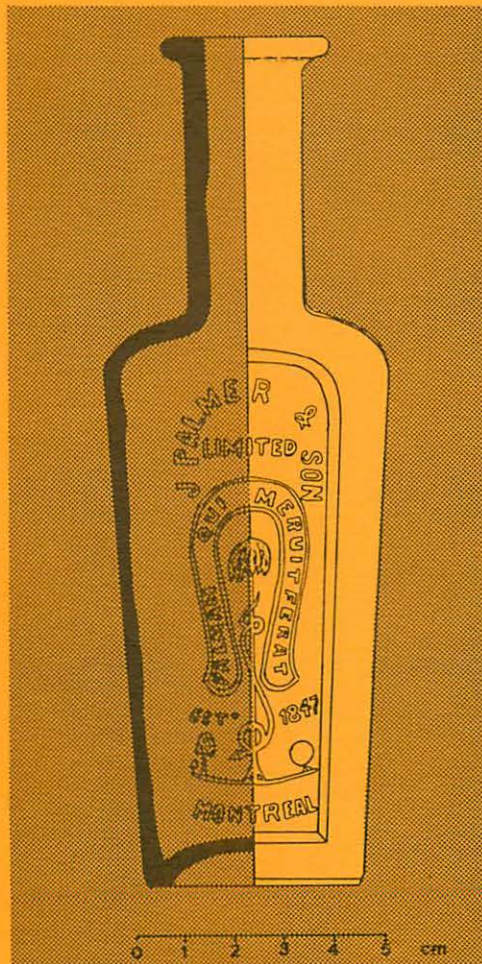
Curatorial Report Number 69

Archaeology in Nova Scotia 1987 and 1988

Nova Scotia Museum
1747 Summer Street
Halifax, Nova Scotia, Canada
B3H 3A6

Edited By:
Stephen A Davis
Charles Lindsay
Robert Ogilvie
Brian Preston

June 1991



Nova Scotia



Department of
Education

Nova Scotia Museum Complex

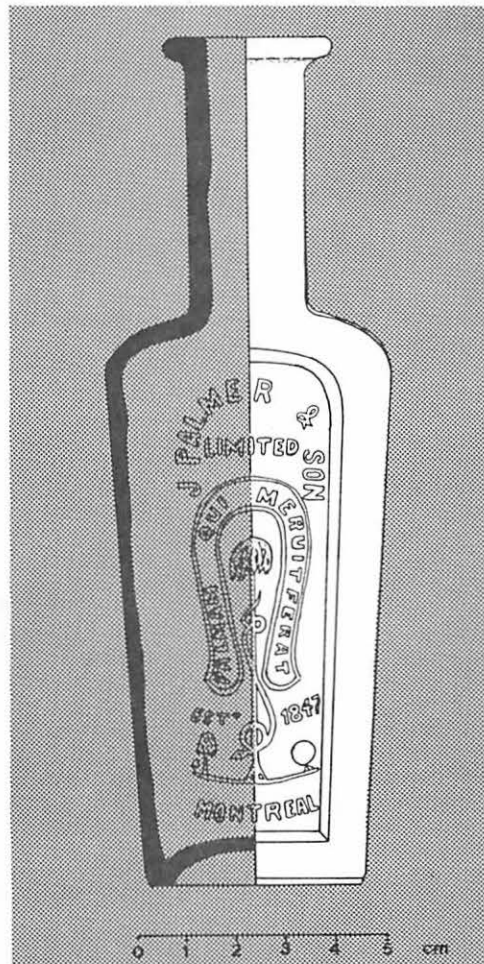
Curatorial Report Number 69

Archaeology in Nova Scotia 1987 and 1988

Nova Scotia Museum
1747 Summer Street
Halifax, Nova Scotia, Canada
B3H 3A6

Edited By:
Stephen A Davis
Charles Lindsay
Robert Ogilvie
Brian Preston

June 1991



Nova Scotia Museum

Curatorial Reports

The *Curatorial Reports* of the Nova Scotia Museum contain information on the collections and the preliminary results of research projects carried out under the program of the Museum. The *Reports* may be cited in publications but their manuscript status should be clearly indicated.

TABLE OF CONTENTS

INTRODUCTION TO ARCHAEOLOGICAL RESEARCH IN NOVA SCOTIA IN 1987 AND 1988	1
Stephen A. Davis	
REPORT ON THE CHAMBERS FLUTED POINT PREFORM	7
David J. Christianson	
REPORT ON PRELIMINARY ARCHAEOLOGICAL EXPLORATION OF THE FOUNDRY NORTH AREA, NOVA SCOTIA MUSEUM OF INDUSTRY, 1987	13
William A. Russell	
LOCOMOTIVE HOUSE, STELLARTON	19
Peter Latta	
THE STELLARTON PUMPHOUSE	21
Helen Sheldon	
PRELIMINARY EXCAVATIONS AT A NINETEENTH CENTURY IRON FOUNDRY	23
Helen Sheldon	
SUMMARY REPORT (1987)	43
Brian Preston	
EXCAVATIONS AT WHITES LAKE, 1987	57
Stephen A. Davis	
YARMOUTH COASTAL SURVEY	69
Stephen A. Davis	
ST. JOHN'S ANGLICAN CHURCH, PRESTON	89
Stephen A. Davis	
SALVAGE ARCHAEOLOGY AT THE ENGINEER'S PROPERTY, LOUISBURG	95
Andrée Crépeau	
THE DIMOCK HOUSE	99
Stephen A. Davis	
SUMMARY REPORT (1988)	113
Brian Preston	
PRELIMINARY EXCAVATION OF THE ALBION IRON FOUNDRY	129
Helen Sheldon	

GRASSY ISLAND: SUBMERGED CULTURAL RESOURCE SURVEY 1988 165
E. Willis Stevens

**PRELIMINARY REPORT ON THE BAIN SITE AND THE
CHEGOGGIN ARCHAEOLOGICAL PROJECT173**
Stephen A. Davis and David Sanger

**RECONNAISSANCES PRELIMINAIRES DU SITE MINIER GOLDBORO,
COMTE DE GUYSBOROUGH, NOUVELLE ECOSSE193**
Marc C. Lavoie

**AN ARCHAEOLOGICAL INVESTIGATION OF JIM CHARLES' CABIN
SITE IN KEJIMKUJIK NATIONAL PARK 227**
Robert Ferguson

**INTRODUCTION
TO
ARCHAEOLOGICAL RESEARCH IN NOVA SCOTIA IN 1987 AND 1988**

**Dr. Stephen A. Davis
Department of Anthropology
Saint Mary's University
Halifax, Nova Scotia**

The papers in this volume represent the second annual report of archaeological investigations carried out within the province of Nova Scotia. They are preliminary statements of research results required under the terms of the Special Places Protection Act (1980). The purpose of this Act is to govern the preservation, protection, regulation, exploration, excavation, acquisition and study of archaeological and historical remains and palaeontological sites which are considered important parts of the human or natural heritage of the province. The Act states that no person shall carry out explorations or make excavations on any land in the province, including land covered with water for the purpose of seeking archaeological, historical, or palaeontological objects or remains, without a Heritage Research Permit. This Act is administered by the Nova Scotia Museum. For further details or legal questions, the Act, in Chapter 17 of the Statutes of Nova Scotia 1980 should be consulted.

The papers contained in this volume are arranged in a chronological sequence according to year and the number issued for their Heritage Research Permit. In each of the years covered a number or permits were given but the reports are not included in this volume. In some cases these are cultural resource assessments where nothing of consequence was found. In others the data has been published elsewhere, this is particularly true of projects by the staff archaeologists working for the Canadian Parks Service.

This volume starts with a report by David Christianson under a permit issued in 1986. Unfortunately, it was inadvertently left out of the first volume in this series. David's paper provides a descriptive analysis of a fluted point preform found in Dartmouth. The preform is described and related to a similar specimen recovered from the Debert Palaeo-Indian site in central Nova Scotia.

The first volume of these annual reports was dedicated to Bill Russell who died on July 31, 1987. The paper that appears second in this volume is Bill's last field report detailing his efforts on behalf of the new Nova Scotia Museum of Industry. The project was designed to investigate an area near the museum which was to be disturbed by the construction of a VIA rail station. Bill utilized a sketch circa 1865 and a 1924 aerial photograph to identify former structures in the area. His methodology employed the use of heavy equipment with positive results. Although he was unable to locate structures related to the industrial activities of the General Mining

identify former structures in the area. His methodology employed the use of heavy equipment with positive results. Although he was unable to locate structures related to the industrial activities of the General Mining Association, he did encounter a hitherto unknown domestic structure. Bill concluded that the dwelling may have been occupied by common labourers who worked for the General Mining Association. He rightly states that little is known about this class of individual who "provided the lifeblood of Nova Scotia's industrial past".

The next three articles in this volume are also centered on archaeological investigations on the property of the Museum of Industry. The first is a short discussion by Peter Latta on the attempts to define the location of the locomotive house built ca. 1838 by the General Mining Association.

The remaining two articles on the Museum of Industry property are by Helen Sheldon. One was an unsuccessful attempt to locate features connected with the Stellarton Pumphouse. The other deals with the successful efforts to locate a nineteenth century iron foundry. Sheldon feels that she encountered the foundry in her test units and that it is sufficiently well preserved to warrant additional work. During the course of testing for the location of the foundry, Sheldon also located a possible domestic structure.

The report by Preston contains areal summaries of his activities as curator of archaeology during 1987. The western area included a preliminary survey of the DesBarres estate, known as Castle Frederick, where thirty structures were recorded. This western area also included the monitoring of recorded pre-explusion Acadian sites at New Minas, Belleisle and Upper Clements. A nineteenth century cemetery in Savary Provincial Park at Plympton, Digby County was investigated. The final report deals with a one day reconnaissance of the shell middens at Port Joli.

The central area of the province includes metropolitan Halifax and surrounding areas. Reported sites in downtown Halifax, the Dartmouth Lakes, Lake Major, Porter's Lake and the Dollar Lake Provincial Park were investigated.

Similar activities related to public inquiries were conducted for the northern and eastern areas of the province. A prehistoric site was recorded within a residential section of Truro. A Clovis fluted point was identified from Amherst Shore, however, field investigations failed to produce an associated site. The same situation prevailed with an Otter Creek type point found in a disused gravel pit near the headwaters of Six Mile Brook on Dalhousie Mountain.

Two historic period sites were investigated, one on Mr. James Gunn's property at Lochabes was determined to be related to an unknown nineteenth century activity. The other, located near Judique on Cape Breton

Island, holds more promise. A review of the literature along with local oral tradition could not reveal the nature of the structure. Preston concluded that "this is potentially an early and interesting structural feature".

The first report by Stephen A. Davis is a preliminary report on the Skora site at White's Lake, Halifax County. A portion of this site had been inadvertently destroyed during the construction of an access road into a newly developed subdivision. The report identified the age of the site as an Early Woodland burial mound. It also outlines the cultural activities which took place at this location leading to the creation of the mound.

The second by Davis outlines a two week survey project which was directed towards identifying prehistoric sites in Yarmouth County. The project was the first year of a long-term cooperative venture between Saint Mary's University and the University of Maine. The survey was directed towards locating sites, primarily middens, which could be excavated in the future. The hypothesis to be tested by excavation was to investigate the possibility of prehistoric contact between southwestern Nova Scotia and the central Maine coast. Although forty-six heritage resource locations were identified and recorded, few met the criteria for testing the hypothesis. The majority of the sites were interior locations while the middens recorded had been disturbed beyond utility by erosion and unauthorized digging.

A third report by Davis in this volume outlines the investigation of the first Anglican church to be constructed on the east side of Halifax Harbour. The location had been identified by Andrew MacLeod during his research into the histories of the three St. John's Anglican Churches. The location on Crain Hill near the community of Preston was tested and produced evidence of construction details not recorded in archival documentation.

The final report for 1987 is written by Andree Crepeau, staff archaeologist, Fortress Louisbourg. Andree reports on a salvage excavation in the yard of the unit designated as the Engineer's Property. The work was required to allow for the repair of a stone lined pond on the property.

The first paper dealing with the 1988 field season is one by Davis on the test excavations at the property known as Dimock House. The report summarized an apparent conflict situation on the property. The historical records for the structure placed it in the mid-nineteenth century yet observable building features suggested an early eighteenth century date for the house.

The next report is the 1988 summary of activities undertaken by Brian Preston, Curator of Archaeology, Nova Scotia Museum. Brian details additional survey and testing results at Castle Frederick the former DesBarres estate. This is followed by the survey results on attempts to locate surviving log structures on Cape Breton Island. Three standing structures are reported along with the location of five collapsed structures. While conducting the "log house survey" Brian was informed of seven cellar depressions at Militia

Point. His investigation of the previously unknown village is discussed. The initial results suggest this as the location of a pre-explusion Acadian community.

The remaining sections of Preston's report detail the results of public enquiries related to surface finds and the existence of historic features. Brian also includes a brief section on monitoring of ongoing projects reported elsewhere in this volume.

The next paper is by Helen Sheldon which provides descriptions of two field projects at the Albion Iron Foundry. The site is located within the boundaries of the new Nova Scotia Museum of Industry in Stellarton. Initial testing provided sufficient evidence to warrant a more detailed effort at the foundry. The results of the projects are presented in Sheldon's paper.

The results of an underwater survey and testing project at the location of a new wharf to be built at Grassy Island is reported by Willis Stevens. The paper outlines the objectives, and methodologies, employed in this submerged cultural resource survey.

A preliminary report on the Bain site excavation and the Chegoggin Archaeological Project (CAP) is presented by Stephen Davis and David Sanger. The Bain site was recorded during the first year of the project (see Davis A1987NS07 this volume). The private collections from this site, notably the one made by Nate Bain, suggested an extensive occupation of this site during the late archaic period. Given the possibility of the existence of a Maritime Archaic component at this location an excavation was conducted in August of 1988. The preliminary results of the excavation are considered in this paper.

The report by Marc Lavoie is his cultural resource assessment of the Goldboro area of Guysborough county. The project was initiated by the Groupe Ecotone Inc. of Montreal as part of an overall environmental assessment of the study area. Marc discusses the features and associated artifacts recovered during the project.

The final report by Rob Ferguson deals with the limited testing of a homestead within Kejimikujik National Park. The property is associated with two Micmac families. The first was that of John Jeremy who was granted the land in 1842. The second family was that of Jim Charles who is surrounded by considerable folklore. The archaeological investigations are presented by Rob along with a comprehensive historic study of the property and its occupants.

The papers in this volume cover a wide range or archaeological interests. This is a reflection of a growing concern by public and private individuals and institutions to study the culture history of Nova Scotia. The future of archaeology in the province looks brighter with each passing

year. It is hoped that this momentum will continue and that future volumes in this series will provide insight into Nova Scotia's past.

Heritage Research Permit A1986NS7**REPORT ON THE CHAMBER'S FLUTED POINT PREFORM**

David J. Christianson
Nova Scotia Museum Research Associate

Introduction

The Chambers fluted point preform was found by Adam Chambers while playing in his yard at 19 Plymouth Street, Dartmouth. Adam found the preform near the surface of the ground while playing with a friend in the northwest corner of the backyard.

Brian Preston, Curator of Archaeology at the Nova Scotia Museum, was informed of the discovery by Adam's father, George Chambers. Upon seeing the object, Preston immediately noted a similarity in lithic material to the predominant chalcedony used at the Palaeo-Indian Debert Site.

On May 21, 1987 Preston and I visited the Chambers home to gather more information on the find and to try to locate additional cultural material. We were joined by Stephen Davis and Michael Deal of the Department of Anthropology, Saint Mary's University. The Chambers property is situated on a lowland, former watercourse southwest of the adjacent height of land known as Miller's Mountain. Prior to the construction of houses in this area, preparatory earth fill was brought in. The origin of the fill, and presumably the fluted point preform, is not known. George Chambers suggested that the near slopes of Miller's Mountain may have been the source for the fill.

The area surrounding the Chambers property was walked, erosional areas and gardens were checked and part of the nearby Miller's Mountain slope was walked. A one meter test pit was begun in the location where Adam Chambers found the biface. The unit was not taken down to subsoil due to lack of time and heavy tree root concentration. No additional evidence of prehistoric occupation was recovered from these activities.

The Chamber's Fluted Point Preform

The Chamber's fluted preform is made from a distinctive chalcedony that was the predominant material used at the Palaeo-Indian Debert Site. MacDonald (1968:61) described this material as opaque, brecciated and noted a colour range from greenish-brown to grey. The only other report of this material in an archaeological context is flake detritus from a suspected late Palaeo-Indian or Early Archaic site near Oxford, Nova Scotia (Brian Preston: personal communication). No source for this chalcedony has been discovered despite surveys for Palaeo-Indian quarries at the time of the

Debert excavation. MacDonald (ibid.) suggests that post-glacial sea level rise may have covered the source locations for lithic materials used at Debert.

There are striking technological similarities between the Chambers specimen and a fluted point preform reported from the Debert Site. The Debert preform was described as representing the stage of manufacture immediately prior to striking off the first channel flake to form the first flute.

The initial basal preparation, shown by one complete preform discarded at this stage (Figure 20 a), has a convex base and is symmetrical in profile with short crushing flakes at the center of the base to provide a bite for the punch in drawing off the first channel flake. (MacDonald 1968: 73-74).

The Chambers specimen (Appendix A) is similar in size and method of manufacture to the Debert preform.

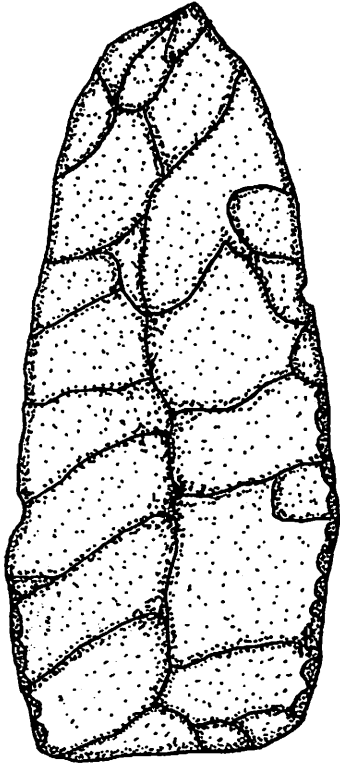
Discussion

The original context of the Chambers specimen is not known. The suggestion that it was brought to its discovery location with pre-construction land fill appears reasonable. That the nearby Miller's Mountain was the source of the fill cannot be further supported at this time. An assessment of the quaternary geology of the Miller's Mountain area would provide useful background information for future archaeological survey in the area.

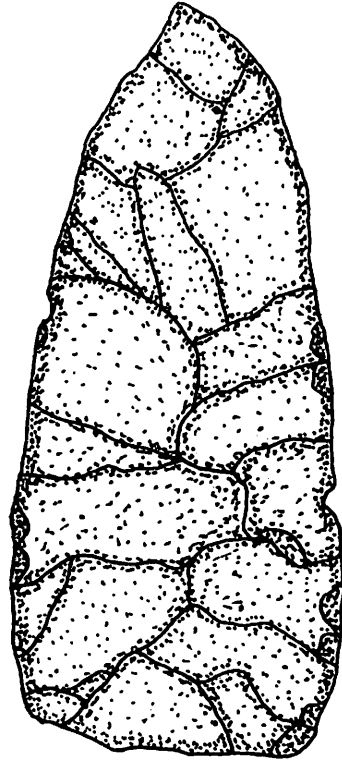
The discovery of the Chambers fluted point preform and recent finds of a fluted point in Amherst Shore and an Eastern Plano point near Yarmouth (Davis and Christianson 1988) add further information to our understanding of Palaeo-Indian settlement in Atlantic Canada. Although, only the Yarmouth specimen appears to be situated in a primary deposition, the presence of these objects suggests greater temporal and spatial parameters for the Palaeo-Indian period in Nova Scotia than the occupation at Debert.

References Cited

- Davis, Stephen A. and David J. Christianson
1988
"Three Palaeo-Indian Specimens from Nova Scotia." Canadian Journal of Archaeology, Vol 12, 190-196.
- MacDonald, George
1968
Debert: A Palaeo-Indian Site in Central Nova Scotia. Anthropology Paper No. 16 National Museum of Canada, Department of the Secretary of State, Ottawa.



a



b

Figure 1. Chambers Preform, a) obverse, b) reverse.
(drawing by S. Davis)



Figure 2. Chambers Preform Obverse Face.

Figure 1. Chambers Preform, a) obverse, b) reverse.
(drawing by S. Davis)

Appendix A

Chamber's Fluted Point Preform Attribute Analysis

SITE : CHAMBERS

LITHIC TYPE : CHALCEDONY

SITE # : _____

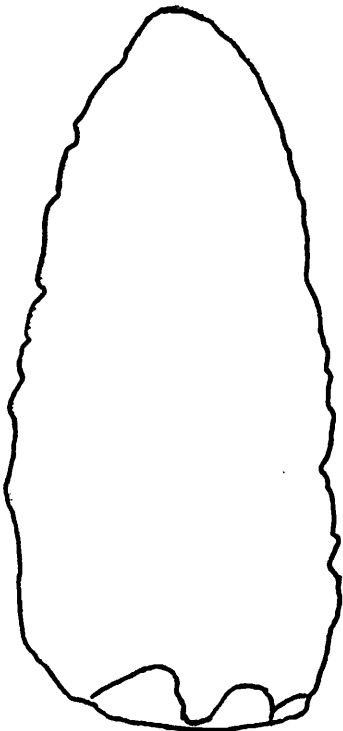
ARTIFACT # : _____

COLLECTION : NOVA SCOTIA MUSEUM

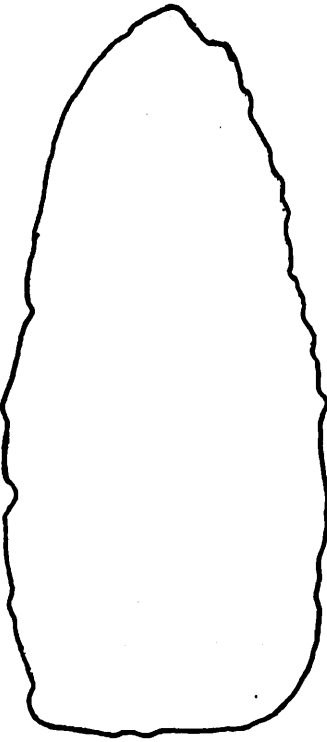
ANALYST : DAVID CHRISTANSON TYPE : FLUTED POINT PREFORM

LOCATION : HALIFAX, N. S.

DATE : DEC. 11, 1987 SUBTYPE : _____



obverse



reverse



lat. x-section



transverse x-section

MORPHOLOGICAL ATTRIBUTES *

Artifact

length : 97.5
 width : 44.5
 thickness : 15.0
 basal width : 36.5
 hafting width : N/A
 weight : _____

Fluting

preparation : FLUTE PREPARATION
FLAKES (OBVERSE)
 # of flutes - ob. NONE rev. NONE
 longest flute - ob. N/A rev. N/A
 widest flute - ob. N/A rev. N/A
 total width - ob. N/A rev. N/A

Grinding - basal : ABSENT

ob. right : N/A
 ob. left : N/A

Comments

This specimen is similar to a fluted point preform from the Debert Site (MacDonald 1968: 73-74)

Edge angle : _____

Tip angle : _____

Face angle : _____

Heat treatment : ABSENT

*all measurements are in millimeters and are maximums

**Heritage Research Permit A1987NS01
Investigations at the site of the Nova Scotia Museum of
Industry, Stellarton, in 1987**

**REPORT ON PRELIMINARY ARCHAEOLOGICAL EXPLORATION OF THE
FOUNDRY NORTH AREA: NOVA SCOTIA MUSEUM OF INDUSTRY 1987.**

**William A. Russell
Private Consultant**

Introduction

The valley of the East River, Pictou County, especially the west band from Abercrombie to Ferrona has a long history of industrial activity. Indeed, it could be described as the focus for the arrival of the Industrial Revolution in Nova Scotia. In view of this fact it was proposed that prior to the construction of the new Nova Scotia Museum of Industry and a proposed new VIA rail station on the same property, some investigation might be carried out to ascertain both the location of know historical features as well as the nature and extent of earlier unknown but suspected industrial activity.

The work described below consisted of two distinct operations, and was conducted in response to a request by the curator of collections of the Museum of Industry under Heritage Research Permit No. 1987NS01 issued by the Nova Scotia Museum.

The first investigation of an area directly slated for disturbance was conducted on May 14, 1987 when the site of the Albion Mines locomotive shed (1835-1924?) which house the Samson, Albion and John Buddle was sought and found. The shed was partially excavated later on May 24 by volunteers from the Nova Scotia Archaeology Society and others: This work is reported below.

The second investigation was conducted on July 6-7, 1987 in the area located between the CNR main line end and the embarkment of the old (abandoned) Truro-Pictou main line of the Nova Scotia Railway. This area was occupied by Nova Scotia's fourth oldest foundry owned and operated by the General Mining Association, and the buildings associated with it. It is here the proposed VIA rail station is to be located. This report deals with the archaeological exploration of this portion of the museum property fronting the present CNR main line.

The only indications of prior structures on the site come from (A) a sketch c. 1865 (PANS F/239-1865 Albion Mines) whose primary focus is the railway "route proposed by the Agent of the G.M.A. totally outside works"; and which shows the main foundry building and nine others located to the west and especially the north of it. The foundry, however, as a business

west and especially the north of it. The foundry, however, as a business enterprise dates from c. 182.5 (b) The only other source of visual information currently known has disappeared; but four other structures are visible; one of which (the northernmost) is located so close to the railway that it seems to have been removed either before, or in the face of, the double-tracking of the CNR line which occurred at some time subsequent to the taking of the photograph.

The area slated for latter-day construction covers somewhat more than 25, 000 square feet. The conventional archaeological investigation of this would require a substantial amount of funds, personnel and time. The return on such an investment in terms of information retrieved could well be minimal or, although unlikely, entirely negative, even were the resources to conduct it available.

Methodology: In these circumstances it was decided to enlist the aid of heavy machinery. It should be mentioned that various experiments with this type of equipment can be found in the literature and has been observed and used by the author elsewhere. While the delicacy of soil removal by traditional archaeological means contrasts sharply with the relative crudity of mechanized earth-moving, it is both possible and practical to use one or more types of the latter machines. It depends on the nature of the particular task which kind of machinery is used, and - not least - on the skill and motivation of the operator. In the explorations conducted on the Museum of Industry property the investigators were fortunate to have the assistance of Pictou County Excavators Ltd., and in particular the expertise of a dozer operator Mr. Sandy MacLean, whose ability and involvement were second to none.

On a reasonably well-founded assumption that a distinctive grassy mound located at the south-east corner of the Museum property was the site of the principal Foundry building, a site not likely embraced in construction plans, operations began immediately to the north of this mound. Sod and overburden were carefully stripped in contiguous parallel rows up to but not including the two depressions (the most obvious surface features) which lay at the northern boundary of the exploratory area. These were left until the greater portion was cleared.

This procedure was repeated successively, cutting through unevenly distributed layers and pockets of the kinds of fill associated with the industrial activity known to have taken place there. This fill consisted of an amalgam of slag, coke, coal, burnt and raw limestone, cinders etc., until sterile subsoil appeared. Despite the number of structures shown on the sketch and air photo, no foundations, footings, or soil stains by which any building could be delineated were found. The area did however, reveal a considerable number of artifacts which again, reflected the nature of the industrial activity. These included items such as: boiler-plate (punched); a heavy, hafted drill (machine-operated); portions of flanged, cast-iron wheels of various diameters; several 3-foot sections (standard casting dimensions) of iron rails; an early type of miner's pick; miscellaneous heavy bolts - threaded and unthreaded; bolts, nuts and washers - separate and attached; cast-iron rings; "keys"; flat and round

bar-iron; rod-iron; angle-iron; strap-iron; a large rasp; a cast-iron hearing cup. There were a few examples of artifacts reflecting domestic activity: ceramics; several oyster shells; several animal bones, one apparently a complete pig femur.

A single deep swath was cut north to south across the approximate centre of the cleared area and well into the sub-soil, designed to intersect the locations of possible structures set beneath later developments in the foundry-yard. This proved negative.

The only discovery that might be termed a "feature" was an ovoid concentration measuring approximately 23' x 37' on its east-west axis and lying about 50' north of the foundry mound. As far as could be determined without analysis, this appeared to consist of fine limestone and limestone flakes and chips (at first mistakenly identified as wood ash to which it bears a striking resemblance) interspersed with very large blocks of raw coal as well as a number of badly deteriorated wood masses. The shape and dimensions of these and whether worked, could not be determined except that the texture of the fibres suggested cedar.

The northerly area in the vicinity of the two depressions was treated somewhat more carefully. That furthest from the foundry mound had a well-defined embankment along its west side. This proved to be entirely topsoil empty of any ash or other industrial detritus giving reason for judging that this was the site of a relatively recent excavation to expose and remove the underlying material to be used for fill elsewhere. Given the lesser expectation that this possibility produced, and the pressure of time constraints, no further exploration of this locale was undertaken.

As for the other depression filled with tall weeds and brush, it and the immediate vicinity were cleared gradually and with more finesse than elsewhere. Here the overburden was thin, and directly under the sod flat, aligned stones appeared which were uncovered and traced by hand. Although a number were displaced or were missing on the north side, sufficient number remained to define a rectangular structure approximately 26 1/2' x 17 1/2'. Further work established that where the subsoil was lower, larger stone blocks - some dressed, some rough - had been laid down and thinner flat stones placed without mortar on top evidently for the purpose of levelling the footings to receive wooden sills. Several squared, hand-wrought spikes (one with wood adhering to it) confirmed this suggestion. The interior of the rectangle was filled with a loose mixture of clay bricks and stone blocks.

This structure lay immediately to the west of the depression and aligned with it, the eastern dry stone wall being common to both, although the rectangular structure extended south well beyond the edge of the depression. The bottom of the latter, left unexcavated, appeared covered with the same mixture of loose clay bricks and stones which may explain the almost complete lack of any footings surrounding it, that is, the footings and perhaps interior lining had collapsed inwards. On the surface at the west side, midway along its length, was a concretion of

packed clay surrounding another loose assemblage of bricks and stones. This may indicate the base of a chimney.

Relatively few artifacts were uncovered, and consisted of fragments of window glass, sherds of domestic china and semi-porcelain; a large hook-and-eye, the aforementioned spikes, and the head of a ball-peen hammer.

Taking this incomplete evidence (along with a small domestic midden located 15' to 20' to the south with its medicine bottles and a New Glasgow-made carbonated drink bottle), the whole suggests a domestic building - a family dwelling or perhaps a bunk-house, the main portion of which was 26 1/2' x 17 1/2' with a kitchen ell 16' x 16' on its western side and a cellar beneath the latter. An ash dump near the centre of the cellar's south wall reinforces the presence of a kitchen, while a solitary flat stone(s) aligned with the eastern end of the cellar and some 11' south of it suggests a base for a porch corner post. The stone work and artifacts, pending analysis, seem to indicate a 19th or early 20th century occupation.

A domestic dwelling at this location is unexpected but not surprising since Pleasant Row workers' housing, lay only several hundred metres to the north-east. Moreover, it is known that, during the period in question, workers frequently lived close by, even cheek-by-jowl, to their places of employment.

Significance: While the remains of the structure described summarily above are unprepossessing to the eye and far from exciting to the layman, it should not be downplayed. Its significance may well be as a component in a wider context; that is (and with its full nature clarified) when it is included in a wider knowledge of the lives and domestic conditions of industrial workers - a study hardly begun for the years before the 1920s. It is startling to realize that more is known about Cro-Magnon man of 100,000 years ago than about the domestic and working conditions of the men and women who, over less than 200 years ago to the present, provided the lifeblood of Nova Scotia's industrial past. Concerning them little is known and little documentation exists - except under the earth. For every Samuel Cunard or Amos Seaman there were hundreds of now anonymous labourers of both sexes upon whose efforts the eminence of the former is founded. It will only be by gradually compiling information from many modest features and many modest excavations of them, that the mosaic picture will appear. It is why Pleasant Row is important as well.

Recommendations: It is recommended, in general, that any future construction undertaken on the Museum of Industry property have incorporated in the plans and budget provision not only for adequate time and funds to conduct archaeological survey and pre-examination, i.e. salvage; but due consideration for alternate courses of action should historical remains be uncovered in these investigation, e.g. full-scale prior excavation; provision for halting construction for removal; changing the location of the construction itself; allowance for protecting the heritage resource in conjunction with the construction proceeding as

planned, and so forth. In other words: what is the point of discovering something, if nothing can be done with it once found! What very much needs to be avoided is the mind-set, unfortunately suspected elsewhere, whereby "taking a quick look" serves as a salve for the heritage conscience, a paying of lip-service towards approaching and resolving a real and serious on-going problem for heritage resources that can only be appreciated through archaeological means.

It is recommended that consideration be given to those portions of the Museum of Industry property not slated for construction. There would seem to be considerable potential for incorporating these (especially known or suspected sites) into future multi-seasonal Museum programmes which, aside from their intrinsic historical value, could prove strong attractions for future visitors, and serve as highly visible illustrations of an important part of the Museum's mandate.

In particular, and regarding the structure described in the body of this Report, it is recommended that, if the construction schedule(s) permit, volunteers be organized under appropriate supervision, and the structure fully excavated. If this cannot be allowed for, it is suggested that the remains be covered with the sod readily available (it protects and also acts as an easily discernible marker for future investigators); and the area brought up to grade with topsoil. And that the architect arrange or adjust for some light structure or amenity - such as a flower bed - to be installed on the surface. Thus, if nothing heavy or impervious is applied, the site may be left for fuller investigation another day.

LOCOMOTIVE HOUSE SITE, STELLARTON

Peter Latta
Nova Scotia Museum of Industry

The former existence of the locomotive house which had been built for the Samson and its sister engines ca. 1838 by the General Mining Association was known of by photos of the building and a survey sketch made ca. 1865 for the planned Nova Scotia Railway. This sketch identifies a long narrow building as the "locomotive house" and places it just west of the foundry. Later maps show a long building, but do not identify it (see A. F. Church maps of 1861 and Pictou County Atlas of 1871). An aerial photograph of the site made in 1924 shows rubble in the vicinity of the building site.

On May 14, Bill Russell, archaeological consultant, and Brian Preston, the Nova Scotia Museum archaeologist, visited the site with the intention of determining the precise location of the locomotive house. From the observation of the joint of cut stones which had been washed clean by a run-off, and a line of rubble in the known direction of the building, it was decided to clear some of the overburden. This work was done by use of a bulldozer under the careful guidance and observation of Bill Russell. This procedure proved very successful in clearing considerable overburden and exposing the top of a footing wall within a short amount of time.

The overburden was determined to have been built up as a result of apparent activity by heavy machinery. It is supposed that a front-end loader had once been employed on the site to clear away the rubble. In doing so most of the building stone was removed, along with the south-east corner of the building.

Once one footing wall was established it remained to determine the location of the corresponding wall. To this end the bulldozer cut a trench to the west of the established wall about thirty feet in length. It also cleared an area parallel with and to the west of the established wall. No sign of construction was discovered in that area, leading to the conclusion that the second wall would lie to the east of the established wall. This was subsequently confirmed.

Because the site had been considerably disturbed after the locomotive house was demolished, and given the heavy construction materials used, it was felt that volunteers could undertake the task of further examination without the likelihood of damaging any sensitive materials. To this end members of the Early Trades Industries and Technologies Society and other interested people were invited to participate.

Consequently on May 24, twenty volunteers arrived at Stellarton. Their specific tasks for the day were to uncover the west wall of the locomotive house and determine its dimensions, and to locate the east wall. Under the guidance of Terri Scott and Larry Bjarnason, two senior archaeology students from St. Francis Xavier University, a grid of eight feet square was laid off above the west wall. Volunteers were assigned squares in which to work and were given general instruction throughout the day by Terri Scott. The work was undertaken under the authority of Heritage Research Permit A1987NS01.

The general goals of the project were achieved with the exposure of the west footing wall and the determination of the eastern wall. Very few artifacts were uncovered. Most significant was the location of footings for three forges inside the building. Little remained of the eastern wall to refer to, but its location was confirmed.

Participants:

J. Leonard Embree, Halifax
Bill Naftel, Halifax
Charlotte Cooling, Truro
Susan Young, Truro
Nancy Murray, Truro
Helen Gill, Truro
Joan Payzant, Dartmouth
Carla Hayley, Antigonish
L. J. Payzant, Dartmouth
Mark Lewis, Merigomish
Jim Sangster, Merigomish
Louise Hale, Fredericton
Laird Niven, Halifax
Kate Buckland, Halifax
Janice Clark, Dartmouth
Diane Tyne, Pictou
Terri Scott, Antigonish
Wayne Jones, Antigonish
Peter Latta, Pictou
Larry Bjarnason, Merigomish

**THE STELLARTON PUMPHOUSE
BjCp-6**

**Helen Sheldon
Private Consultant**

The Borden number BjCp-6 was assigned to the area immediately surrounding the nineteenth century pumphouse ruin in Stellarton, Nova Scotia. The pumphouse sits approximately 50 metres south of the trans-Canada highway and approximately 50 metres east of an on-ramp of highway exit 24. Because this section of highway will be twinned in the near future the pumphouse is going to be moved 100 metres to sanctuary on the lands of the Nova Scotia Museum of Industry.

Historic photographs show that the operating pumphouse was surrounded by a number of wooden buildings and other structures. On December 11, 1987 an excavation was conducted to discover and record any extant features. No features except for one rail bed were found. The excavation tool was a bulldozer.

The bulldozer was used to excavate a portion of the area between the pumphouse and the East River (Figure 1). Earth was removed in a series of c. 30 cm deep strips.

The only feature discovered was a series of 14 parallel wooden timbers lying perpendicular to an old rail bed. These railway ties were on only the west side of the rail bed. The distance between the centres of the timbers was two feet.

The rail bed was visible before excavation. It was roughly 2.75 metres (nine feet) wide. The rail bed probably is not contemporary with the pumphouse as rails are not shown in photographs of the operating pumphouse. Underneath the rail bed, which was removed by bulldozer, was coke and slag waste very similar to that found in test pit 3 of the foundry site (BjCp-5). The existence of this foundry waste underneath the rail bed indicates that the bed was constructed after the foundry opened.

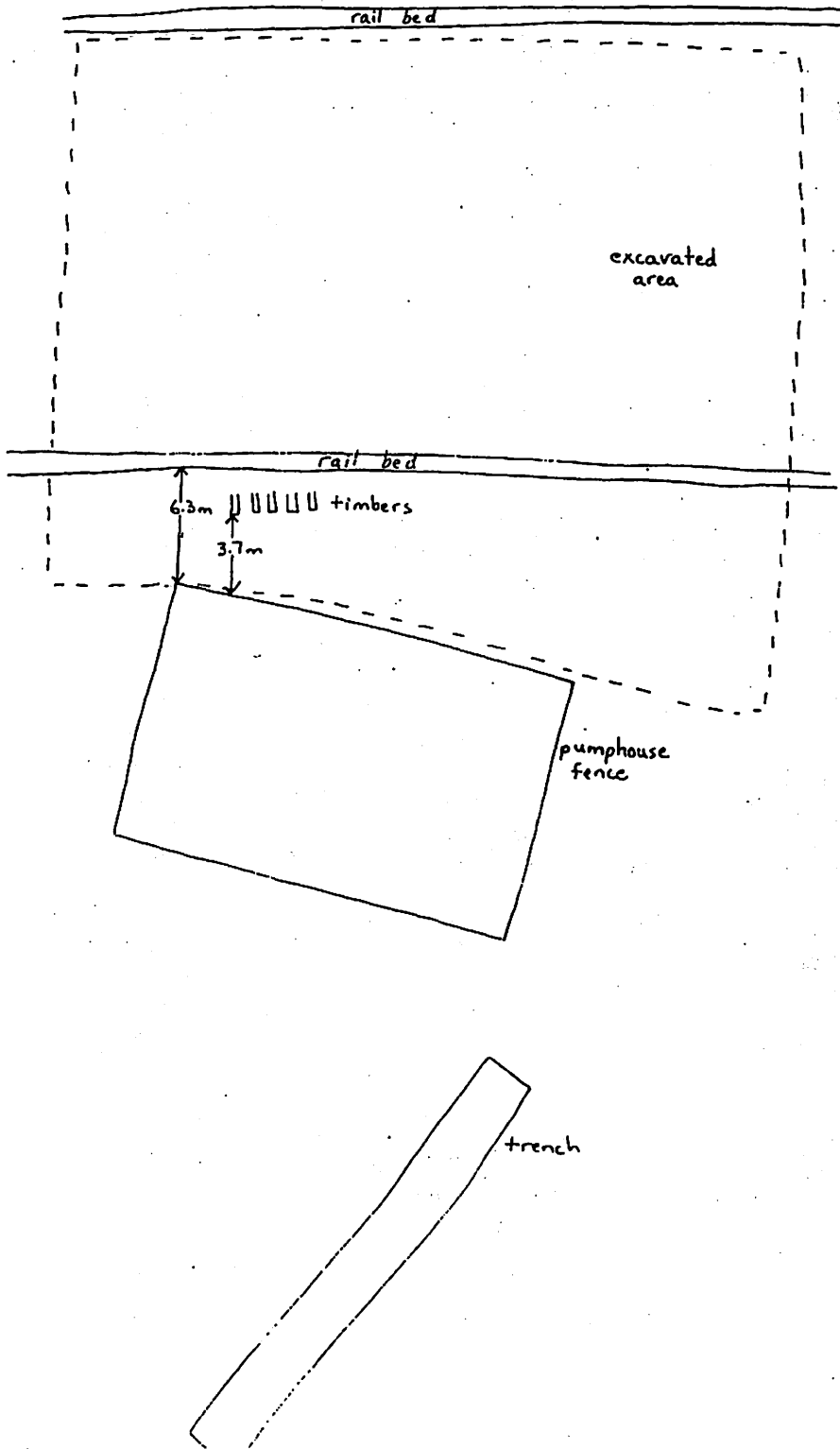
Several scattered railway rails were found, not in original context. According to Peter Latta these are post-1880. Only a few artifacts were found east of the pumphouse and most of these were recovered within six metres of the fence that surrounds the pumphouse. Artifacts included six square-shank nails and spikes, five sherds of clear bottle glass, two sherds of coarse earthenware and three fragments of roofing slate.

In addition to the excavation east of the pumphouse a trench was dug on the west side. The trench ran east-west (Figure 1) and measured approximately 3 m wide by 40 m long by 1.5 m deep. No features or artifacts were exposed.

In conclusion, it is evident from this excavation that no remains of pumphouse-related buildings or structures exist at the site.

Figure 1

Not to Scale



PRELIMINARY EXCAVATIONS AT A NINETEENTH CENTURY IRON FOUNDRY

Helen L. Sheldon
Private Consultant

Introduction

In 1829 the General Mining Association that had been formed three years earlier to develop the potential of recently acquired mineral rights in Nova Scotia, erected a coke blast furnace near New Glasgow. Around this furnace arose an iron foundry, the fourth iron foundry to be built in Nova Scotia. Maps dating from the late nineteenth century depict the foundry as a cluster of seven or eight buildings located between the "Road to New Glasgow" and the East River.

The furnace operated for an undetermined number of years, producing about 45 tonnes of iron. The iron, however, was of a low quality and this fact combined with additional problems with the workers effectively discontinued operations at the foundry at some time in the nineteenth century (Andreae n.d.).

The majority of the land upon which the iron foundry was situated now is owned by the Nova Scotia Museum Complex and is the site of the Museum of Industry that currently is under construction. During the late autumn of 1987 the Nova Scotia Museum commissioned preliminary archaeological testing of the area believed to be the site of the former foundry in order to discover if any remains of the complex still existed. This testing was undertaken over a four week period by the author and one assistant.

Methodology

The area under investigation was a small grassy field, approximately 100 metres by 50 metres in extent sandwiched between the railway and the construction area of the museum. The surface of the field had been disturbed in some places by the tracks of heavy equipment; the extent of the damage, however, appeared to be minimal.

A number of late nineteenth century maps of the area that showed the foundry were used to attempt to pinpoint the exact location of the foundry buildings. When the scales were converted and the buildings transferred to a modern large scale map, however, the buildings were located at a different place for each map, ranging from the study area to several hundred meters to the north and to the south. It quickly became obvious that this method would not help to locate specific buildings, thus test pits were located in areas with promising surface features.

A total of five 1 x 2 m test pits were excavated using a combination of shovel and trowel depending upon the complexity of the stratigraphy in a given situation. The test pits were placed for the purpose of identifying as many structures, i.e., buildings, as possible, and thus were oriented to surface features and not to a site grid.

Test Pits

Test pit 1

This pit was positioned on the north slope of a large circular depression immediately adjacent to the railway tracks (Figure 1). Originally it was believed that this depression might be the site of the coke blast furnace (Peter Latta, pers. comm.), but this turned out not to be the case. Approximately 60 cm below the surface in the northern quarter of the pit was discovered the exterior face of a brick wall, running at a compass bearing of 50°. Unfortunately, excavation had to cease before the bottom of the wall was found because of the depth and the instability of the east wall of the pit.

The stratigraphy in test pit 1 was relatively straight-forward (Figure 2), consisting of four major layers. The bottom layer was a brown sandy clay containing red brick fragments, whole red bricks, a large percentage of decomposed mortar and relatively few artifacts. The artifacts that were recovered are of nineteenth century date and are listed below:

- 9 ferrous nails, square shank, machine cut;
- 2 ferrous spikes, square shank, machine cut;
- 1 sherd of window glass;
- 1 fragment of white clay pipe stem.

This bottom layer of soil probably is associated with the construction of the building of which the brick wall is a part.

Above this construction layer was a 15 cm thick layer of black soil containing large amounts of charcoal, fragments of burnt brick and the greatest concentration of nails found on the site. Artifacts from this layer include:

- 197 ferrous nails and nail fragments, square shank, machine cut;
- 2 ferrous wire nail;
- 7 miscellaneous ferrous objects;
- 3 sherds of window glass;
- 1 small fragment of stoneware;
- 1 bottle rim fragment, dark green glass, machine made.

The fibre of the nails and spikes runs lengthwise, indicating a manufacture after 1830 (Noel Hume 1982:253). The first machine made bottles date from the 1880's (Jones and Sullivan 1985:38).

This layer of soil is best interpreted as a burn layer which strongly suggests that the building burned at some point in time, probably during the latter quarter of the nineteenth century, judging from the artifacts.

The uppermost two layers of soil consist of a brown sandy clay and a black organic loam that represent soil accumulation following the end of the occupation of the site. These layers contain a mixture of nineteenth and twentieth century artifacts, including square shank, machine cut nails and spikes, window glass, fragments of purple slate roofing shingles and sherds of twentieth century green bottle glass. One bottle neck is of particular interest in that it is one of the few diagnostic artifacts recovered from the site. The bottle neck is of clear glass displaying a cork style finish. The mould seams disappear just below the neck and there are faint horizontal lines on the finish suggesting the use of a finishing tool. The neck corresponds to Hall's type 19 (Hall 1977:21) that dates to the late 1850's.

The brick wall was in excellent condition with the mortar still intact. The uppermost seven courses of bricks consist of one course of headers upon two courses of stretchers; the lower courses consist of alternate courses of headers and stretchers. In addition, in most of the header courses an occasional stretcher occurs (Figure 5).

Test pit 2

This test pit was located nine metres to the northwest of test pit 1 on the side of a slight depression. The pit was excavated to a depth of 1.7 m at which point sterile subsoil was encountered. A brick wall was discovered at a depth of 70 cm running along the northwest wall of the test pit at a compass bearing of 50°. This wall is the interior face of the parallel wall to that found in test pit 1, i.e., in test pit 1 was found the exterior face of the southeast wall of the building and in test pit 2 was found the interior face of the northwest wall of the building. The thickness of the walls cannot be determined from the current excavations. The stratigraphy of test pit 2, therefore, is that of the interior of the building while the stratigraphy of test pit 1 is that of the exterior of the building.

The brick wall encountered in test pit 2, like that of test pit 1, is in excellent condition. Both bricks and mortar are stable. The wall is made up of red bricks measuring approximately 22 cm x 7 cm x 12 cm. A five course footing sits upon the sterile soil. The footing has a course of headers, then three courses of stretchers, topped by another course of headers. Upon this footing, indented approximately 5 cm are another five courses of brick (Figure 6). This section of the wall consists of alternate courses of headers and stretchers.

The stratigraphy of test pit 2 is slightly more complex than that of test pit 1. Immediately above the sterile soil are four distinct layers of soil associated with construction of the building. These soils contained only a few artifacts - two unidentified ferrous objects and one fragment of white clay pipe stem. Lying on top of these layers at a depth of 85 cm below the surface is an extremely distinctive 5 cm thick band of bright orange clay. This clay is very flaky and contains some pieces of charcoal. This is believed to be the level of the occupation floor of the building.

Along the interior face of the wall ran a trench filled with large pieces of coke and slag. This trench starts at the level of the occupation floor, ranges in width from 10 cm at the bottom to 25 cm at the top (Figure 6) and probably is a builders trench.

Immediately above the orange clay was a series of eight layers of sandy soils ranging in colour from light brown to black brown containing bricks and brick fragments, iron waste and slag in varying concentrations. Artifacts include:

- 2 sherds of window glass;
- 7 fragments of purple slate roofing shingle;
- 45 miscellaneous ferrous objects;
- 38 ferrous nails and spikes, square shank, machine cut.

At the northern end of the test pit a line of disturbance cuts through the stratigraphy (Figure 3) and through the brick wall. This disturbance cannot be dated at present; it may be connected with railway activities.

Test pit 3

An area just to the east of the museum construction mound had been scraped free of sod by heavy equipment revealing fragmented brick, slate shingle and pane glass. It was believed that a test pit sunk here could serve to identify another building (Figure 1). This, however, proved not to be the case.

The stratigraphy in this areas was relatively simple. Approximately 30 cm below the surface a light brown hard-packed sterile silt was encountered. Above the sterile soil was a 15 cm thick band of decomposed mortar, containing no artifacts. This layer is believed to represent the level of the soil at the time the foundry was in operation. Coke and slag would have accumulated as a result of foundry activities.

Located directly above the coke and slag layer is a burn layer, a black sandy clay only 5 cm thick containing numerous charcoal fragments and two ferrous metal artifacts - a segment of strapping and an unidentified piece. This burn layer is very similar in context to that encountered in test pit 1.

The 10 cm thick surface layer of soil was a dark brown silty clay that contained red brick fragments and a few artifacts - roofing slate and pane glass. This layer represents collapse of foundry buildings and post occupation soil accumulation.

Test pit 3 probably is located in the foundry yard, thus explaining the abundance of coke and slag. The burn layers in this pit and in test pit 1 suggest that at least some of the foundry burned at the end of its useful life.

Test pit 4

During the summer of 1987 construction activity at the museum site led to the discovery of a sandstone foundation at the northern end of the area presently under investigation. This foundation was uncovered to the surface of the wall only, rough measurements were taken of its dimensions, and the structure was reburied (Peter Latta, pers. comm.). The purpose of excavating test pit 4 was to relocate this foundation in order that it could be protected from future construction activity, i.e., paving of the parking lot and building of the railway station, and to attempt to gain some understanding of the function of the structure.

The test pit exposed a one meter section of the eastern wall of the foundation. The wall was composed of irregularly shaped pieces of roughly cut greenish-grey sandstone. The first course was in poor condition, fragmented and unstable. The lower courses were constructed better with slightly more regularly cut sandstone blocks, but even these courses were not 100% stable because most of the original mortar had decomposed.

The wall ranged in width from 75 cm at the base to 40 cm at the first course. It was approximately 50 cm high and ran roughly north-south.

A drain-like feature was found running underneath the wall. On the east side of the wall, the exterior of the building, the drain was a 25 cm by 21 cm rectangular hole with straight sides descending 22 cm. The drain appears on the west side, the interior of the building, as a shallow bowl-shaped cavity.

The stratigraphy in the test pit relates to four major events. The first event is post-glacial soil development, represented by layer 4 in the soil profile (Figure 4). The next event, the construction of the foundation is represented by the wall itself (5), a pocket of decaying mortar (8) and the drain area. The only evidence of the occupation of the building, event number three, does not appear in the soil profile. Between levels 3 and 4 on the exterior of the wall and in the drain area was a black loam containing numerous pieces of coke, slag, brick fragments and a few pieces of glass. Also in this soil were found two small fragments of plaster showing the imprint of wooden boards. The remaining layers of soil (1,2,3,6,7) represent post-occupation accumulation of soil and debris. Level 6 of Figure 4 is the surface sod level at the time of discovery of the structure in the summer of 1987. Level 1 represents fill that was used to rebury the wall in 1987.

A relatively high proportion of the artifacts recovered from test pit 4 were of a domestic nature. The most complete artifact was a spoon found against the interior surface of the sandstone wall. It is of a non-ferrous metal, 14 cm in length with an ovate shaped bowl, a stem that is convex in cross-section and ears and a fiddle pattern at the stem end. On the back of the stem is stamped "Nevada Nickel Silver O.S. Co." The ears and the fiddle

pattern decorative motif were popular at the end of the eighteenth and the beginning of the nineteenth centuries (Wade 1982:40).

Bottle glass fragments included one of clear glass and two of a light green glass. The green glass fragments are machine made with threaded lips. The first machine made bottles were produced in the 1880's; threaded lips were made from the 1850's to the present (Jones and Sullivan 1985:81).

One fragment of opaque white glass appears to be a portion of the rim of a bowl or saucer.

Ceramics included one small fragment of porcelain with a blue transfer printed design and two fine earthenware fragments, one of which has a blue transfer printed motif.

Other artifacts recovered from the pit included five sherds of window glass; two pieces of brick tile; two square shank, machine cut spikes; one U-bolt; one square shank, machine cut nail; and one wire nail.

It is difficult to determine the function of this building from the present excavation. Relatively few artifacts occurred but the majority of those that did were of a domestic nature dating to the latter half of the nineteenth century. The large proportion of industrial-type ferrous metal artifacts found in the other four test pits was not found in test pit 4. This is a good indication that this building was not associated directly with the iron foundry. It might have been part of the railway complex that included the engine house excavated in May 1987 by St. Francis Xavier University. It possibly might be a domestic structure.

Test pit 5

A 1 m x 2 m test pit was placed in an area that was believed to contain another building (Figure 1). No wall or remnant of such was found, however there was an area of sandstone rubble some of which still had mortar attached. The sandstone was the same as that of the foundation wall of test pit 4. This sandstone rubble might represent remnants of workings or the decay of a nearby wall.

The cultural level was relatively shallow in this area, varying from approximately 10 cm to 20 cm over the area of the pit. The cultural level was disturbed, evidenced by fragments of asphalt roofing shingles found in the lowest levels.

Artifacts recovered from the pit primarily are of an industrial nature. These include 52 sherds of window glass two of which are shattered as if from excessive heat. Thirteen nails and nail fragments and three spikes were recovered all of which are machine cut with square shanks. Other ferrous metal artifacts include five washers ranging from 3.5 to 6.8 cm in diameter, one railway bolt, one nut, a triangular file 14 cm in length, three screws and three unidentified ferrous objects.

Other Features

Two other features appear on the site map (Figure 1) that could be associated with the iron foundry. These lie on land adjoining the Museum land and thus could not be investigated as part of the current research project.

One feature is a large raised level pad the surface of which is littered with small pieces of coke and slag. The second feature is a small oval depression that may be the foundation of one of the smaller foundry buildings. Further investigation of these features could prove productive.

Conclusions

The preliminary archaeological excavations conducted during the autumn of 1987 led to the discovery of two buildings, one of which previously had been uncovered. The sandstone foundation wall of test pit 4 may not be associated directly with the iron foundry. This is suggested by the nature of the artifact assemblage from the pit which is predominantly of a domestic character while artifacts from the other test areas are predominantly of an industrial character.

The brick walls discovered in test pits 1 and 2 are believed to be the exterior face and the interior face respectively of the walls of one building. There is every reason to believe that this building is one of the original buildings of the iron foundry. Local oral history designates the area as cow pasture with no ruins or other structures visible (Peter Latta, pers. comm.), thus suggesting that no buildings were erected here, probably since the turn of the century. The artifacts, coke, slag and other waste products indicate a nineteenth century industrial use of the area.

Combination of the archaeological data with the available historical information leads to the inevitable conclusion that ruins of the iron foundry do exist on the Museum of Industry land. Moreover, the excellent condition of the walls and the undisturbed nature of the soil indicate that further large scale archaeological excavations would prove extremely productive at this site.

References Cited

- Andreae, Christopher
n.d. Nineteenth-century Nova Scotia iron works. Early Ironmaking. CIM Historical Metallurgy Notes.
- Hall, Valerie
1977 Are Archaeologists on the Bottle 11 Part II. Manitoba Archaeological Society Quarterly (2) 1:17-27.

Jones, Olive, Catherine Sullivan, et al

1985 The Parks Canada Glass Glossary for the Description of Containers, Tableware, Flat Glass, and Closures. Studies in Archaeology, Architecture and History. Ottawa: Parks Canada.

Noel Hume, Ivor

1982 A Guide to Artifacts of Colonial America. New York: Alfred A. Knopf.

Wade, Barbara

1982 Cutlery from the Fort at Coteau-du-Lac, Quebec. History and Archaeology No. 61. Ottawa: Parks Canada.

FIGURE 1
Site Map, B₇Cp:5

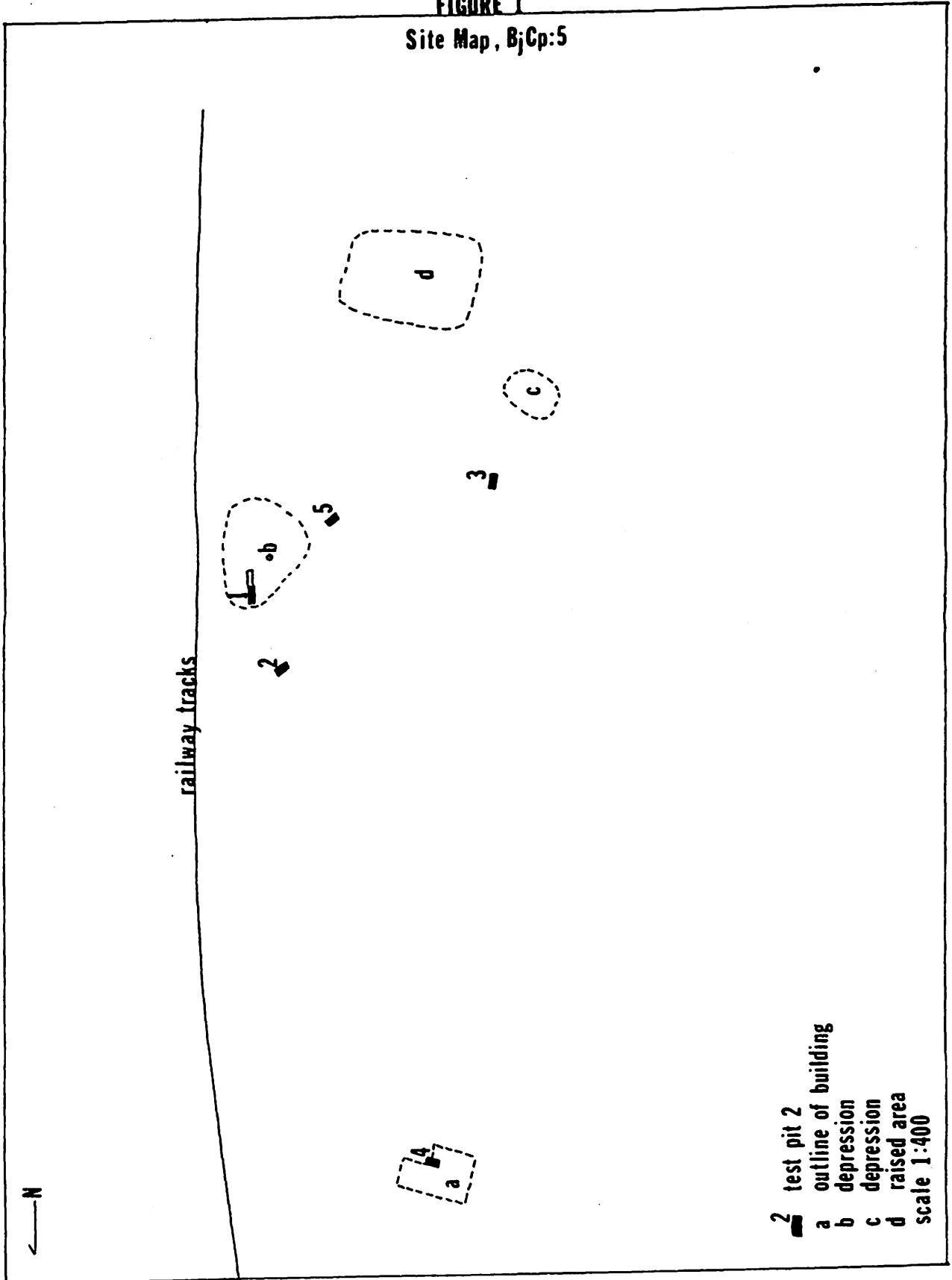


Figure 2

Legend

- 1 - black, organic loam
- 2 - brown sandy clay, pebble inclusions
- 3 - black, burnt brick, charcoal
- 4 - brown sandy clay, brick fragments, mortar

FIGURE 2

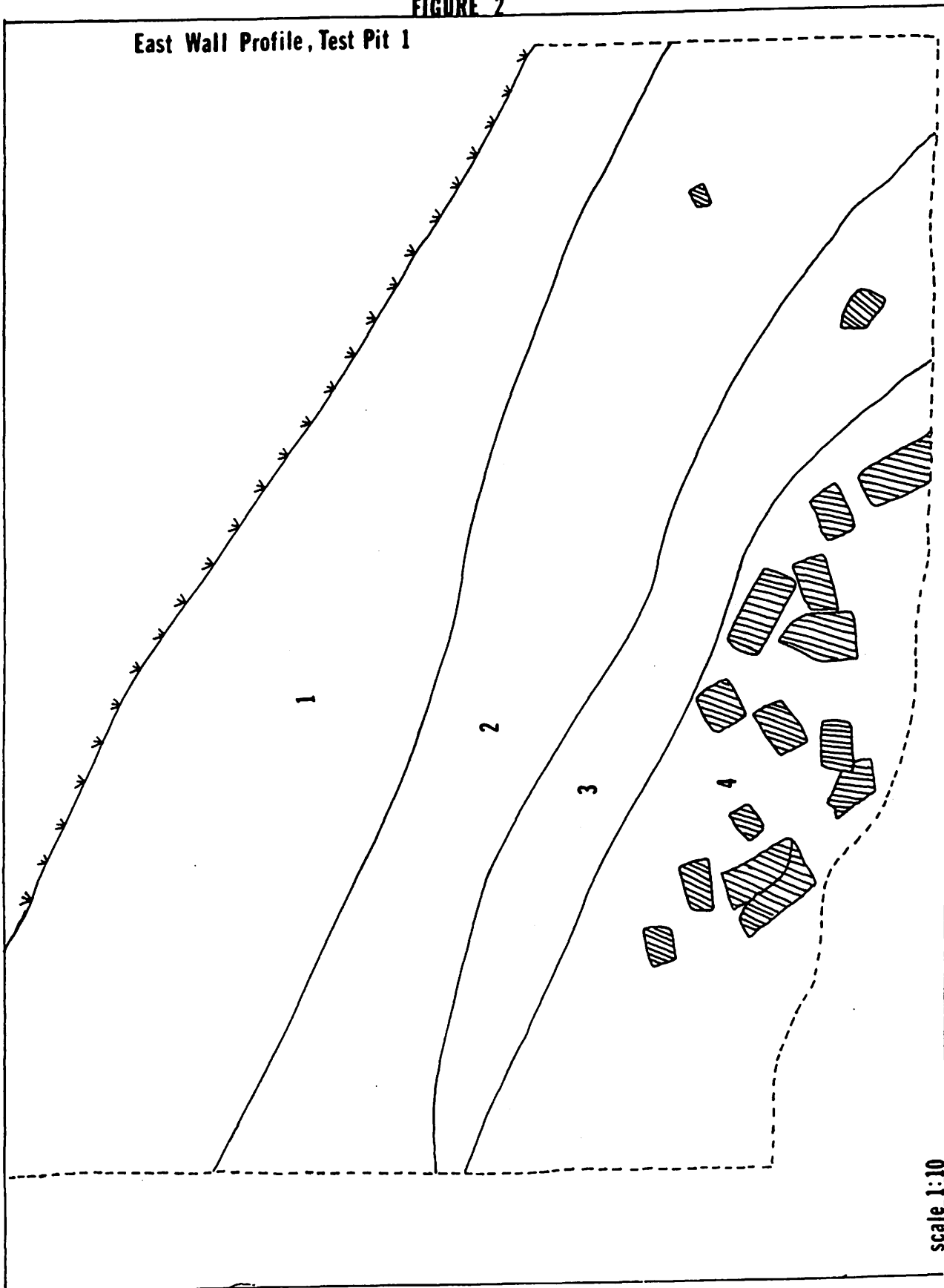


Figure 3
Legend

- 1 - black-brown organic loam
- 2 - light brown sandy soil
- 3 - dark brown sandy soil
- 4 - dark brownish-black sand
- 5 - black-brown sandy soil
- 6 - grey sandy soil
- 7 - grey-brown sandy soil
- 8 - grey-black sandy soil
- 9 - orange clay, very flaky
- 10 - yellowish-brown clay, orange and charcoal flecks
- 11 - purple-brown clay, loose and rocky
- 12 - light brown sandy soil, chunks of purple-brown clay
- 13 - grey-black sandy soil, large gravel
- 14 - yellow-brown sand, tightly packed, large cobbles

FIGURE 3

East Wall Profile, Test Pit 2

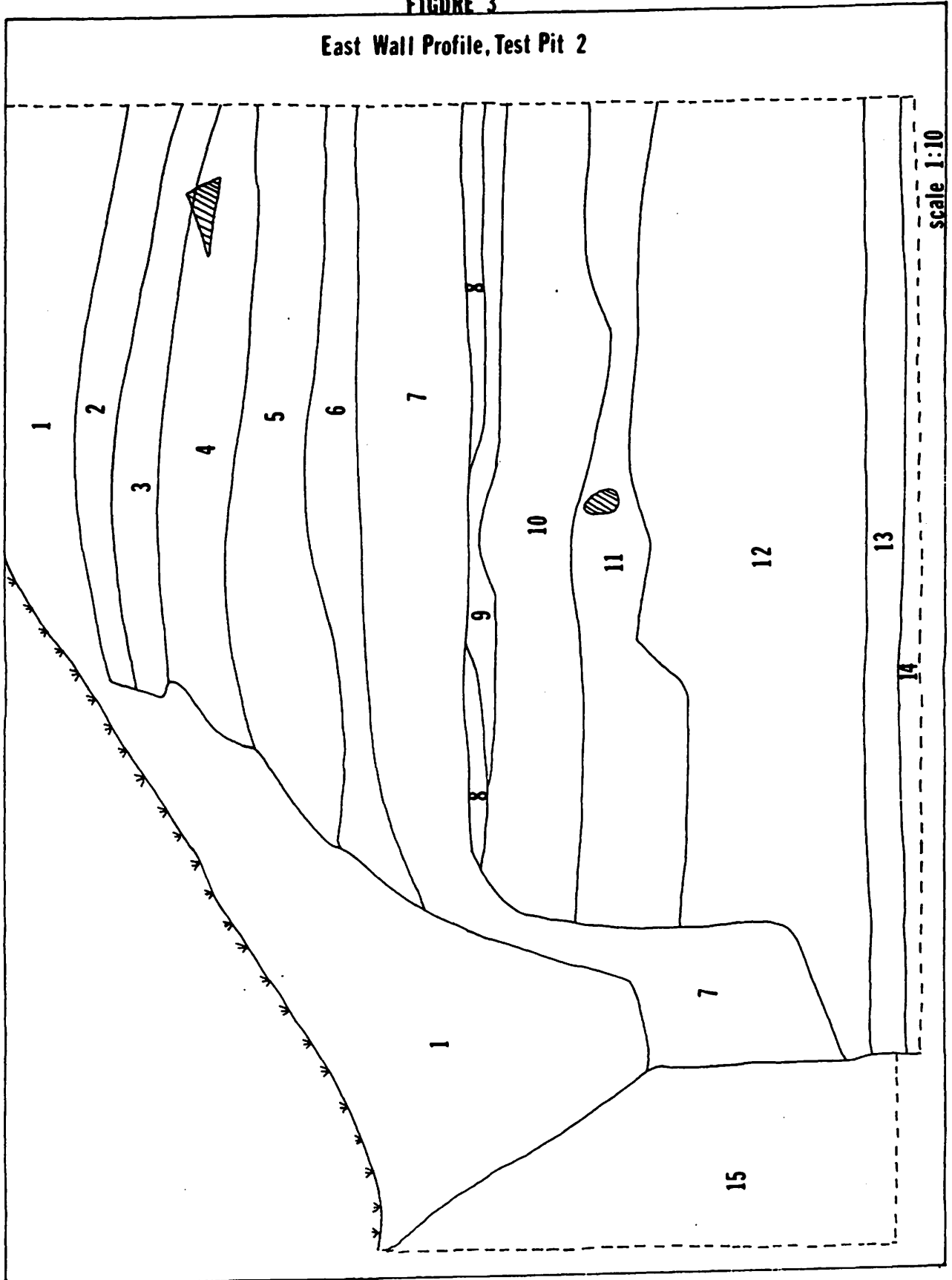
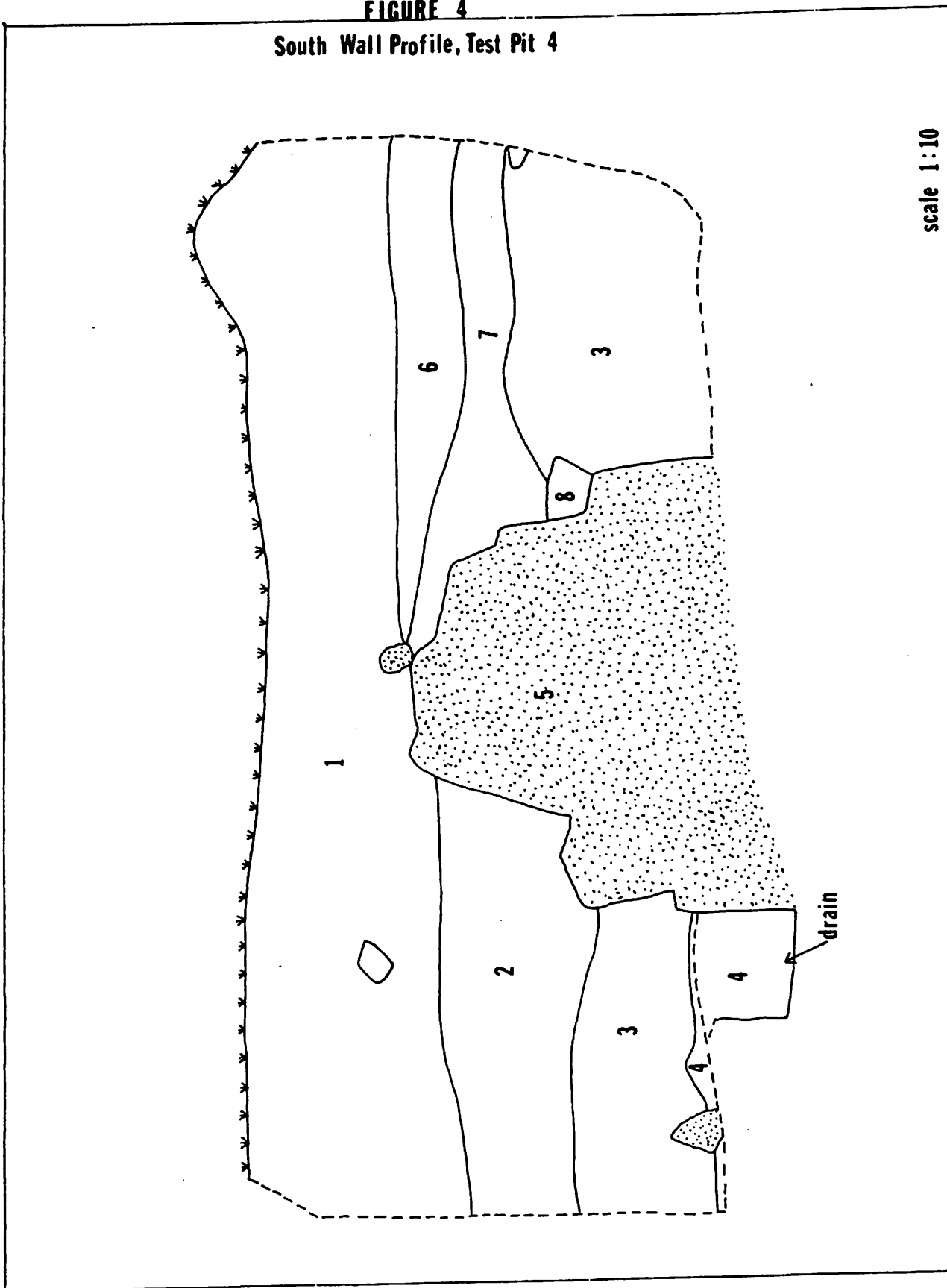


Figure 4
Legend

- 1 - black sandy soil with clumps of yellow clay
- 2 - beige-brown clay with yellow and grey mottling
- 3 - greenish-brown clay, brick fragments
- 4 - light brown clay with orange and grey-black mottling
- 5 - sandstone wall
- 6 - sod
- 7 - mortar, brick fragments
- 8 - mortar

FIGURE 4
South Wall Profile, Test Pit 4



scale 1:10

FIGURE 5

Profile of Brick Wall, Test Pit 1

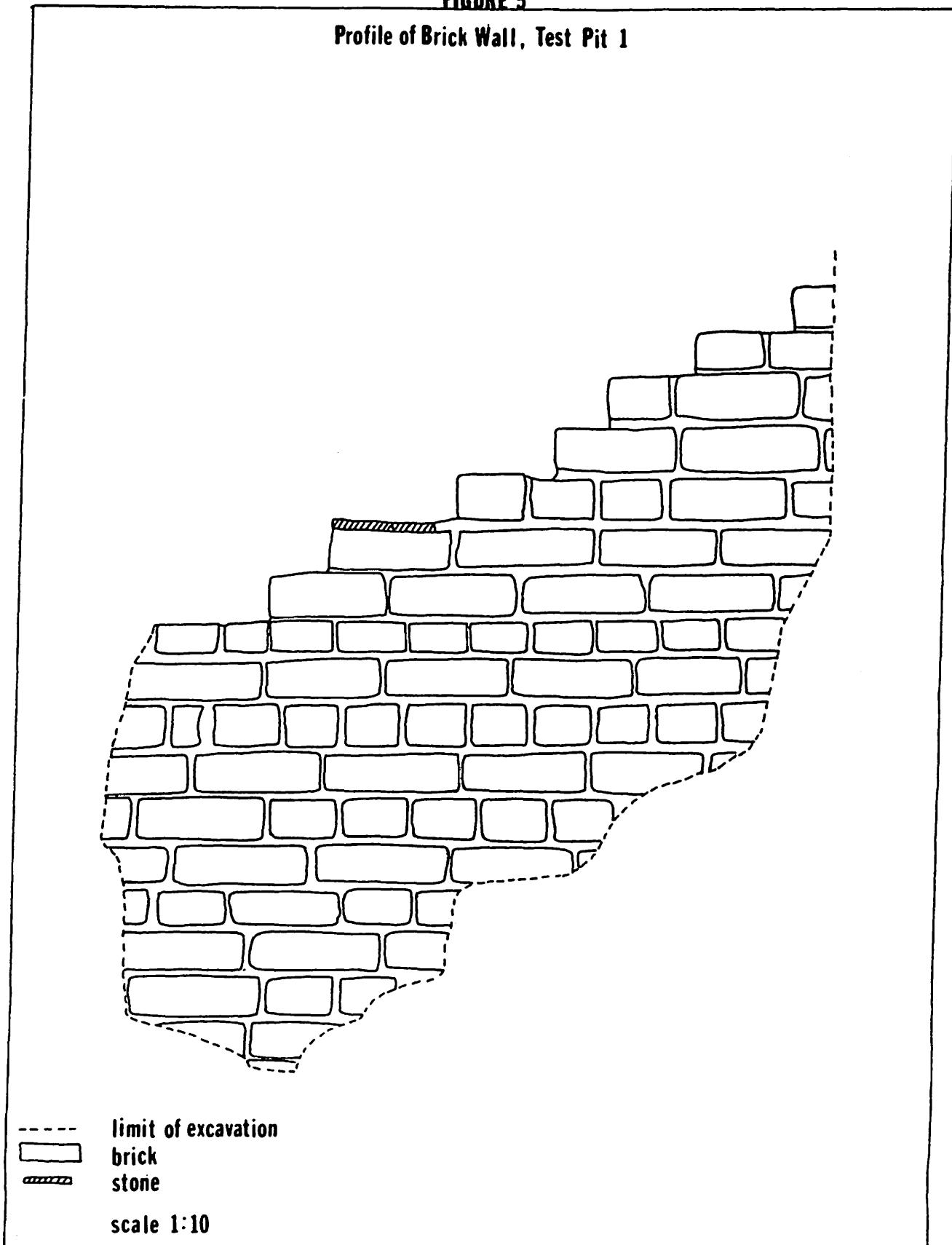
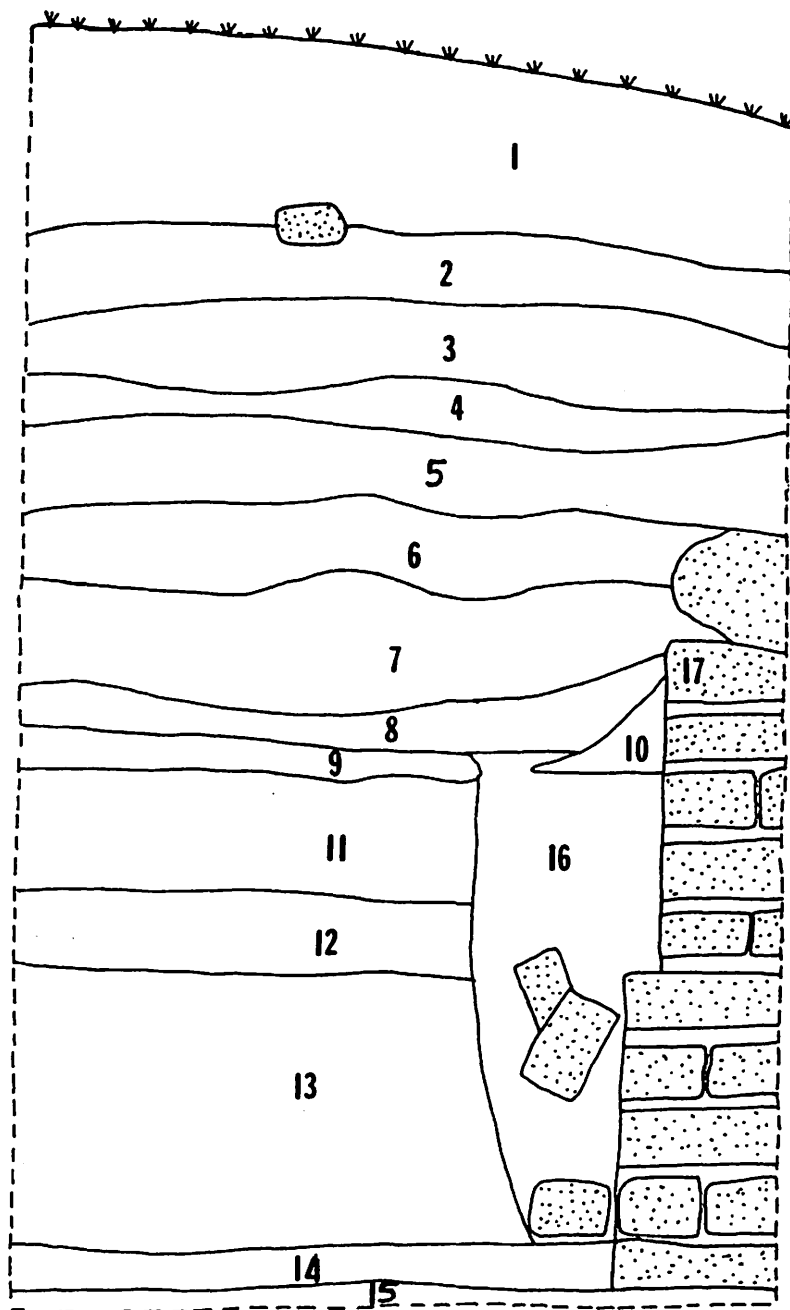


Figure 6
Legend

- 1 - black-brown organic loam, bricks, waste
- 2 - light brown sandy soil, bricks, iron, slag
- 3 - dark brown sandy soil, bricks, waste, nails
- 4 - dark brown-black sand, bricks, iron, slate, mortar
- 5 - black-brown sandy soil, iron scraps
- 6 - grey sandy soil, iron scrap
- 7 - grey-brown sandy soil, loosely consolidated
- 8 - grey-black sandy soil, orange flecks
- 9 - orange clay, very flaky, charcoal
- 10 - light brown sand (mortar)
- 11 - yellow-brown clay, orange and charcoal flecks, gravel
- 12 - purple-brown clay, loose and rocky
- 13 - light brown sandy soil, chunks of purple-brown clay
- 14 - grey-black sandy soil, large gravel
- 15 - yellow-brown sand, tightly packed, large cobbles
- 16 - dark brown-grey sandy soil, orange flecks, bricks
- 17 - brick wall

FIGURE 6

South Wall Profile, Test Pit 2



scale 1:10

Heritage Research Permit A1987NS3**SUMMARY REPORT**

**Brian Preston
Nova Scotia Museum**

Permit A1987NS3 had a general application, and was designed to cover a variety of activities throughout the year, including responses to emergency situations. Activities have been arranged in three broad regional groupings - western, central, and northern and eastern.

Western Area**Castle Frederick**

During August 1987 the Nova Scotia Museum undertook a brief preliminary reconnaissance of the area of the former Castle Frederick estate at Upper Falmouth, Hants County. "Castle Frederick" was the name given by Joseph Frederick Wallet DesBarres (1721-1824) to his estate of some 8,000 acres in Falmouth township, which was used by him as a base during his coastal surveys for the Atlantic Neptune, 1764-1773. A population of 93 was recorded for the estate in 1770.

DesBarres never resided there again after his departure for England in 1774 to oversee the publication of the Atlantic Neptune. However, it continued to be administered as part of the vast DesBarres holdings of some 40,000 acres in several areas of Nova Scotia and New Brunswick. In the late nineteenth century the Falmouth estate was divided up and sold, but a portion of the original estate is still owned and farmed by a direct descendant of DesBarres, Mr. James Bremner.

This area of extensive farms, in contrast to the more central area of Falmouth, has remained relatively unaffected by modern settlement expansion. It was also an area of pre-expulsion Acadian settlement, and, along with tenants of other ethnic origins, Acadians were resettled here and elsewhere on his properties by DesBarres from the 1760s on. Consequently, it seemed a promising area for the investigation of pre- and post- expulsion settlement in eighteenth century Nova Scotia. In addition, the DesBarres Papers preserved at the Public Archives of Canada and the Public Archives of Nova Scotia offer the potential for a particularly well-documented study.

The preliminary investigation undertaken in 1987 consisted of a walking survey of the central area of the former estate. This resulted in the identification of 30 cultural features related to former human settlement ranging in date from probably at least the early eighteenth century to about 1950. Prominent among these is the well preserved foundation of the "castle"

itself, the residence built by DesBarres in the mid 1760s and abandoned or destroyed some time early in the nineteenth century. Also of great potential significance is a cluster of features most probably representing the remains of the pre-expulsion Acadian Pierre Landry Village, and including at least two house foundations. A number of other features are probably connected with the development of the estate as a system of tenant farms in the late eighteenth and early nineteenth centuries.

The following is a summary of the structural features identified during the reconnaissance. The focus of the former DesBarres estate is in the area now occupied by the farms of Mr. James Bremner and Mr. Calvin Ross. The 1987 investigation concentrated on the Ross property, and all but two of the recorded features are located on it. The remaining two features, located on the Bremner property, were pointed out by Mr. Bremner, and a comprehensive examination of the Bremner property has yet to be made. The features lie to the west of the Avon River south of the forks, and they have been listed in an approximately south to north sequence in seven broad groupings.

Group A

These features, associated with the most southerly arable land on the west bank, are believed locally to be the remains of an Acadian settlement.

Structure 1. An apparent house foundation depression in woods just to the south of a brook outlet.

Structure 1a. A small circular depression just to the west of Structure 1, and possibly representing an associated well.

Structure 2. An apparent house foundation depression among apple trees in a clearing about 100 metres north of Structure 1, on a low terrace on the north bank of the brook outlet overlooking a large arable field and the river to the east.

Group B

A field road runs south from the Ross farmyard, and about 1 km south of the Ross house there are the remains of a farm, reportedly abandoned in the 1950s, and now forming part of the southern section of the Ross property.

Structure 3. A derelict house collapsing into an unmortared stone cellar.

Structure 4. A large rectangular concrete foundation to the west of the house (barn?).

Structure 5. A large rectangular area in the field to the east of the house outlined by a low ridge (enclosure?).

Structure 6. Two small wooden sheds still standing to the southeast of the house.

Structure 7. A large rectangular concrete foundation in the second clearing to the southeast of the house.

Group C

A single, isolated structure located in a field about 300 m north of Group B:

Structure 8. A well preserved, open, unmortared stone-lined cellar (a nineteenth century house foundation?).

Group D

These features are located on either side of the field road, about 500 m southeast of the Ross house in a large field immediately west of a section of dykeland. They are most probably the remains of the pre-expulsion Acadian settlement known as Pierre Landry village.

Structure 9. A house foundation in the form of a depression and mound feature similar to those at Belleisle. This lies immediately to the east of the field road.

Structure 9a. A small circular depression (well?) adjacent to Structure 9.

Structure 10. Another house foundation similar to and about 150 m southeast of Structure 9, on the fence line at the edge of the field.

Structure 11. An apparent foundation depression, about 100 m east of Structure 9 and in the same field.

Structure 12. An apparent foundation depression by the eastern edge of the field road, at the edge of the woods just to the north of Structure 9.

Structure 13. A possible foundation represented by a suggestive surface irregularity on the opposite side of the field road from Structure 9.

Structure 14. A possible house foundation represented by a small depression and mound feature to the west of Structure 13, by a hawthorn bush near the western edge of the field.

Structure 15. A possible foundation represented by a rectangular area outlined by an irregular low ridge.

Structure 16. A large oval depression and an adjacent smaller circular depression in woods to the north of Structure 13, just west of the second Texas gate on the field road from the Ross farmyard.

Group E

Two relatively isolated features to the north of Group D:

Structure 17. A large, roughly circular depression at the edge of a small wooded area near the river bank, just west of the large section of dykeland - possibly a house foundation.

Structure 18. A deep rectangular depression at the treeline on the western edge of the large field northeast of the Ross house - possibly a house foundation.

Group F

A cluster of features in and immediately around the Ross farmyard:

Structure 19. A very large, well-preserved foundation depression in pasture, about 100 m east of the farmyard and near the edge of a high terrace overlooking the river to the east - most probably the original Castle Frederick.

Structure 20. A small circular depression to the north of Structure 19 and just south of the field road (a well?).

Structure 21. A shallow, but distinct, roughly circular depression, just south of Structure 19 - a foundation?

Structure 22. A very deep, oval depression on the edge of the high terrace south of Structure 21. This has been cited locally as the site of the observatory. However, it is probably not a structural foundation at all, but rather a feature connected with water management.

Structure 23. Another very deep oval depression, generally similar to Structure 22, and located on the edge of the same terrace, although to the west of the Ross house. There are traces of wooden cribbing in the centre of the depression (which, like Structure 22, is quite wet). Both Structures 22 and 23 have channels leading down the slope, reinforcing the impression that they are water-related.

Structure 24. A roughly rectangular feature formed by what appear to be two depressions separated by a central balk located in a clump of trees by the barn to the west of the farmyard.

Structure 25. A partial foundation represented by a line of stone footing by the chicken coop immediately south of the house.

Structure 26. A foundation in the form of a substantial, rectangular stone footing just west of the house.

Structure 27. An indeterminate stone feature just west of the cattle pens in the farmyard.

Structure 28. A rectangular depression on the western boundary of the cattle pens - possibly a foundation.

Group G

This comprises the two features so far identified on the Bremner farm:

Structure 29. A house foundation, apparently in the form of a depression and mound feature, located in woods about 150 m south of the Bremner house and 400 m west of the Ross house. This location corresponds to that of an isolated "Acadian cellar" on the 1911 Lockhart map. It is also only just to the west of Group F and could just as conveniently be included in that group.

Structure 30. A house foundation represented by an overgrown, rectangular cellar depression on the treeline at the edge of a field, about 400 m northwest of the Bremner house and just south of a side road.

This limited reconnaissance has thus produced encouraging results, and it is hoped that the investigation can be expanded in the 1988 field season to examine other areas of the former estate, and to include a testing programme.

Falmouth

In conjunction with the Castle Frederick project Mr John Duncanson, the local historian, was consulted in an attempt to identify the locations of the possible Acadian features reported by Erskine. Mr. Duncanson himself has never heard of any "Acadian" cellars in the general Falmouth area other than at Castle Frederick, and Erskine's descriptions are vague with the exception of one which refers to the Illsley property. This was located with Mr. Duncanson's help.

Mr. Illsley is elderly but still very active. He has never heard of any such features on his property and does not recall any investigation by Erskine. No further inquiries were made since the Erskine references are so imprecise.

New Minas, Belleisle, Upper Clements

During the 1987 season the known pre-expulsion Acadian sites at New Minas (BgDc-2), Belleisle (BeDi-2) and Upper Clements (BeDj-3) were

monitored. In all cases the surviving features have not been disturbed and no immediate threats are evident, although gradual suburban encroachment continues at New Minas.

Port Joli

Early in 1987 existing archaeological data on Port Joli was supplied to the Department of Lands and Forests in connection with the development of a provincial park centred on Sandy Bay on the west side of the harbour. This resulted in a one day reconnaissance of the area in September in the company of John Leduc and Don Howard of Lands and Forests and Stephen Davis of St. Mary's University. The western shoreline of the harbour was walked from Sandy Bay to London Brook. Several prehistoric shell middens were located, some of which had apparently not been recorded by Erskine. The condition of these sites varied widely from an apparently undisturbed example to one that had been effectively destroyed by unauthorized digging.

This last instance is located at the mouth of London Brook, readily accessible from the head of the harbour, and illustrates that vandalism is a continuing and serious problem in this area. A more detailed assessment of the area is merited.

Plympton, Digby County

On July 22, 1987 the early nineteenth century Savary family cemetery in Savary Provincial Park at Plympton was investigated at the request of Professor Thomas Barnes, owner and seasonal resident of "Gardenia Lodge", the Savary residence contiguous to the park. He had expressed concern that a proposal by the Department of Lands and Forests to level an uneven area by the cemetery monument might result in the obliteration of grave sites.

The area was examined in the company of Dr. Barnes and Richard Gates of the Department of Lands and Forests. In a clearing in woods, well separated from the developed section of the park, there is a fenced stone memorial (erected in this century) located on a flat-topped knoll surrounded by low, boggy terrain. This knoll certainly seemed to be the most likely location for the early cemetery.

Within the rather boggy area of mown grass around the knoll there were several indistinct, probably natural unevennesses. One was rather more distinct, but was very irregular, and exhibited pockets of very recent subsidence. This did not look at all like traces of a grave and was also most probably of natural origin.

The entire area of the clearing is quite small, and there could be graves just about anywhere within it. It is secluded, well maintained, not subject to disturbance, and is already appropriately marked. Consequently, it was recommended that the subsidence be filled in to facilitate maintenance.

There is no question that it is a cemetery site, and recognition and maintenance are quite satisfactory.

Central Area

Cunard Court, Halifax

On September 30, 1987 David Christianson reported from the Environment Canada-Parks facility in the Trade Mart that some pearlware had been observed in the vertical cut along the east side of Brunswick Street, in the narrow space between the street and the western edge of the Cunard Court concrete foundation.

When the site was visited at 10:00 a.m. the same day the intervening space was being filled in with concrete. It appeared that the excavation edge along Brunswick Street had been extended slightly to the west since the investigation of 1986, removing some of the walling of the mid-nineteenth century cellars exposed here. This resulted in the exposure of various pockets of cultural debris, including some early nineteenth century ceramics. By the time of the inspection the location of the original observation had been reburied, and the gap between the sidewalk and the new foundation was being filled in. No further action was taken.

Dartmouth Lakes

During the fall of 1987 the water level in Lakes Banook and Micmac was lowered to facilitate construction for the 1988 canoeing championships. Consequently, the shorelines of both lakes were monitored in October and November for any traces of archaeological sites.

The only prehistoric material observed was in the vicinity of the site at the north end of Lake Micmac excavated by Stephen Davis in 1976. This material comprised only a few lithic flakes. As was to be expected, the lowered level exposed considerable quantities of historic material. However, nearly all of this was of quite recent origin and the result of random discard. No significant features were observed.

Lake Major

Towards the end of July 1987, the Department of the Environment reported that artifacts had been unearthed by the bulldozing of a new street line in the Lake Major area east of Dartmouth. This was investigated during the first week of August.

The new street, a cul-de-sac named Bainbridge Court, extends south from Crane Hill Road towards Highway 7, between Lake Major Road and Little Salmon River.

Extensive bulldozing in the area of the line between lots 7 and 8, on the west side of the new street about 50 metres south of Crane Hill Road, had revealed a scattering of ceramic, glass and metal artifacts which appeared to be of late eighteenth century origin. There were no indications of any structure, and shovel testing failed to yield any indication of an undisturbed cultural deposit in the bulldozed area. Whatever feature had existed had obviously been destroyed.

However, a surviving feature was located about 100 metres south of the first area, in the area of lot 10, also on the west side of the street. Here there was a small foundation depression in close association with several cut granite boulders. Limited shovel testing and an examination of bulldozer cuts failed to reveal any artifact evidence in the vicinity of this feature.

Discussions with the developer and St. Mary's University led to a tentative agreement that the feature would be recorded and tested by a university class involved in a project elsewhere in the Crane Hill Road area. These features have been designated BeCu-1.

Porters Lake

In May 1987 Mr. W. L. D. Farrell of Crowell Road, Porters Lake began excavating a small fish pond behind his house and uncovered wooden debris and three large spikes just under the surface. The find was investigated on May 29, 1987.

Mr. Farrell's house is located on the east side of Crowell Road opposite the fire hall, 1.3 km north of Highway 207. The fish pond is in a waterlogged area on a grassy flat by the shoreline of Porters Lake to the east of the house. The remainder of the property has been extensively disturbed by the construction of the house, landscaping, and the excavation of a small docking area. Apparently no other cultural material was exposed by these activities, and there was no known previous residence.

Nothing was observed during the visit other than the wooden debris. However, according to Mr. Farrell, there was a Second World War bombing range in this area, and, to the north of his house, within 100 m, there were two structures and a dock. The pond excavation gave no indication of any structural feature, and it seemed most likely that the debris is associated with this former military activity.

Dollar Lake Provincial Park

On August 6, 1987 Lee Gaetz of Musquodoboit Harbour submitted a small quartzite biface for identification. He had found this by a picnic table on the beach at the north end of Dollar Lake in the new Dollar Lake Provincial Park.

The area of the find was investigated on September 25, 1987 in the company of Brian Kinsman of the Department of Lands and Forests. The beach and the brook outlet at the north end of the lake were examined for surface indications of prehistoric occupation, and limited shovel testing was undertaken. No evidence of prehistoric occupation was observed. Traces of burning and occasional occurrences of fire-cracked rock seemed to be associated with relatively recent recreational activity.

The higher ground behind the beach has been extensively disturbed by the construction of park facilities, and a brief examination of soil exposures in this area also failed to reveal any indication of prehistoric occupation. More extensive testing did not seem warranted, but it was suggested that park staff monitor for further finds.

Northern And Eastern Areas

Truro

In 1983 Mr. Larry Delbridge of Churchill Street, Truro found a fragment of a large quartzite biface in his garden. This find was reported through the agency of the Colchester Historical Museum and the site was investigated on June 25, 1987.

Proceeding east on Robie Street from Exit 14 on Highway 102, Giles Street is the first on the left past the three-way stop by the bowling alley, and leads to Churchill, a short residential street parallel to Robie Street. The houses on the north side of Churchill are located along the edge of the terrace overlooking the marsh and river to the north.

Mr. Delbridge made the find in his backyard vegetable plot, close to the edge of the terrace. Since the original find he has picked up a quartzite flake and a spall. The exposed soil is a medium brown, gravelly humus, and a brief inspection yielded another three quartzite flakes. However, the plot was newly planted and only the periphery could be examined. There was insufficient time to attempt to investigate neighbouring backyards. They are mostly lawn, but there are vegetable and flower plots, and they should be checked in conjunction with a more detailed examination of the Delbridge plot when it is not in production.

It should be noted that this locality is only about 1 km east of the Robie Street cemetery, the area of site BiCt-2, from which material was collected in 1934-36 and deposited in the Nova Scotia Museum. The Delbridge finds may indicate that prehistoric occupation extended along the river bank for some distance in this area. This new location has been designated BiCt-3.

Debert

The Debert Palaeo-Indian site was monitored in October 1987. There was no evidence of any deliberate attempt to disturb the archaeological resource as such. However, the central site area bore evidence of very heavy vehicle traffic. Balloon tire tracks were very prominent indicating increased activity by all-terrain vehicles in addition to the long standing use by motor cycles. A major consequence is that the entire area is now being driven over and denudation of vegetation appears to be increasing. This can only exacerbate the problem of soil erosion.

Amherst Shore

The area was visited on May 12, 1987 in the company of Stephen Davis, John Gilhen (who has a cottage there) and Sean Lemoine (Grade 8 student) of Bedford whose family also has a cottage there.

A few years ago Sean Lemoine found a large biface on the beach near his cottage, by the outlet of a small brook. This find has since been lost, but it has been photographed. After this find was made it was revealed that Mrs. Vicki Daley of Amherst, aunt of Sean, and who also has a cottage at Amherst Shore, had also found a prehistoric artifact in the vicinity about 10 years ago. This was brought to the museum by John Gilhen on March 2, 1987, and proved to be a Clovis fluted point (specimen on the left page). The area was visited to investigate this find.

Mrs. Daley was met at Amherst Point. The biface found by Sean Lemoine was a surface find on the beach in front of the Daley cottage. This is an area of active shoreline erosion, but no indications of prehistoric occupation were observed, nor were there any in a small garden patch just behind the beach.

A local permanent resident, Ross Beaton, also made a find in the vicinity, reportedly prior to the Second World War. Mr. Beaton was not present during our visit, but Mrs. Daley had obtained his find to show to us. It is a large, side-notched point of Otter Creek form which was found in a farm field to the west of Highway 366, just to the northwest of the Chapman Settlement Road. This is on rising ground about 500 m west of the present shoreline. The field is under grass and it was only viewed from the highway.

The fluted point found by Mrs. Daley actually came from Lorneville, about 3 km west of Amherst Shore on Highway 366. The fluted point was picked up on the high water line of the beach directly in front of a cottage. The immediate area is low-lying, and just to the northwest of the lawn there is a boggy area. Further to the northwest, towards Jacksons Point, there is a low, eroding cliff. The shoreline was examined for several hundred metres on either side of the find spot, but no indications of prehistoric occupation were observed. The point is slightly water-rolled, so it probably had moved some distance eastward along the shore.

The fluted point find has been designated B1Cx-3, and Mrs. Daley has very generously donated the artifact to the Nova Scotia Museum.

Dalhousie Mountain

In January 1987 Mr. Andrew Marshall of Pictou submitted a large chalcedony side-notched point of Otter Creek form. He had found it while hunting in the Dalhousie Mountain area in the fall of 1986.

On June 25, 1987 Mr. Marshall was met at Salt Springs, the point was returned to him, and the find spot, a disused gravel quarry, was visited. The quarry is by the headwaters of Six Mile Brook on the northeastern slope of Dalhousie Mountain. The point was found on the surface of the excavated floor of the quarry, at the entrance, just north of the road. This spot is exactly 7 km along the Six Mile Brook road from its junction with Highway 104.

How the point came to be where it was found is open to speculation. Presumably it was uncovered during gravel removal and may have been redeposited accidentally.

The find has been designated BjCr-1.

Antigonish County

During June 1987 several Antigonish County locations were visited.

In September 1986 a fragment of a unilaterally barbed bone point was brought to the Nova Scotia Museum by a child who had found it on the sand bar fronting Ogden Pond, Antigonish Harbour while returning from Crystal Cliffs. The area of the find was investigated on June 3, 1987, but no indications of prehistoric occupation were observed. It was later ascertained that Ronald Nash had surveyed this locality with similar negative results.

On June 15, 1987 Mr. James Gunn of Lochaber reported that he had uncovered possible structural timbers with traces of burning in the course of bulldozing a foundation for a new garage by his house.

The find was investigated on June 25, 1987. Mr. Gunn's property is located on the east side of Highway 7, about 0.5 km south of the Roman Catholic church at Lochaber. A fairly large garage was being built on a concrete foundation high on a steep hillside looking west over Highway 7 and Lochaber Lake. An extensive area had been bulldozed during construction. Some wooden debris with traces of burning was exposed. However, no other evidence of cultural activity was noticed. An inspection of soil exposures during the visit revealed nothing of significance, and no artifacts were seen. An old, dilapidated building sits on the crest of the hill immediately above. The property was settled in 1811, according to Mr. Gunn, and there is no living memory of any structure in the area of the new

garage. Consequently, the excavated wood is probably associated with some nineteenth century activity on the property.

A brief reconnaissance of the Keppoch Mountain area was undertaken following the Lochaber investigation. This is an area of extensive abandoned nineteenth century settlement. The mountain is very extensively logged by Stora Industries, and it seems likely that abandoned nineteenth century settlement areas may still be reasonably accessible by means of logging roads.

Judique

In November 1986 Mr. Peter Barr of Halifax requested an investigation of a house foundation near Judique, Cape Breton. This is reportedly the remains of the home of one of the first Scottish settlers in the area, perhaps dating to the 1790s.

The site was visited on October 14, 1987. It was located by driving north along Highway 19 from Port Hastings to the centre of Judique and then turning right (east) on River Denys Road, by a Texaco station and almost opposite the Post Office. About 1.7 km along this road, almost at the end of the pavement, there is an access road on the right (south) with a sign reading "Kintyre Farm".

At the end of this driveway, about 200 m south of the road, is a renovated farmhouse, originally constructed about 1910 according to Bill Graham, a local resident. The house sits at the top of a fairly steep slope overlooking a large clearing to the west which descends to Rory Brook, flowing east to west about 100 m to the south. At the foot of the slope, about 100 m southwest of the house, there is a barn which Mr. Graham was repairing at the time of the visit. The reported feature is located about 50 m west of the barn, in the same cleared field. It is a well-defined, rectangular depression with exposed indications of massive stone wall footings. There are no surface indications of a central chimney, but there is a suggestion of a possible hearth area at the west end. Its long axis is aligned east-west, and overall dimensions are approximately 8 m x 6 m.

Mr. Graham has no knowledge of the origins of this feature. The road is recorded on the 1884 Geological Survey map of the area, but there are no buildings indicated anywhere in the vicinity of Kintyre Farm. If the existing house was built about 1910, and was the first at that particular spot, then the record of the geological map is only as might be expected. However, it also suggests that the building represented by the surviving foundation no longer existed by the early 1880s, if the map is accurate. This is potentially an early and interesting structural feature.

Projects Monitored

Liaison and monitoring were involved in connection with three projects directed by others.

The most extensive involvement was with the Whites Lake project directed by Stephen Davis. This was concentrated during the testing program carried out at the Adena-related Skora site in May and June, but also included periodic site monitoring throughout the year. Fortunately, the site was not subjected to any vandalism during 1987. In this respect, the interest and vigilance of concerned local residents and the RCMP deserve acknowledgement.

Liaison was also maintained with Peter Latta concerning archaeological aspects of the development of the Nova Scotia Museum of Industry site at Stellarton. The site was examined with Bill Russell in May and the foundation of the Samson enginehouse was located. This feature was further defined by a team of volunteers. Later in the year assistance was given in the development of a testing program which was directed by Helen Sheldon in October and November.

Also in October, St. Mary's University carried out a training excavation at the site of a late eighteenth century Anglican church in the Lake Major area east of Dartmouth. The project was visited and assistance with equipment was given.

Heritage Research Permit A1987NS05**EXCAVATIONS AT WHITES LAKE, 1987**

**Stephen A. Davis
Department of Anthropology
Saint Mary's University**

Significant archaeological sites are often discovered under unusual circumstances. A series of events beginning in early June of 1986 led to one such discovery. An architect, Mr. Jan Skora, while jogging with his wife in a newly developed subdivision on the outskirts of Halifax, happened upon a recently bulldozed access road. His fortuitous journey along with his professional interest in potential sites for his clients, combined with some training in archaeology in his native Poland, drew his attention to a large knoll overlooking Prospect Bay. Half of the knoll had fallen victim to the bulldozers which had cut it away to fill in the road bed and adjoining building lots.

Mr. Skora's attention was drawn to a dark soil stain exposed on the top of the knoll. He left the road to climb the hill to investigate the stain and was immediately rewarded with the discovery of several stone artifacts. His enthusiasm and his early training in archaeology led him to report his finds to the agency responsible for archaeology in Nova Scotia. The following morning he contacted Brian Preston, Curator of Archaeology, Nova Scotia Museum.

The description of the finds given by Mr. Skora led to an on site meeting between him and archaeologists from the Museum and Saint Mary's University. The visit, along with the artifacts recovered, pointed to a conclusion that Mr. Skora had discovered the location of an ancient Indian burial site. The immediate concern was to salvage the exposed burial and to protect the remaining non-bulldozed section of the site.

The following three days were spent excavating the exposed burial. This effort recorded an oval-shaped burial pit containing charcoal, cremated artifacts and human bone. The stone artifacts had shattered from intense heat and have subsequently been reconstructed (Plate 1). The human bones were also exceptionally fragmented from the cremation process and as such allow very little interpretation.

The charcoal proved to be of exceptional value in that enough was collected to provide dates through the radiocarbon technique. The samples

The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is well-posed in the sense of Hadamard. The second part is devoted to the construction of the solution. The third part is devoted to the numerical solution of the problem. The fourth part is devoted to the stability of the solution. The fifth part is devoted to the convergence of the solution. The sixth part is devoted to the error analysis. The seventh part is devoted to the numerical results. The eighth part is devoted to the conclusions.

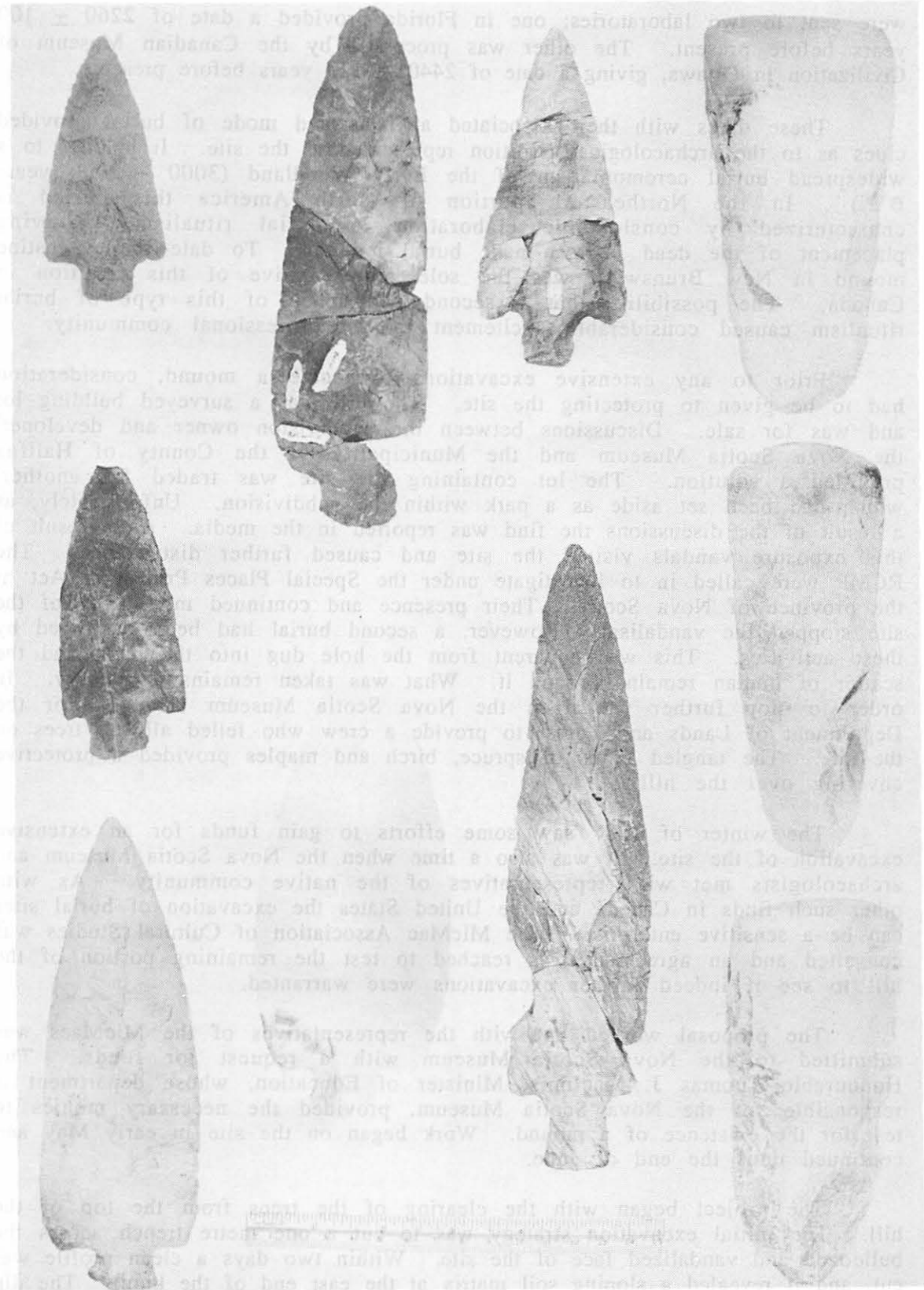
Plate 1

The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is well-posed in the sense of Hadamard. The second part is devoted to the construction of the solution. The third part is devoted to the numerical solution of the problem. The fourth part is devoted to the stability of the solution. The fifth part is devoted to the convergence of the solution. The sixth part is devoted to the error analysis. The seventh part is devoted to the numerical results. The eighth part is devoted to the conclusions.

The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is well-posed in the sense of Hadamard. The second part is devoted to the construction of the solution. The third part is devoted to the numerical solution of the problem. The fourth part is devoted to the stability of the solution. The fifth part is devoted to the convergence of the solution. The sixth part is devoted to the error analysis. The seventh part is devoted to the numerical results. The eighth part is devoted to the conclusions.

The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is well-posed in the sense of Hadamard. The second part is devoted to the construction of the solution. The third part is devoted to the numerical solution of the problem. The fourth part is devoted to the stability of the solution. The fifth part is devoted to the convergence of the solution. The sixth part is devoted to the error analysis. The seventh part is devoted to the numerical results. The eighth part is devoted to the conclusions.

The first part of the paper is devoted to a general discussion of the problem. It is shown that the problem is well-posed in the sense of Hadamard. The second part is devoted to the construction of the solution. The third part is devoted to the numerical solution of the problem. The fourth part is devoted to the stability of the solution. The fifth part is devoted to the convergence of the solution. The sixth part is devoted to the error analysis. The seventh part is devoted to the numerical results. The eighth part is devoted to the conclusions.



were sent to two laboratories; one in Florida provided a date of 2260 ± 100 years before present. The other was processed by the Canadian Museum of Civilization in Ottawa, giving a date of 2440 ± 120 years before present.

These dates with their associated artifacts and mode of burial provided clues as to the archaeological tradition represented at the site. It belongs to a widespread burial ceremonialism of the Early Woodland (3000 - 2000 years B.P.). In the Northeastern portion of North America this period is characterized by considerable elaboration in burial ritualism, involving placement of the dead in man-made burial mounds. To date the Augustine mound in New Brunswick was the sole representative of this tradition in Canada. The possibility that a second occurrence of this type of burial ritualism caused considerable excitement in the professional community.

Prior to any extensive excavations to locate a mound, consideration had to be given to protecting the site. The hill was a surveyed building lot and was for sale. Discussions between the subdivision owner and developer, the Nova Scotia Museum and the Municipality of the County of Halifax provided a solution. The lot containing the site was traded for another, which had been set aside as a park within the subdivision. Unfortunately, as a result of the discussions the find was reported in the media. As a result of this exposure vandals visited the site and caused further disturbance. The RCMP were called in to investigate under the Special Places Protection Act of the province of Nova Scotia. Their presence and continued monitoring of the site stopped the vandalism. However, a second burial had been destroyed by these activities. This was apparent from the hole dug into the bank and the scatter of human remains around it. What was taken remains a mystery. In order to stop further vandalism the Nova Scotia Museum arranged for the Department of Lands and Forest to provide a crew who felled all the trees on the site. The tangled limbs of spruce, birch and maples provided a protective covering over the hill.

The winter of 1987 saw some efforts to gain funds for an extensive excavation of the site. It was also a time when the Nova Scotia Museum and archaeologists met with representatives of the native community. As with other such finds in Canada and the United States the excavation of burial sites can be a sensitive enterprise. The MicMac Association of Cultural Studies was consulted and an agreement was reached to test the remaining portion of the hill to see if indeed further excavations were warranted.

The proposal worked out with the representatives of the MicMacs was submitted to the Nova Scotia Museum with a request for funds. The Honourable Thomas J. MacInnis, Minister of Education, whose department is responsible for the Nova Scotia Museum, provided the necessary monies to test for the existence of a mound. Work began on the site in early May and continued until the end of June.

The project began with the clearing of the trees from the top of the hill. The initial excavation strategy was to cut a one metre trench across the bulldozed and vandalized face of the site. Within two days a clean profile was cut, and it revealed a sloping soil matrix at the east end of the knoll. The dip

lined up with a raised surface feature which arched towards the western end of the site. The excavation of these first units showed that an extensive matted root layer was situated on top of the soil matrix. It was decided to remove this sterile modern layer using shovels and sod cutters. This proved a valuable exercise as within a few days the remains of the suspected burial mound was revealed.

Once exposed in its entirety it became apparent that approximately four fifths of the burial mound had been lost. To maximize the data recovery from the remaining portion a line was cut through the mound to provide a clean profile. The profile was recorded and on site consultations were held with a soils scientist from the provincial Department of Mines and Energy. He concluded that the mound was indeed a man-made structure. The soil profile clearly showed the burial of the former 'A' horizon (Figure 1). The identification of this led to the removal of the soils below this from the edge of the mound out towards the cut created by the bulldozer.

This operation revealed four oval stains in what would have been the floor of the mound. The clearing of this soil also allowed the reconstruction of approximately one half of the original pre-mound floor (Figure 1).

The discovery of the stains and the possibility that they were burial features came two days prior to the end of the excavation period. The decision was made to use contingency funds and the laboratory time to continue the fieldwork. The four features were excavated using grapefruit knives, dental picks and fine brushes. Three of the features proved disappointing in that, other than charcoal and a few small fragments of human bone, nothing was recovered. The fourth feature was somewhat more rewarding. It contained hundreds of fragments of human bone, abundant charcoal and, surprisingly, the only cultural material was represented by seven chalcedony flakes.

Although a complete analysis has yet to begin, nor has the site been excavated in its entirety, a number of observations can be reached with the data on hand. The dates provide an absolute time frame for the events which took place at the site. They correspond nicely with similar sites throughout the northeast portion of the continent. The ritualism surrounding the burial at Whites Lake falls within the realm of speculation. However, given the excavation to date we can speculate on some of the events which may have taken place.

The primary cremation of the human remains took place in the vicinity of the mound. The large pit located on the eastern end of the mound may have been the location of this activity. It has been partially excavated and reveals a shallow basin-shaped pit dug into the pre-mound soils to the bedrock layer. The pit was filled with small fieldstones, and the compacted soil around and under these suggests the feature was exposed to extensive heat. Furthermore, the pit was clearly utilized prior to the construction of the mound. This is evident from the fact that the east end of the mound extends over this feature.

Once the bodies were cremated they were gathered up and placed in shallow pits dug into what would become the floor of the mound. Two of the features showed limited use in terms of this activity. That is they contained only dark, charcoal stained soil and very few human remains. Perhaps, rather than being formal burial locations, they were spills from the primary cremation.

The two burials which contain the most evidence for ritualism are the original found by Mr. Skora and the one labelled as feature four. The former, when excavated, showed a shallow basin-shaped pit resting on the bedrock. It contained numerous calcined bones with cremated and non-cremated artifacts. It is interesting to note that the pit showed evidence of burning, that is the soil around the pit was compacted as a result of on site burning. It is possible that cremated human remains were placed into the pit and then a second burning took place in order to cremate the grave goods that had been placed with the body. Furthermore, once this took place more non-cremated goods were added.

The burial excavated this summer did not show any evidence of this secondary burning. In fact it did not contain any formal grave goods. The only artifacts recovered besides the human remains were seven chalcedony flakes all from the same stone core. What is interesting about these is that they were found in the grave which is not a common occurrence.

A fifth feature that was discovered under the mound had the appearance of being a grave. However, once excavated it proved to be a rock-filled pit of unknown function. It was oval-shaped and contained numerous fieldstones. The soil was not like that encountered in the other sub-mound features. It was a grey mixture containing disintegrated fieldstone with minimal flecks of charcoal and no evidence of in place burning.

The sequence of events can now be reconstructed. The large pit on the east end of the site was utilized first; whether or not it was the primary cremation pit is inconclusive with the evidence on hand. The burial pits and other features were dug into the mound floor and various activities followed, including placing the cremated human remains in these pits as well as at least one instance of secondary cremation. The final event was the construction of the mound over all of the features, including a partial covering of the possible primary cremation pit.

Although the mound itself has yet to be completely excavated it has been profiled. This allows us to interpret some of the activities which led to its creation. The position of the mound is telling, in that, it occupies the highest part of the natural hill. This was obviously a cultural decision by its builders as it would have provided an excellent vantage point to look out over Prospect Bay to the west and Whites Lake to the east. If the builders had shifted the mound ten metres west they would have had a much easier area in which to dig. This section of the knoll is characterized by a bed of loosely consolidated glacial till. The mound builders would have had knowledge of this when they were constructing the mound as they borrowed soils from the

down slope sections of the knoll to build the mound. The word borrow is used rather than dug as there are no indications that they dug holes to get soil to cover the dead. Rather, it appears, that they scooped soil from the surrounding area to construct the mound. The containers and digging implements remain a mystery. One could speculate the use of moose antlers or perhaps wooden shovels to dig with and baskets or hide containers to carry the soil to the mound.

As has been mentioned, the work at the Skora Site has finished for this year. It is anticipated that a second season of excavation will take place with the objective of removing the rest of the mound to see what lies beneath its protective covering.

The first part of the report deals with the general situation of the country and the position of the various groups. It is followed by a detailed account of the events of the past few years, and a description of the present state of affairs. The report concludes with some suggestions for the future.

The second part of the report is a list of the names of the various groups and their members. It is arranged in alphabetical order and includes the names of the groups, the names of the members, and the names of the places where they live.

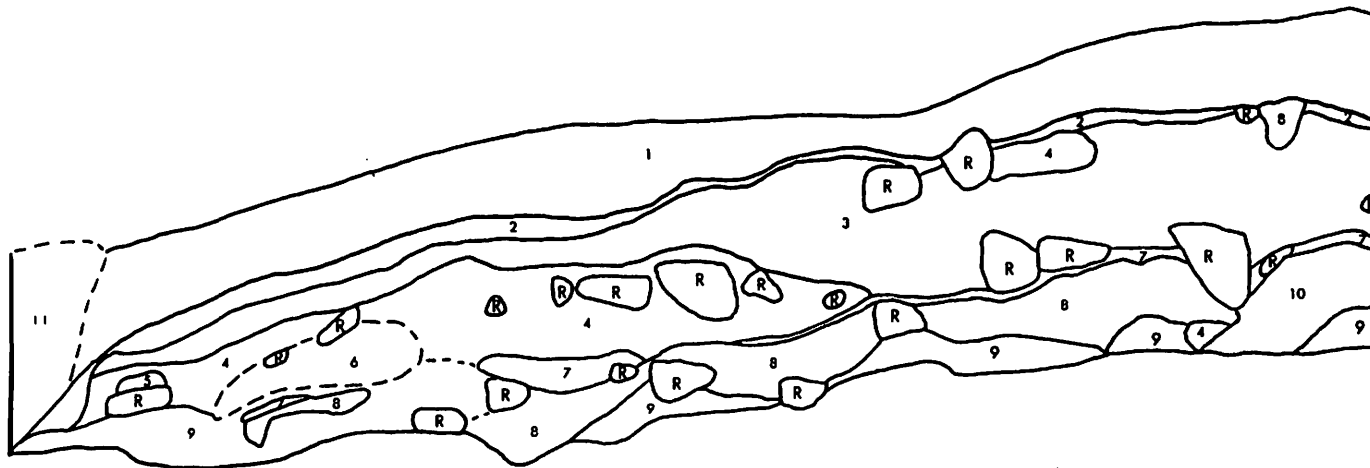
Figure 1

N 6 W 48

N 6 W 49

N 6 W 50

N 6 W 51



BdCw-1 SKORA SITE
 NORTH 6 MOUND PROFILE
 JUNE, 1987

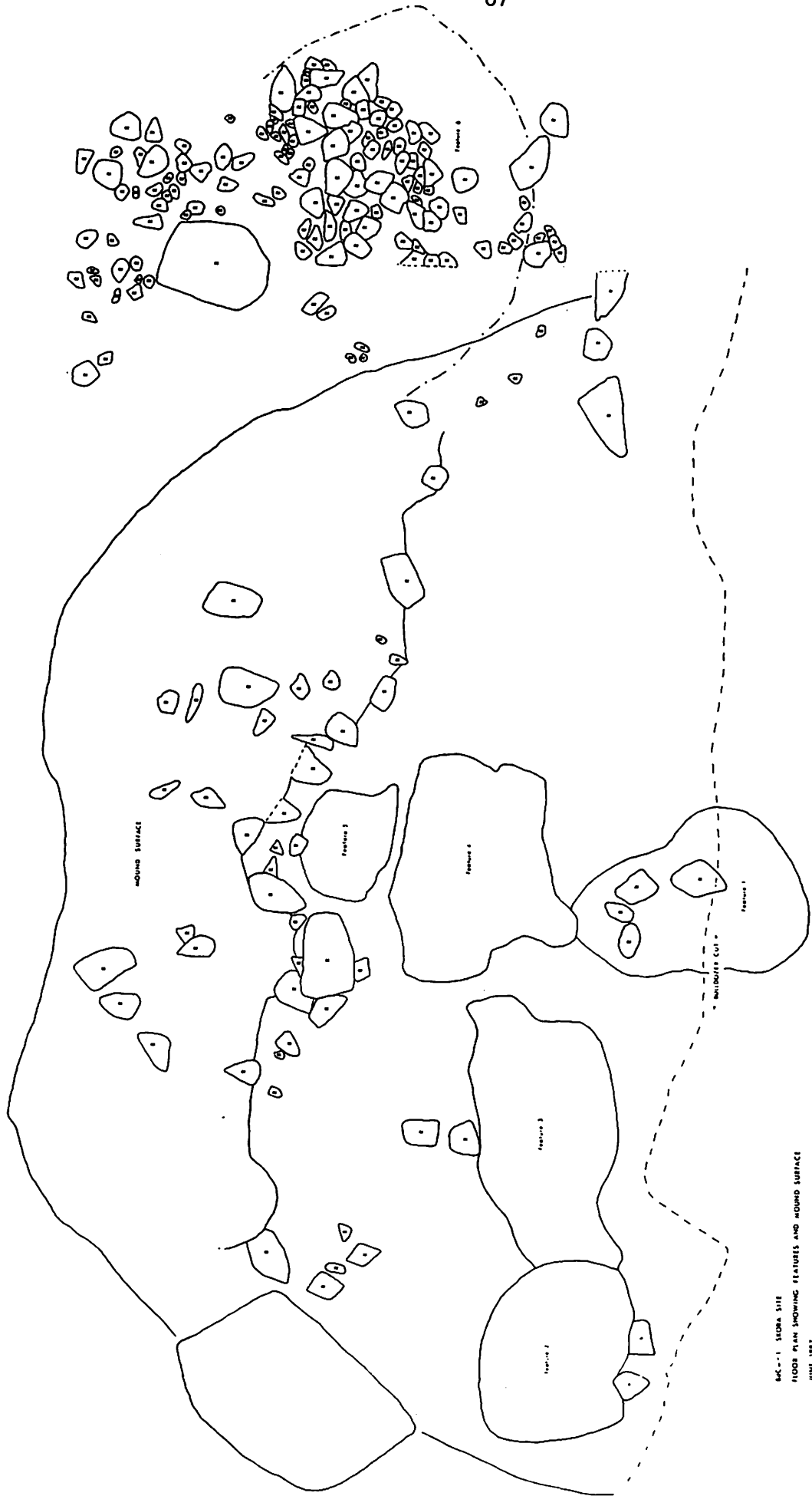


1. 10YR 2/0- BLACK PEAT LAYER WITH ROOTS
2. 10YR3/1- VERY DARK GRAYISH BROWN FINE SOIL WITH GRANITE GRIT
3. 7.5YR3/4- DARK BROWN SILT
4. 10YR3/6- DARK YELLOWISH BROWN SILT
5. 2.5YR3/2- VERY DARK GRAYISH BROWN SOIL WITH CHARCOAL FLECKS
6. 10YR3/4- DARK YELLOWISH BROWN WITH SEEDS IN RODENT BURROW
7. 2.5YR2/0- BLACK SILT
8. 10YR7/1- LIGHT GRAY SILT
9. 7.5YR4/6- STRONG BROWN SILT
10. 10YR3/4- DARK YELLOWISH BROWN SILT
11. TREE STUMP DISTURBANCE

L.H.S.P.

Figure 2





64C--1 SIENA SITE
FLOOD PLAN SHOWING FEATURES AND MOUND SURFACE
JUNE 1987



Heritage Research Permit A1987NS07**YARMOUTH COASTAL SURVEY**

**Stephen A. Davis
Department of Anthropology
Saint Mary's University**

Introduction:

The following report outlines the forty-six heritage resource locations found during an archaeological survey from 24 August to 03 September 1987. The project was a cooperative venture between the University of Maine at Orono and Saint Mary's University of Halifax. The survey team comprised Dr. David Sanger and Mr. Douglas Kellogg, UMO and Dr. Stephen Davis, SMU. The approach was a preliminary survey to identify coastal resource locations in an effort to locate sites that would provide a data base for future excavations. The hypothesis to be tested, with excavation, was to ascertain the degree of similarity or dissimilarity between the artifactual content of sites in Nova Scotia with those which have been excavated along the coast of Maine. Although only three coastal middens were identified in the survey area, numerous non-midden sites were found at the heads-of-tide along the Tusket and Chegoggin Rivers. It is anticipated that these locations will provide a data base that can be applied towards the hypothesis.

The survey methodology was fairly straightforward as the area has a number of prominent collections. The amateur activities, some of which have been going on for approximately forty years, provided initial site locations. Of the five major collections, four individuals allowed access to their artifacts and gave locational information as to where the artifacts were found. The fifth collection could not be viewed as the owner was not a resident in Yarmouth at the time of the survey. It is anticipated that this individual will cooperate at a future time. The following collectors provided site information as well as agreeing to allow the team to record their artifacts throughout the winter.

Mr. Wilbur T. Sollows
Arcadie
Yarmouth County, Nova Scotia

Mr. John Green
680 1/2 Main Street
Yarmouth, Nova Scotia

Mr. Larry Hameon
P. O. Box 61
Arcadie, Yarmouth County, Nova Scotia

The following individuals have artifactual material from the survey area but time did not permit a viewing of their collections.

The following individuals have artifactual material from the survey area but time did not permit a viewing of their collections.

Mr. Roger King
17 Oak Drive
Yarmouth, Nova Scotia

Mr. Michael Easton
Sluice Point
Yarmouth County, Nova Scotia

Mr. Mel Doucette
Bell Neck
Yarmouth County, Nova Scotia

Sites Recorded:

The survey team did not give Borden designations to the sites nor were 'T' numbers given unless artifacts were recorded. Borden designations have been assigned by the Nova Scotia Museum to allow for future separation of the artifacts currently being catalogued from the private collections. At this time the artifacts are being assigned sequential numbers and the three initials of the collector. In many instances, the exact provenience of specimens can not be given as the collector can not be sure of where the item was found. The site locations are presented in summary fashion in the text of this report.

Map reference: Tusket 20 P/13 East Half

1. Confluence of Quinan River and Barren Lake. Sites were reported by W. Sollows and L. Hameon along the exposed shoreline beginning at the dam along the west side of Barren Lake. The field survey encountered numerous pockets of scattered quartz flakes in this area. Although the field crew did not recover any diagnostic artifacts, collections from these sites reveal extensive occupation for at least 4,000 years. The Hameon collection contains three Otter Creek type projectile points from this shore.
2. Sites were reported by W. Sollows in the small cove approximately two kilometers south of the dam on the west side of Barren Lake. The field crew did not reach this location, however, the Sollows and Green collections contain interesting artifacts from this location. These include two ulu fragments in the Green collection, plummets, gouges and ground slate points in the Sollows collection. Sollows also has a lanceolate point with collateral flaking (Plano point?) from this location.
3. Three other areas were identified by Sollows as having produced artifacts along the shores. An extremely rich area is known locally as English Mills dam. The dam is located between Barren Lake and Quinan Lake. The remaining two areas are north of the dam on big Gull Lake.

Map Reference: Tusket 20 P/13 East Half

	Borden No.
Big Gull Lake North	A1Dk-1
Big Gull Lake South	A1Dk-2
English Mills	A1Dk-3
Quinan River Dam	A1Dk-4

Map Reference: Tusket 20 P/13 East Half

	Borden No.
Barren Lake A (N-S)	A1Dk-5
Barren Lake B (N-S)	A1Dk-6
Barren Lake C (N-S)	A1Dk-7
Barren Lake D (N-S)	A1Dk-8

Map Reference: Comeau Hill 20 0/9 East Half

The survey team hired a boat to investigate the possibility of midden sites on the Tusket Islands. The exercise was moderately successful in that two sites were recorded. One was previously known, having been tested by John Erskine (AkDm-1). It is known locally as the Comeau Hill site even though it is situated on the south end of Turnip Island. This location is presently overgrown by thick brambles and was not tested. Given the quantity of artifacts in private collections, along with the easy accessibility of the site, it has been extensively damaged over the years and its scientific value is suspect.

The second site encountered is due south of AkDm-1 at the end of the large peninsula on the north end of Big Tusket Island. Limited shovel testing at this location showed a thin midden remaining five metres back of the eroding shoreline. Surface collecting and profiling activities along the eroded bank produced a quantity of flakes and three scrapers. Although no diagnostic artifacts were recovered, the presence of the midden and the impure quartz (agate) flakes would place this site in the Ceramic period. The site should have undisturbed areas that could warrant further investigation.

Map Reference: Comeau's Hill 20 0/9

	Borden No.
Turnip Island	AkDm-1
Big Tusket Island North	AkDm-3

Map Reference: Yarmouth 20 0/16 East

Eight locations with nine sites were reported in areas covered by this map.

1. Wilbur Sollows reports that a shell midden exists on Clemment Island. Apparently the island burned in the 1920's exposing shells on the surface. Repeated visits to the Island by Sollows and other collectors in the

area have failed to relocate the midden. The survey team did not investigate this lead.

2. A non-shell midden site was reported by Sollows on the west bank of the Tusket River south of the community of Pleasant Lake. The survey team did not investigate this location, however, the Sollows collection contains numerous artifacts from this site.

3. The local collections contain artifacts found on the shore of Harris Lake across from a private campground. The survey team did not investigate this location.

4. A shell midden (?) was reported by Nate Bain on the island in Chegoggin Lake. Mr. Bain has not seen the actual site nor did the survey team visit this location.

5. The survey team re-evaluated the oyster shell midden known on Bunker Island in Yarmouth Harbour. This site is no longer in existence having been destroyed by collecting activities as well as from extreme erosion.

6. Artifacts in the Yarmouth County Museum and in the Green collection are reportedly from the area of Milford Corners on the outskirts of Yarmouth. The museum collections are labelled as coming from Brown's Orchard which is on the north side of the narrows between Yarmouth Harbour and Milton Lake. The property is presently owned by the Bank of Nova Scotia in Yarmouth. The large biface preform and scraper in the Green collection came from the terrace on the west side of Milton Lake directly across from Green's residence. He also reports finding a small notched point on the shore below this location. A rather unique specimen in the Bain collection is reportedly from the area of Brown's Orchard. The artifact is a plano point circa 8,000 years old and was given to Bain by a one-time resident of the property.

7. The remaining site on this quadrant is recorded as the Bain Site (1987 NS 7-4).

Map Reference: Yarmouth 20 0/16 East

	Borden No.
Chegoggin Lake Midden	A1Dm-2
Chegoggin River (Bain Site)	A1Dm-3
Siddon Hill	A1Dm-4
North Yarmouth	A1Dm-5
Bunker Island	AkDm-2
Clemment Island	AkDm-4
Tusket River West	A1Dm-6
Doctor Lake North	A1Dm-7
Harris Lake	A1Dm-8

Map Reference: Tusket 20 P/13 West Half

Twenty-one sites were reported in areas covered by this map.

1. A cluster of eight sites were identified by the survey crew in the vicinity of Tusket Falls. The crew was shown these sites by W. Sollows and J. Green who have collected in this area for the past forty years. The artifacts held by these individuals include a full range of specimens from the late Archaic through the full Ceramic sequence. One of the sites designated by Green as Tusket Falls East (T.F.E.) contained a fairly extensive Susquehanna component.
2. Other sites were reported from the following locations:
 - a) On the narrows between Lake Vaughan and Butler Lake at Gavelton.
 - b) The small peninsula on the north side of Butler Lake.
 - c) On the narrows between Butler Lake and Gavel Lake. This area is known locally as Long Falls and is where Larry Hameon found the blocked-end tube pipe. The survey crew visited this site and it appears to have potential for excavation.
 - d) At the confluence of the Tusket river and Bennet Lake.
 - e) On the narrows between Lake Vaughan and Carleton Lake at Reynard Bridge.
 - f) In the small cove south of Reynardton.
 - g) Three locations were identified on the west side of Carleton Lake.
 - h) The survey crew relocated the oyster shell midden on the north end of Roberts Island. This site has and continues to be disturbed by undisciplined digging.

Map Reference: Tusket 20 P/13 West Half

	Borden No.
Mouth of Carleton River	A1D1-3
Confluence Sloan Lake South & Carleton Lake	A1D1-4
Carleton Lake West	A1D1-5
Reynard Bridge	A1D1-6
East Bennet Lake	A1D1-7
Long Falls North	A1D1-8
Long Falls South	A1D1-9
Reynardton South	A1D1-10
Confluence Agard & Ellenwood Lakes	
Butler Lake	A1D1-11
Gavelton North	A1D1-12
Gavelton South	A1D1-13
Allen's Field Tusket	A1D1-14
Tusket East	A1D1-15
Marion Coves	A1D1-16
Tusket Northeast	A1D1-17
Tusket Falls Dam North	A1D1-18

Tusket Falls Dam South	A1D1-19
Tusket Falls West	A1D1-20
Tusket Falls South (Radar Station)	A1D1-2
Robert's Island North	AkD1-1

Map Reference: Digby 21 A/12 East Half

The survey team stopped at the Bear River sites to evaluate their present conditions. The main site BdDk-1 and BdDk-3 have been and continue to be potted. The east headland of the cove is undergoing severe erosion. A small pocket of shells was seen eroding from the steep, high bank 50 metres north of BdDk-1.

Map Reference: Meteghan 21 B/1 East Half

1. John Green has a number of flakes found on the Salmon River. The field crew drove along the river stopping at likely spots without success.

2. The field crew investigated various spots along the Meteghan river without success until it reached Eel Lake. A quick survey of the confluence of the Meteghan River and Eel Lake produced four areas of exposed flakes along the shore. One of the sites has potential for excavation (1987 NS7-1). Surface collecting at this location produced a conically grooved gouge (circa 4,000 B.P.), two stone rods and numerous quartz, quartzite and impure quartz (agate) flakes. Although the site has been extensively damaged by erosion and the construction of a cottage there are some areas that could be excavated.

Map Reference: Meteghan 21 B/1

	Borden No.
Eel Lake A (N-S)	BbDm-2
Eel Lake B (N-S)	BbDm-3
Eel Lake C (N-S)	BbDm-4
Eel Lake D (N-S)	BbDm-5

Conclusions:

It is readily apparent from the quantity of sites recorded and the extensive collections in private hands that southeastern Nova Scotia has a rich and varied record of prehistoric occupation. Although the primary objective of locating coastal middens was not achieved in the numbers expected, this negative evidence in and of itself is of interest. It shows a departure in the study area away from a resource base associated with similar habitats across the Bay of Fundy and Gulf of Maine. Admittedly, the survey was a cursory look at the area, however, given the extensive island and intertidal zones of Lobster Bay more middens should have been found. Further research is required to investigate the lack of evidence related to shellfish utilization during the ceramic period.

The distribution of the recorded sites suggests that the prehistoric inhabitants of southeastern Nova Scotia focused on inland resources. Further, the narrows of rivers and thoroughfares between lakes were favoured locations for campsites. This may indicate that settlement is strongly related to seasonal fish runs. Many species in the area today occur in large numbers at specific times, for example the spring kayak runs are still a heavily exploited resource. Again more research is required to adequately reconstruct the question of subsistence.

The private collections held by the individuals listed in the body of this report are extensive and varied. Presently, half of the Sollows material has been catalogued and is being stored in a computer file at Saint Mary's University. This procedure will continue throughout the winter of 1987/88 with the recording of as many specimens as time will allow. Hard copies of the data base will be made available to the Nova Scotia Museum when they are completed. Until the entire inventory is known the complex prehistory of the study area cannot be adequately presented. However, on the basis of general observations of the collections the following table is given to illustrate the potential of the area:

<u>Tradition/Period</u>	<u>Type Artifact</u>	<u>Collector</u>
Late Palaeo-Indian	Plano Pt. (?)	Sollows
Middle/Late Archaic	Plano Pt.	Bain (Plate 1)
	Variety of projectile pts. collections ground stone items; i.e. ulus, bayonets, gouges, etc.	All (Plate 2)
Otter Creek	Projectile Pts.	Hameon
Susquehanna	Projectile Pts., drills	Green,others(Plate 3)
Maritime Archaic	Projectile Pts.	Bain, others (Plate 4)
Early Woodland (Adena)	Projectile Pts., Blocked-end-tube pipe	Sollows (Plate 5)
		Hameon (Plate 5)
Middle/Late Woodland	Projectile Pts., ceramics	All collections (Plate 6)
Protohistoric	Trade goods, beads etc.	All collections

Recommendations:

The study area requires further surveys and contact with the amateur collectors. The two week effort reported here produced substantial site distribution data and, hopefully, with the cooperation of the collectors, artifacts can be assigned to these various locations. However, this type of information can only be used in a generalized fashion in terms of placing the sites within the broad framework of Northeast prehistory (Table 1). To arrive at a more detailed regional chronology many of the sites require testing followed by extensive excavations. The following locations should have priority for second phase testing, and with positive results, consideration should be given for excavation.

The first part of the report deals with the general situation of the country and the progress of the work. It is followed by a detailed account of the various expeditions and the results obtained. The second part of the report is devoted to the description of the various plants and animals discovered. The third part contains a list of the names of the various places visited and the names of the various persons who accompanied the expedition. The fourth part contains a list of the names of the various plants and animals discovered. The fifth part contains a list of the names of the various places visited and the names of the various persons who accompanied the expedition.

Plate 1

The first part of the report deals with the general situation of the country and the progress of the work. It is followed by a detailed account of the various expeditions and the results obtained. The second part of the report is devoted to the description of the various plants and animals discovered. The third part contains a list of the names of the various places visited and the names of the various persons who accompanied the expedition. The fourth part contains a list of the names of the various plants and animals discovered. The fifth part contains a list of the names of the various places visited and the names of the various persons who accompanied the expedition.

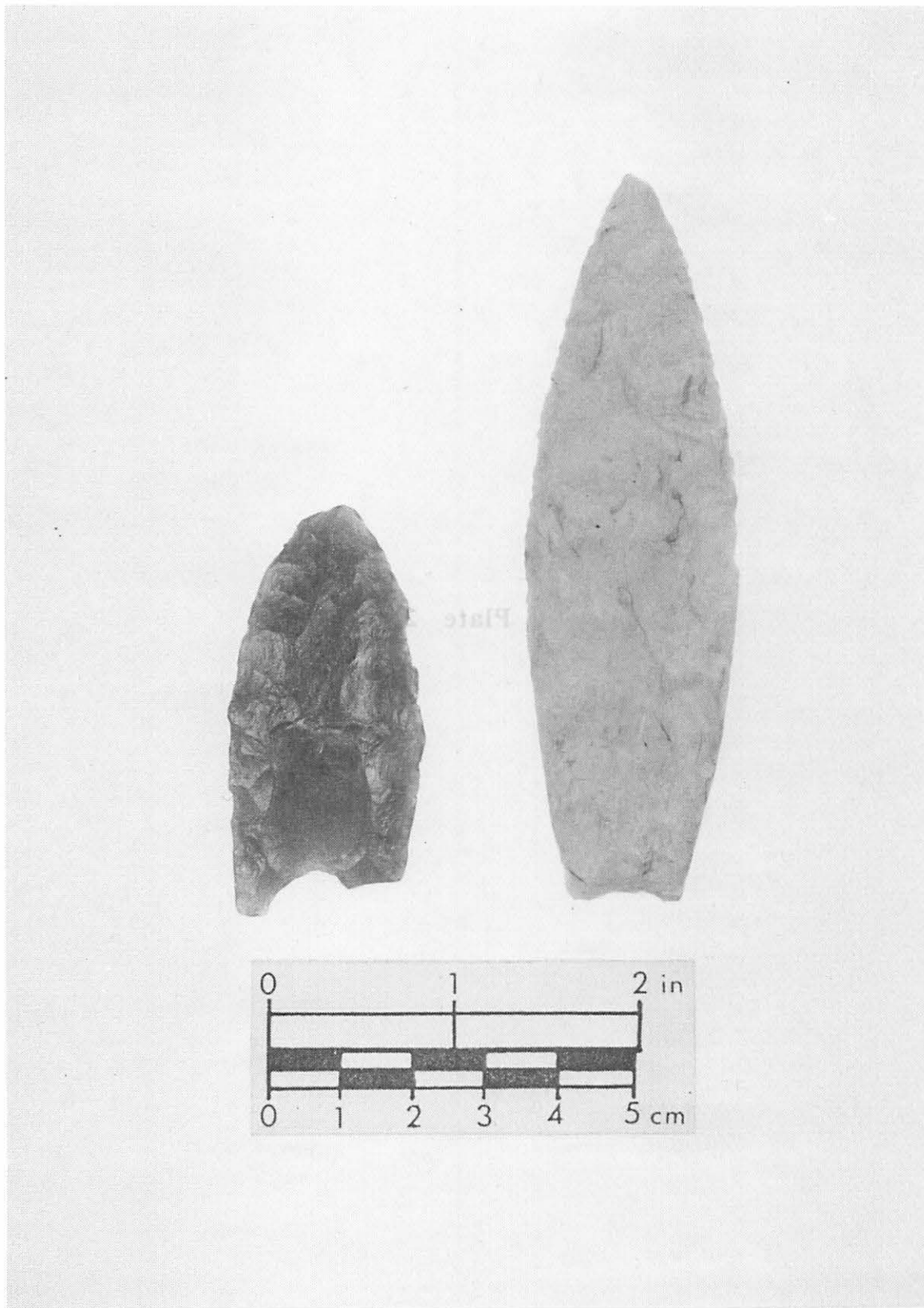


Plate 2

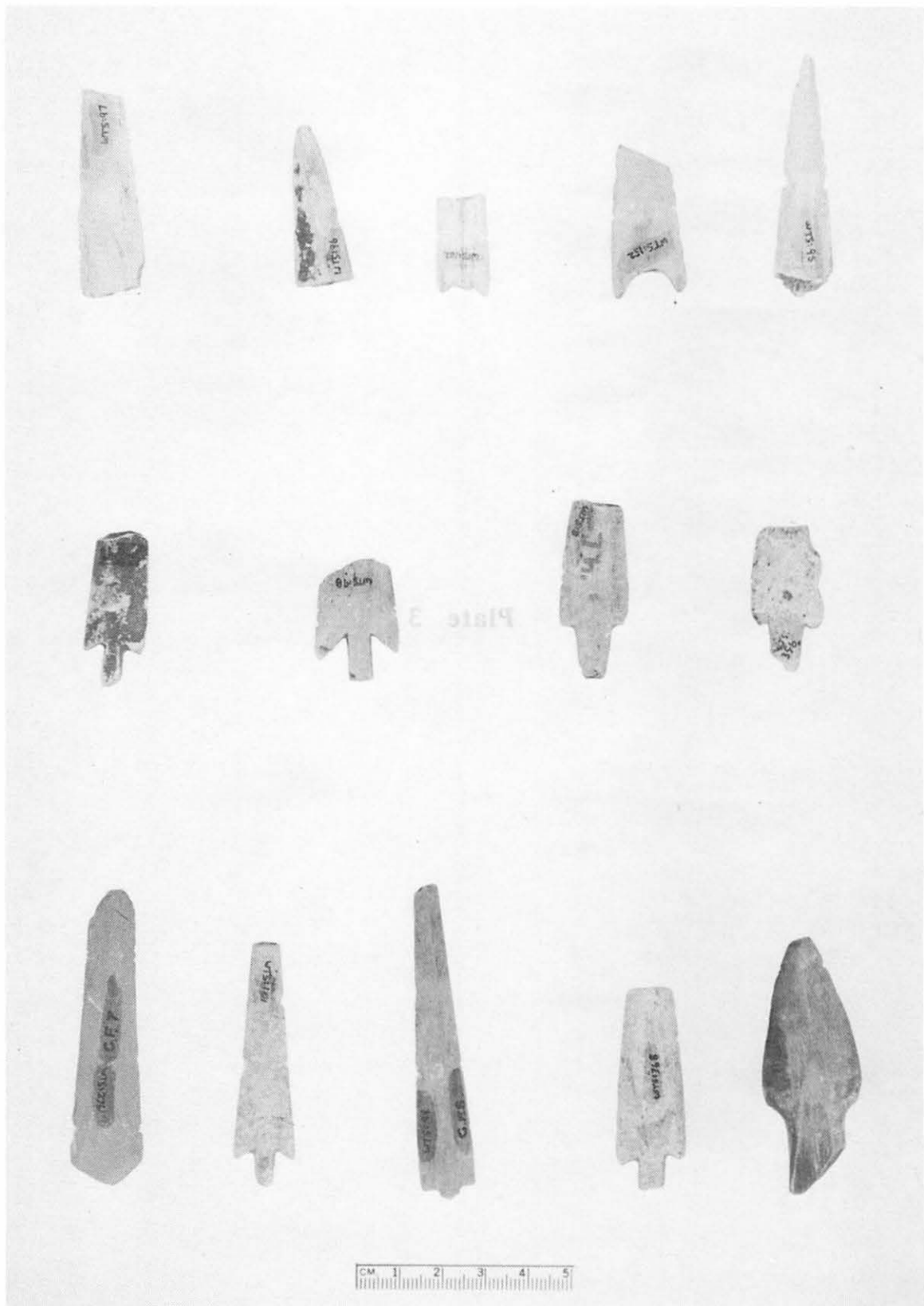


Plate 3

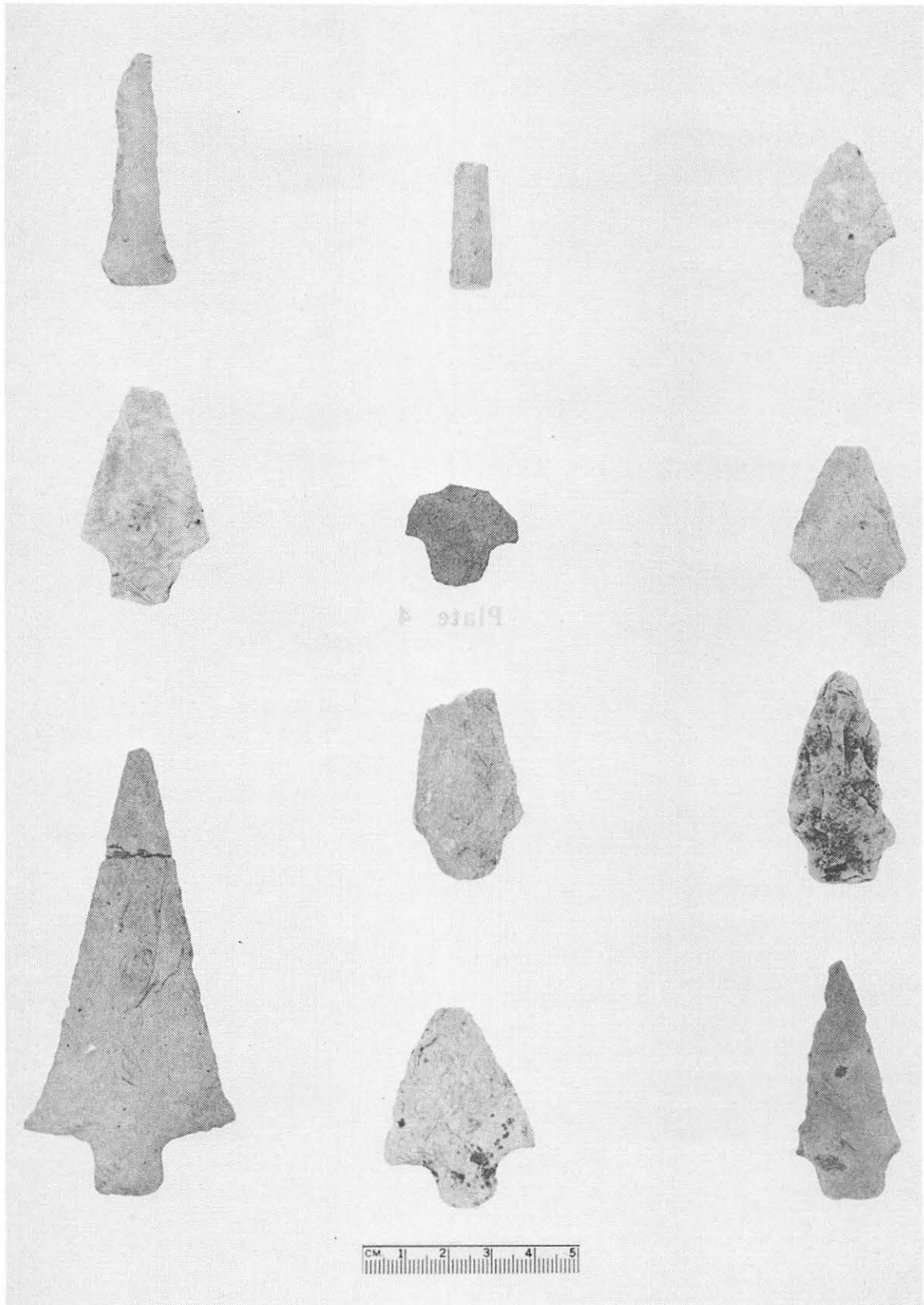


Plate 4

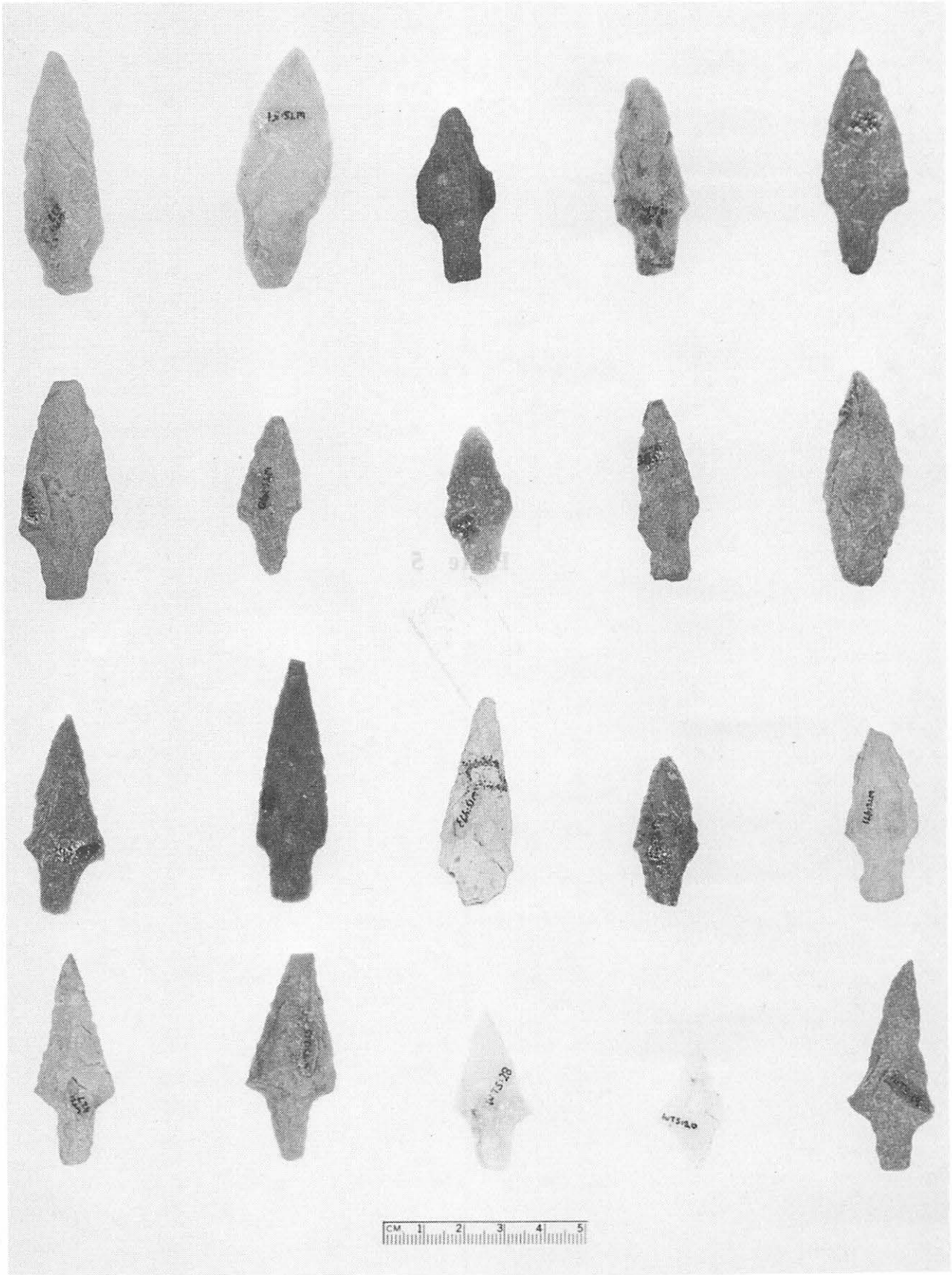
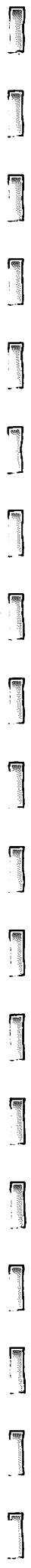


Plate 5



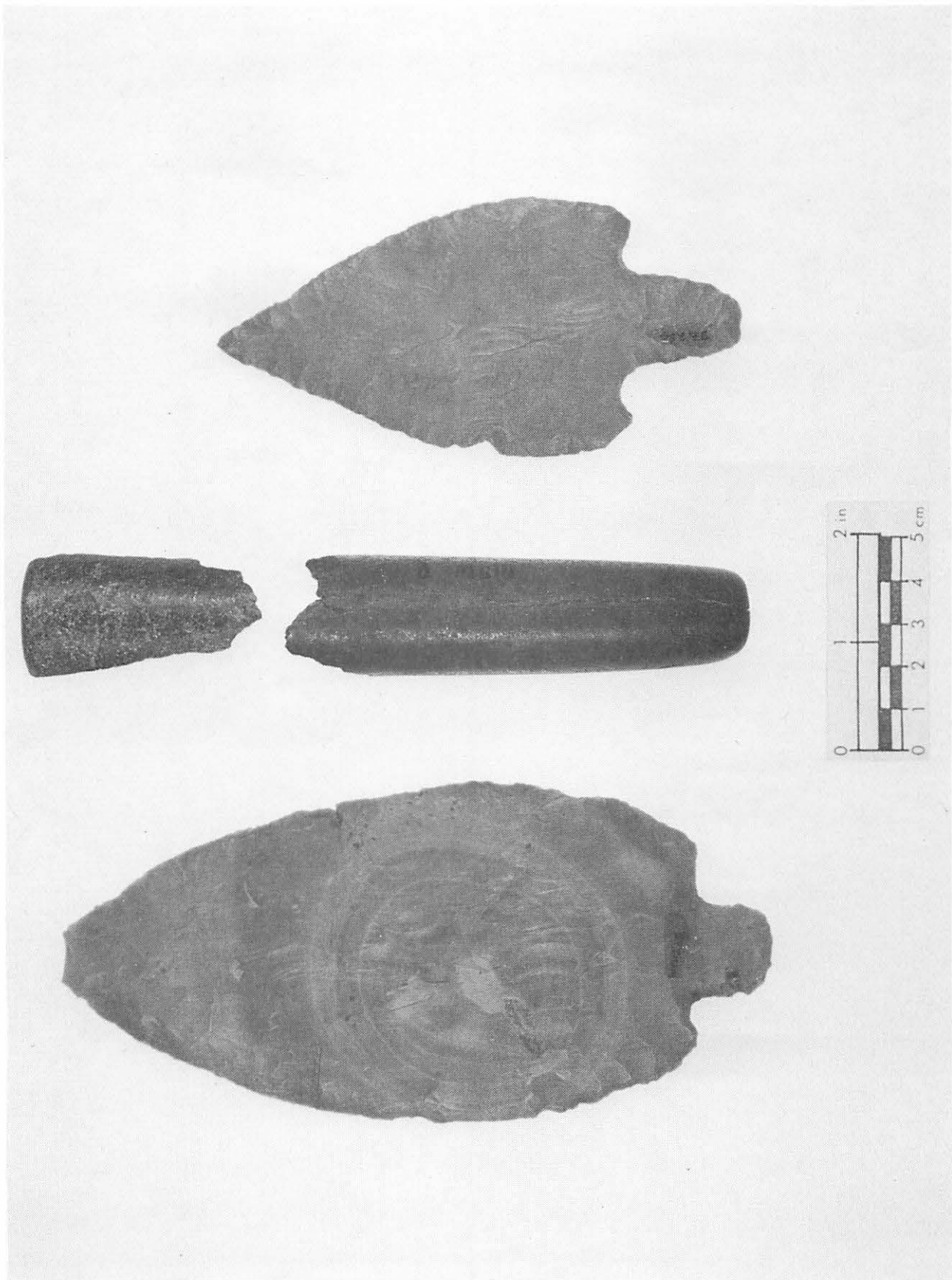
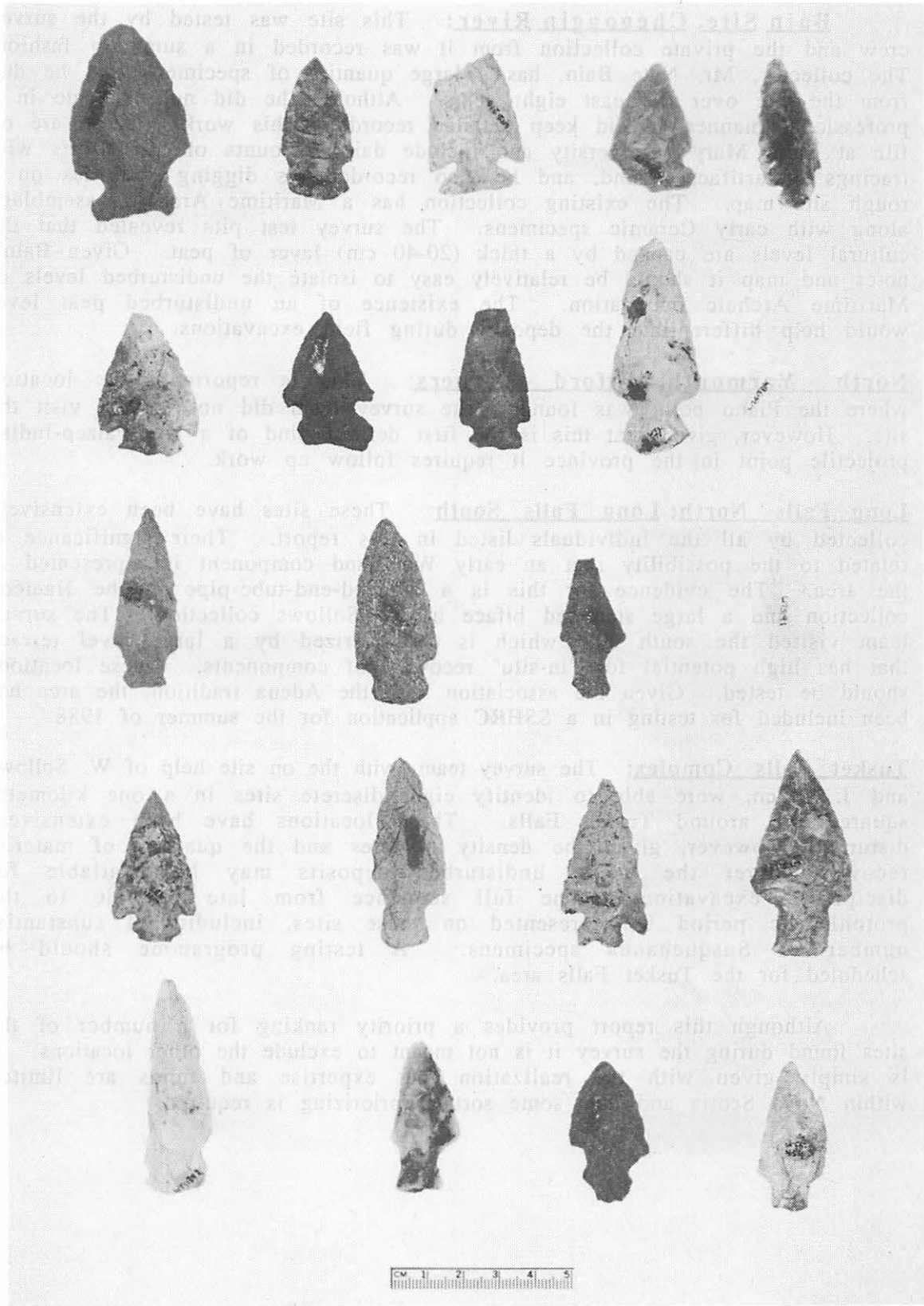


Plate 6



Bain Site, Chegoggin River: This site was tested by the survey crew and the private collection from it was recorded in a summary fashion. The collector, Mr. Nate Bain, has a large quantity of specimens that he dug from the site over the past eight years. Although he did not excavate in a professional manner he did keep detailed records of his work. These are on file at Saint Mary's University and include daily accounts of his efforts with tracings of artifacts found, and he also recorded his digging activities on a rough site map. The existing collection has a Maritime Archaic assemblage along with early Ceramic specimens. The survey test pits revealed that the cultural levels are capped by a thick (20-40 cm) layer of peat. Given Bain's notes and map it should be relatively easy to isolate the undisturbed levels of Maritime Archaic occupation. The existence of an undisturbed peat level would help differentiate the deposits during field excavations.

North Yarmouth, Milford Corners: This is reportedly the location where the Plano point was found. The survey team did not test or visit the site. However, given that this is the first definite find of a late Palaeo-Indian projectile point in the province it requires follow up work.

Long Falls North; Long Falls South: These sites have been extensively collected by all the individuals listed in this report. Their significance is related to the possibility that an early Woodland component is represented in the area. The evidence for this is a blocked-end-tube-pipe in the Hameon collection and a large stemmed biface in the Sollows collection. The survey team visited the south side which is characterized by a large level terrace that has high potential for "in-situ" recovery of components. These locations should be tested. Given the association with the Adena tradition, the area has been included for testing in a SSHRC application for the summer of 1988.

Tusket Falls Complex: The survey team, with the on site help of W. Sollows and J. Green, were able to identify eight discrete sites in a one kilometre square area around Tusket Falls. These locations have been extensively disturbed. However, given the density of sites and the quantity of material recovered over the years, undisturbed deposits may be available for disciplined excavation. The full sequence from late Archaic to the protohistoric period is represented on these sites, including a substantial number of Susquehanna specimens. A testing programme should be scheduled for the Tusket Falls area.

Although this report provides a priority ranking for a number of the sites found during the survey it is not meant to exclude the other locations. It is simply given with the realization that expertise and funds are limited within Nova Scotia and thus some sort of prioritizing is required.

Heritage Research Permit A1987NS08**ST. JOHN'S ANGLICAN CHURCH, PRESTON**

**Stephen A. Davis
Department of Anthropology
Saint Mary's University**

The principal sources for writing a history of a region, a community or indeed a single structure tends to remain within the confines of archival documents. However, as has been stated within the history of St. John's Church, reliance on such traditional sources can provide very little, if any, information on the physical character of this structure (MacLeod n.d.). The excellent research efforts detailed in this work have provided a thorough study of the early personalities and the general conditions of the late eighteenth century on the eastern side of Halifax Harbour. Yet their exhaustive efforts failed to find a single description of the church itself. The examination of the records of other contemporary churches is one way of reconstructing St. John's, albeit as a general style and not a detailed description.

The construction of a building in the late eighteenth century was determined by a number of factors. Rarely were detailed plans available and as such the end product took on a character of its own. This often reflected the availability of materials as well as the expertise and experience of its builders be they professionals or volunteers from the community. Another factor is the length of time given to building community structures. In the case of St. John's, construction began in 1788 and was not completed until three years later. Thus, from the beginning to the end many different tradesmen may have contributed to the final form.

The lack of documentation, and the many other factors that led to the final design, can be ascertained by carefully uncovering the remains of the building through the use of archaeological techniques. With this as a possibility at the site of St. Johns, Andrew MacLeod contacted Saint Mary's University Archaeology Laboratory to conduct an investigation of the site. The following is a report of what we have learned about the architectural features remaining at the site.

The excavation began in the fall of 1987 as a cooperative venture between Saint Mary's University and the Nova Scotia Archaeological Society. Funding for the excavation was provided by the Anglican Diocese of Nova Scotia and the University. The present landowners, the Ernst family, gave their kind permission to allow the investigation. The combined effort was conducted over three Saturdays, with two additional days used to record and map the features which were excavated (Figure 1).

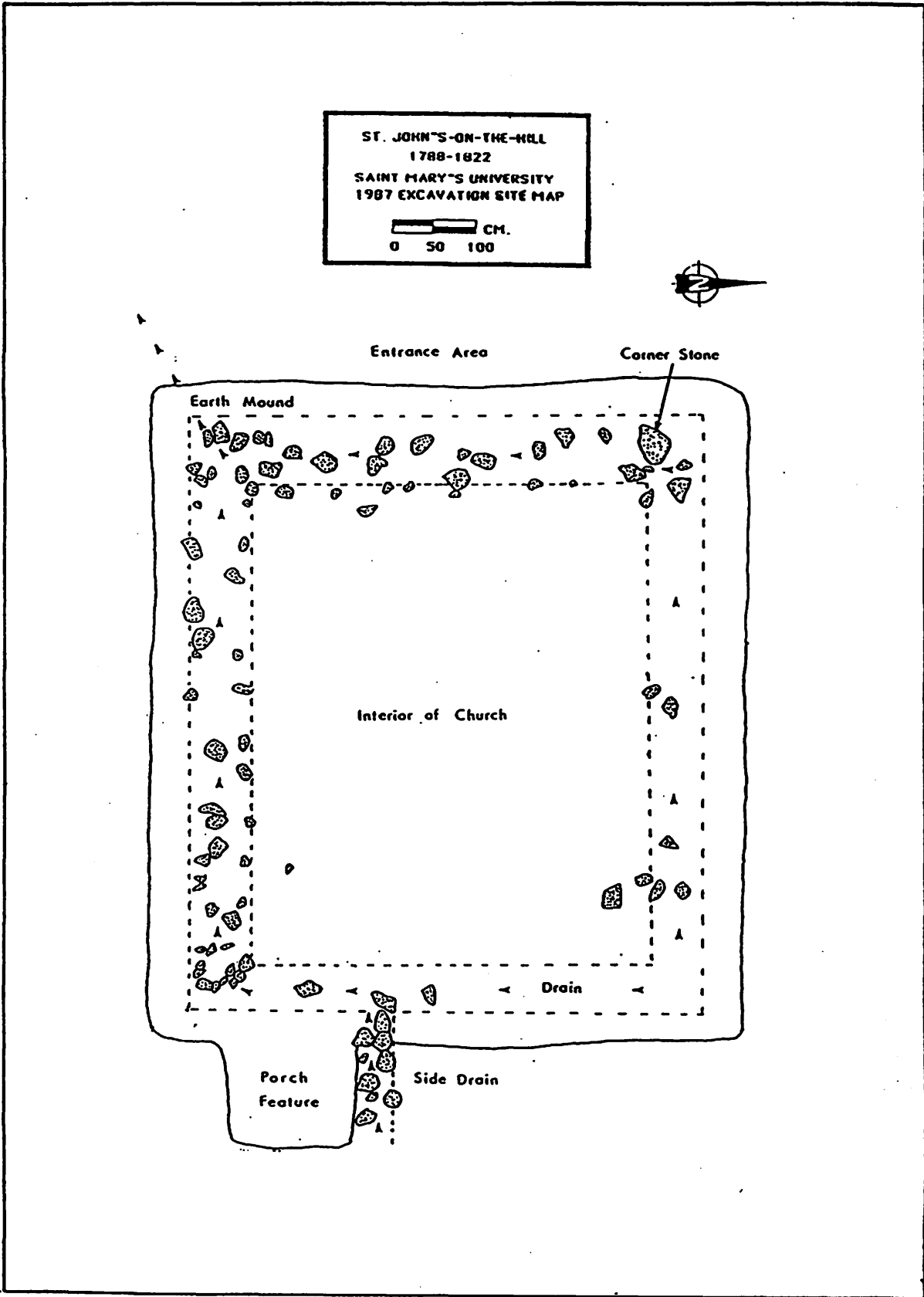


Figure 1: Structural features of St. John's Anglican Church, as revealed in the 1987 excavation. Arrows indicate direction of water flow through the drainage system.

The excavation strategy involved the clearing of dense brush and trees from the site. Once this was accomplished a baseline was established through what was assumed to be the middle of the structure. The mid-point of this line was transected at right angles to form four excavation units measuring ten metres by ten metres. These became the work and recording units for the students and volunteers. The crews ranged in number from eighteen to thirty-three members. The initial strategy was to remove the modern soil layer from the presumed foundation and the interior of the church. This was followed by establishing test excavations at the east and west ends of the structure outside of the foundation. All the excavation was done with mason's trowels, whisk brooms and, due to the extensive growth of spruce, root cutters became essential tools. The artifactual materials were recorded as to which of the four major units or test units they were from.

It should be pointed out that the excavation was a preliminary test and that much more remains to be done with the site.

However, given the above, the excavation did uncover a number of features which can be used to draw some tentative conclusions. Perhaps the most interesting aspect to come out of this work is the fact that the church did not have a formal foundation. The quantity of fieldstones that first attracted the attention of Andrew MacLeod to the site are the remains of a drainage system rather than the supports for the church. It appears that the first construction activities back in 1788 were to dig a drainage trench. The soil from the trench was deposited in two areas, some went to the exterior of the drain while a quantity was also placed in the interior. The rectangular shaped drain was then filled with various sized fieldstones. The drain functioned to carry water from the high ground on the northeast side through the system with an exit in the southwest corner (Figure 1).

The question that remains to be answered is where were the footings for the actual church. The northwest corner of the exterior earth mound may provide the clue to this in the form of a large flat stone which has slumped into the drain. It is assumed that this supported one corner of the church. The absence of similar stones in the remaining corners may be a result of their removal to the site of the second St. John's Church. We can speculate that the exterior earthen mound formed the actual foundation of the church. If this is in fact true then the drain was under the floor boards of the church. The floor boards would have been partially supported on footings placed on the interior earth mounds. The need for the drain is obvious given the location of the building site. It is not on the summit of Crain Hill; it is approximately 100 metres down slope and to the west of the summit. The effectiveness of the drain was witnessed on the third Saturday when heavy rains brought an end to the excavation. The areas around the drain quickly became a quagmire while the interior remained relatively dry.

The siting of the structure fits with what is known of churches built during the tenure of Bishop Charles Inglis. He always sited his churches on or near the summit of a hill. The location of St. John's was such that it would have commanded a panoramic view of the valleys and rolling hills below Crain Hill. Furthermore, if the church had a steeple it probably would have

been visible to many of the Loyalist farmsteads and be seen from a distance by parishioners as they traveled to services. The long axis of the excavated structure is oriented east/west which is another characteristic of the churches of this time. Inglis was known to favour the medieval rod (14 feet) as a unit of measurement and attempted to have his churches two-thirds as wide as they were long. The structure on Crain Hill, given the difficulty of determining the actual position of the corners, as previously reported, is approximately 42 feet long by 28 feet wide. In other words, it conforms to Bishop Inglis' dimensions being 3 rods by 2 rods in size (Cuthbertson 1987: 124-137).

While most of the students and volunteers concentrated their efforts on the excavations of the drain, further efforts were directed at locating other architectural features. Towards this a test unit was dug at the east end of the structure exterior to the drain. It was hoped that evidence would be found for a chancel. As has been mentioned previously, the excavation was not completed and this area needs further work. A small earth mound and drain were partially uncovered at the east end of the church. The drain was on the north side of the mound, that is, the high side. It would have collected surface water and carried it into the main system under the church. At this time, with the evidence on hand, it is rather speculative to say that this feature represents the chancel. Indeed, the evidence thus far revealed suggests that this is not a chancel and it may well be a feature unique to St. John's. The mound is set towards the southeast corner of the structure and not in the middle as would be expected if it were a chancel. Furthermore, it is a rather long and narrow feature being approximately 6 feet by 12 feet in size. It has the appearance of being a porch-like structure, perhaps a rear entrance to allow access to the presumed location of the cemetery.

The second test area outside of the church was established at the west end. These units were excavated to achieve a number of objectives. It was hoped that they would provide evidence for an entrance and possibly a base for a steeple tower. It was also assumed that the front entrance area would contain the most artifactual evidence from the parishioners. This assumption was based on the notion that people would have gathered here before and after the services. Once again time limitations did not allow for a detailed study of these test units.

The limited excavations at the west end failed to provide evidence for an entrance or a steeple tower. The absence of evidence for the base of a steeple should not be construed as meaning that the structure did not have a steeple. Many of the churches of this time period had steeples mounted saddleback on the west end of the roof. If this was the case at St. John's then the presence of such a feature would not appear in the archaeological record. However, the area did produce the largest quantity of non-architectural artifacts. These included ceramic fragments from two sources, a coarse earthenware vessel and a salt-glazed, transfer print vessel. Bottle glass from a liquor bottle and a medicine bottle were also found along the west wall of the church. It was anticipated that a fair number of clay pipe fragments would have been found, however, only a single stem fragment was recovered.

The last area to receive attention was the interior of the church. Once again it was not completely excavated, in fact only the southern half was cleaned of modern humus and tree stumps. It was anticipated that structural evidence for a gallery might be encountered. However, at this stage of the research none was forthcoming. A rather intriguing rectangular shaped line of stones with a depression was encountered roughly in the centre of the church. Its function remains to be determined.

The most common artifactual material to be found throughout the excavation was plate glass. Two major concentrations were encountered, one roughly in the centre of the north wall and the other in the southwest corner. However, smaller concentrations occur along all of the walls as well as in the two test trenches and the interior of the structure. From this evidence we can conclude that the church contained windows, however, how many and their precise locations remain to be determined. The shapes of the windows are also in doubt from what was recovered. However, we do know that there were no stained glassed windows. The Inglis-era windows were glazed in clear glass; stained glass did not appear in Anglican churches until well into the nineteenth century, both because of cost and the belief that it was a popish custom.

At this stage we can offer a number of tentative conclusions. The size, the orientation and siting of the structure all correspond with the information recorded for churches built by Bishop Charles Inglis. The scarcity of nails and other building hardware suggests that much of the lumber that was in the building had been removed from the site. This evidence fits well with the notion that the original St. John's had been salvaged to provide materials for the construction of the second St. John's. The artifactual materials are few in number suggesting that this structure saw limited use. Again this evidence supports the historical information. The church had a low attendance record and the activities associated with the various services probably did not involve many material objects. Combining all of the suggestions made above it would seem to indicate that the site excavated is the location of the first church of St. John's-on-the-hill.

The examination of the structure was our principal concern at the site, however, the other aspect of St. John's was its cemetery. The research team had hoped to be able to locate the position of graves by scanning the area with a metal detector. It was assumed that the individuals buried at St. John's would have been placed in coffins that would have contained iron nails in their construction. The presence of the nails should have given readings on the detector, however, a random survey around the church failed to give any readings. This may be a result of the limitations of the instrument; or the highly acidic nature of the soils may have completely corroded the iron. While conducting the survey a number of suspicious flat, roughly rectangular slate stones were encountered. Although none of these was inscribed they may well have been grave markers. The use of such nondescript stones as headstones also fits with what is known about the parishioners of the first St. John's. Many were poor farmers and, later, the Maroons and the inhabitants of Preston who used the cemetery could not

afford to import headstones from England or elsewhere. Thus they marked the passing of their friends and relatives with locally available stones.

The archaeological work at St. John's has been both rewarding and hopefully informative. The research is very much a preliminary effort which could be expanded with further excavation to provide data to many of the questions left unanswered. Nevertheless, it has shown that the discipline of history can benefit from the techniques of archaeology.

Bibliography

- Cuthbertson, Brian
1987 The First Bishop: A Biography of Charles Inglis. Waegwoltic
Press, Halifax, N.S.
- MacLeod, Andrew
n.d. The History of St. John's Anglican Church. Unpublished
manuscript, Anglican Diocese of Halifax, Halifax, N.S.

Heritage Research Notice A1987NS10**SALVAGE ARCHAEOLOGY AT THE ENGINEER'S PROPERTY,
LOUISBOURG**

**Andrée Crépeau
Louisburg National Historic Park
Canadian Parks Service**

The Archaeological Unit at the Fortress of Louisbourg NHP undertook a small scale salvage excavation in the yard of the Engineer's Property, Block 1 lot A, during the last two weeks of August 1987. The work was directed by Andrée Crépeau, staff archaeologist, with the assistance of Steve Lohnes, seasonal employee, and Kate Buckland a volunteer.

During the Park's development phase archaeological excavations and research preceded the reconstruction of the buildings, fortifications, etc. However, not all of the reconstruction zone was excavated. Areas adjacent to buildings, parts of yards where no architectural features were anticipated or areas that would not be disturbed by the Park's planned development were left intact or only partially excavated. From time to time changes in the location of services to buildings or maintenance procedures necessitate further excavation to prevent the loss of these archaeological resources.

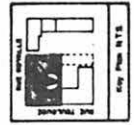
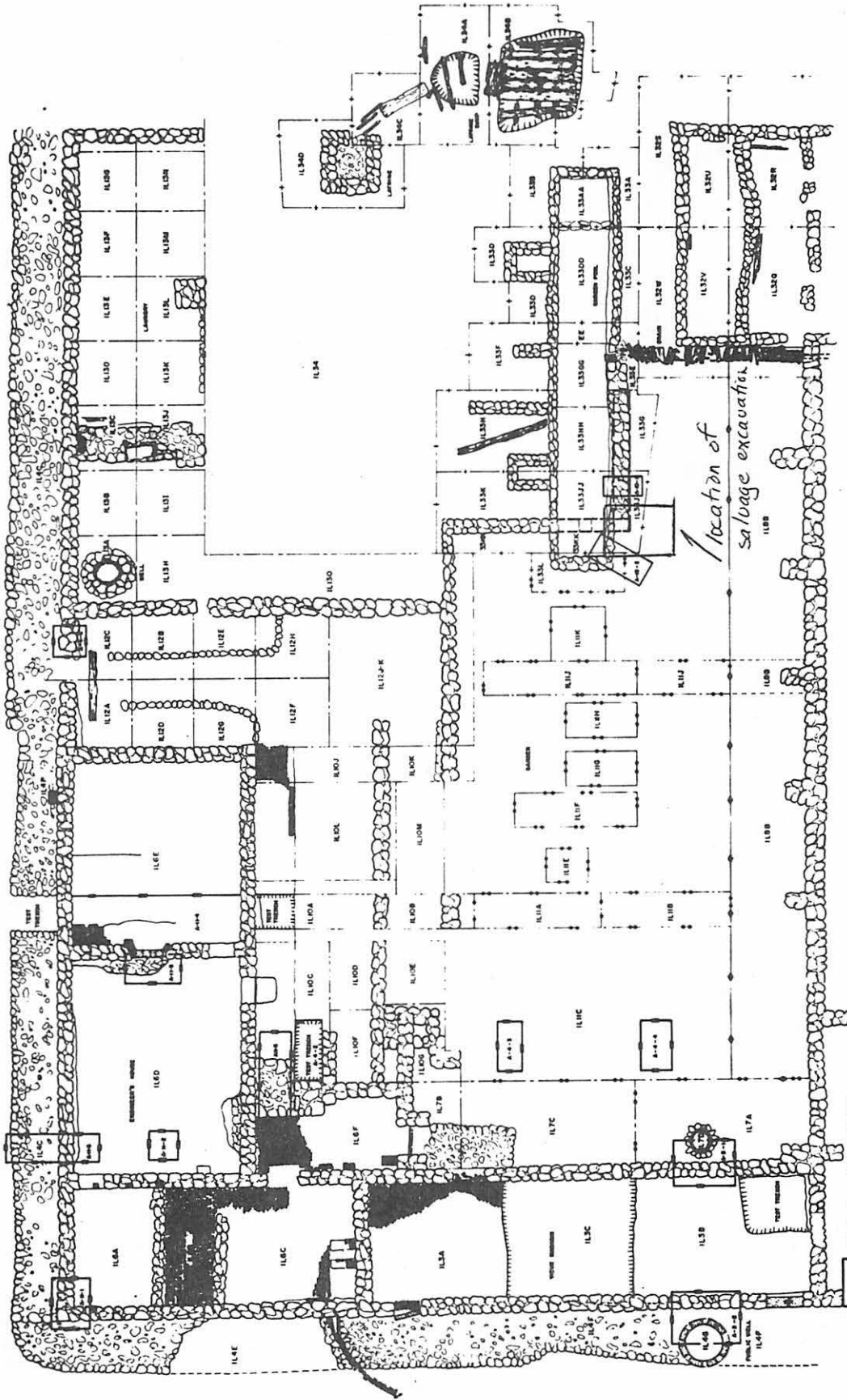
The salvage excavation in the Engineer's property was required to allow for the repair of the stone lined pond. This feature was first excavated in 1968. The work exposed the feature and removed the fill from within the walls. Along the exterior of the pond the yard was excavated to the height of the extant dry stone walls. When the feature was "rebuilt" new material was added to what remained of the original. The force produced by the successive freezing and thawing of moisture trapped behind the walls caused the collapse of the north-east corner of the pond wall. The excavation provided needed clearance behind the wall allowing the damaged section to be completely rebuilt. As none of the yard had been previously excavated to a sterile soil horizon this excavation also provided an opportunity to record the stratigraphy of the yard.

The excavation consisted of one 2.5 m by 3.0 m unit (Figure 1). The modern overburden was removed by shovels and hoes, the remainder was trowelled. Each stratigraphic unit was isolated and all materials records etc. given a distinct number. The unit was located on the Park's master grid and a permanent level station was used to maintain vertical control. Colour slide, black and white photography, measured profile and plan drawings, daily entries in field and survey notebooks were used to record the excavation. Finally, all the artifacts were washed, individually numbered and placed in storage.

Figure 1

[The text in this block is extremely faint and illegible due to low contrast and scan quality. It appears to be several paragraphs of a document, possibly a technical report or research paper. The text is centered on the page and is surrounded by a large amount of noise and artifacts.]

**BLOCK I
LOT A
ENGINEERS PROPERTY
EXCAVATIONS ALL INCLUSIVE**



- | | |
|--|--|
| | 800 EXCAVATION LIMITS (1/8 HAMMER) |
| | 1000-807 EXCAVATION LIMITS (1/4 BUTTERFLY) |
| | 1000 EXCAVATION LIMITS (1/4 STUDY) |
| | 1000 EXCAVATION LIMITS (1/4 HAMMON) |
| | 1000 EXCAVATION LIMITS (1/4 SMITH) |
| | TEST TRENCH |
| | LATHING SUMP |
| | SANDSTONE |
| | WOOD |
| | BRICK |

Heritage Research Permit A1988NS02**THE DIMOCK HOUSE**

**Stephen A. Davis
Department of Anthropology
Saint Mary's University**

Acknowledgements

The archaeological testing of the Dimock house was conducted by Mr. Laird Niven and Mr. Stephen Powell under the supervision of Dr. Stephen A. Davis, Saint Mary's University, Halifax. The project was initiated and funded by the Department of Tourism and Culture of the Province of Nova Scotia. The testing was approved and carried out under Heritage Research Permit (archaeology) number A1988NS02. The ceramic analysis was conducted and written by Stephen Powell.

The team would like to thank Ron and Phyllis Dimock for their help and cooperation throughout the project.

Introduction

The Department of Tourism and Culture awarded a contract to provide a preliminary assessment of the archaeological potential of the property known as the Dimock House. The need for this type of research was revealed in meetings within the Department in its efforts to authenticate the age and ethnicity of the builders of the structure for purposes of registration. The archaeological assessment was to augment the historical documentation and the architectural details of the standing structure. These latter two lines of evidence were perceived to be in conflict, that is, archival research could only trace ownership to the mid-nineteenth century. Whereas, the structure contains observable building techniques highly reminiscent of eighteenth century character. The following report summarizes the two previously researched lines of evidence and the results of the archaeological testing.

Historical Background

The Dimock House is located 3.5 kilometres northeast of the town of Canning in Kings County, Nova Scotia. The area in which the structure is situated is known as Pereau. Historically this region of the province was called by the early French "les Mines" for its association with the copper deposits found along the shores of the Bay of Fundy. This term has persisted through time in its application to the eastern end of the Bay of Fundy as Minas.

The history of European settlement in Minas follows the pattern seen in other areas of Acadia. The precarious location of Port Royal, and its continued harassment by the English, induced Acadian families to move elsewhere. In about 1680 two families from Port Royal became the first Europeans to settle in Minas. In her work, The Acadians of Minas, Brenda Dunn attributes the founding of the community of Grand Pré to Pierre Melanson dit La Verdure, Marie-Marguerite Muis d'Entremont and their children. The second family of Pierre Terriot and Cecile Landry founded a settlement on what is now the Cornwallis River (Dunn 1985:5).

In the years that followed these first settlements natural population increase and continued migration from the Port Royal area added to these communities and created additional settlements in Minas. By 1707 the overall population had reached 578 individuals representing 88 households (Dunn 1985:27). The settlement pattern was on or near the rich salt marshlands around the Minas Basin and its rivers. The latter included the Avon, Cornwallis, Gaspereau, Canard, and Habitant Creek. The most populous settlement was Grand Pré (Dunn 1985:7).

During the political intrigues of the first half of the eighteenth century the area became embroiled in the various conflicts. However, it continued to thrive and by 1750 the estimated population was 2450 individuals. Grand Pré remained the most populous, with an estimated community size of 1350 people. The river communities contained the following resident numbers: 750 at Canard, 125 at Gaspereau, 100 along the Cornwallis, 75 at Habitant Creek and 50 at Pereau (Dunn 1985:22). As recorded in history the dominant Acadian occupation of Minas ended in 1755 with the deportation of 2200 men, women and children. The removal of the Acadians was followed by a systematic destruction of their communities. Thus, after seventy-five years of occupation the lands around Minas Basin were once again vacant.

This void was quickly filled by the invitation to New England settlers, known as Planters, to occupy the lands around the Basin. In the five year period following 1760 a population surpassing the original Acadian numbers reestablished the Minas townships. It is of interest to note that during the period of Planter immigration numerous Acadians who had eluded deportation either surrendered or were captured by the English garrison stationed at Fort Edward. In his history of Kings County, Eaton records that between June 1763 and March 1764 an average of 343 Acadians were detained in the fort (1972:59). Further, by special arrangement, the detainees assisted the new immigrants in working the land as cheap, skilled labour. The dependence upon this labour was such that in 1764 when Acadians were once again permitted to own land in the province, the Planters petitioned the government to

provide assistance to encourage them to remain. It is not known if any chose to take this option.

The record of ownership of the property has been researched by Mr. Daniel Norris of the Department of Tourism as well as by the current owner Mr. Ron Dimock. Their search of the various deeds, albeit incomplete, reveals the following summary of ownership and known dates of transfer of possession:

Date	Owner
1988	Ronald and Phyllis Dimock
1963	Norman Dimock
1912	Horace Dimock
1873	Daniel Dimock
1859	James Whalen
1851	Thomas Jackson
?	Joseph Jackson
1796	Dan Pineo

At the time this report was being written other possible individuals were being checked as to their involvement with the property. This avenue of research needs to be continued before a detailed listing of the property transactions can be presented.

Architectural Background

The architectural elements that are considered to be uniquely Acadian are difficult to ascertain for a variety of reasons. The most obvious is the fact that the English systematically destroyed most of the structures inhabited by the Acadians as part of the expulsion decree. While those that may have survived have disappeared through major renovation or subsequent destruction as they outlived their usefulness. Thus, detailed descriptions of house types for the period have not been discussed in contemporary literature. To compound this problem the descriptions of eighteenth century documents tend to be vague and provide little detail.

A related problem, and one which has recently been addressed, involves the notion that the Acadians were a simple, rural people. The early histories of the Acadians left the impression that they were a rather "humble folk" who eked out an existence in the marshes of the

New World. This interpretation has been altered by modern scholars who have demonstrated a greater diversity in social structure as well as wealth. Furthermore, the concept that they were dependent upon themselves and a strict trade relationship with either the French or English has also been dispelled. Documentary and archaeological evidence has shown that active influence was being made both from the Old World and the New England States. It is reasonable to assume that a diversity of building techniques may have been copied by the Acadians.

Given the above, along with an overview of the existing work on pre 1755 Acadian building techniques (Cullen 1983), we can provide only a generalized description of any Acadian structure. Seventeenth and eighteenth century town plans, notably those showing Port Royal and Fort Beausejour, illustrate square to rectangular storey and a half structures with pitched roofs. The placement of doors and windows show a wide variety as does the placement of chimneys. In general there seems to be a preference for a single gable wall chimney although central and off-centre chimneys are depicted as well (Cullen 1983:493).

The mode of construction is equally variable. In her study Cullen notes that brick and stone were used in military installation, however;

documentary evidence overwhelmingly points to wood as the characteristic building material of Acadia. Three types of wood construction are distinguished: piquet, the planting or standing of verticals; log, the piling of horizontals; and frame or charpente, the framing of verticals and horizontals. Of these the universally popular technique was frame (Ibid:493).

According to Cullen the use of framing techniques involves two principal types.

The first, wattle and daub, is a frame filled with a mix of clay and straw held in place by struts or "wattles" wedged between the uprights. This type was variously known as colombage bousillee, entorchis or a la gasparde. The second is a brick infilled frame or colombage briquette. There is equivocal source material on a third frame type, the frame filled with squared logs tenoned into grooved posts (pieces sur pieces en coulisse) and no documentation on a fourth and popular type in New England and at Louisbourg, the empty frame, clapboarded (Ibid.:494).

An interesting aspect about framed construction techniques and one which may have some bearing on the Dimock house is its portability. Champlain reports that two boat loads were loaded with the framework of the houses of Ste. Croix and subsequently erected at Port

Royal (Lescarbot 1911:514). Furthermore; "the first structures of Fort Anne (Annapolis Royal, 1703) were built of timber transported from dismantled buildings at Fort Saint Jean on the St. John River (op. cit., 494).

At this time, Cullen (1983) is the only major work that addresses the question of the building techniques used by the Acadians. As such, her summary is included in its entirety:

In summarizing the existing documentary evidence of Acadian building techniques in the seventeenth and early eighteenth centuries one is struck by how little we know and by how much of what we know is inexact. Houses were apparently small, one and a half storey with gabled and sometimes hipped roofs, end or central chimneys and a variety of fenestrations. Frame construction was ubiquitous with brick and wattle and daub infilling the best documented, although not necessarily the most common, subtypes. Log building was commonly observed but whether in its framed or unframed form is unclear. Piquet construction was marginal. No studies have yet been undertaken regarding building sizes, interior layouts, wall and roof framing systems in the pre-1755 period (Ibid:496).

In the time since Cullen conducted her research two archaeological projects have been conducted on pre-expulsion Acadian structures. The Belleisle project included the entire excavation of a structure with the testing of a second. House 1 at Belleisle was determined to have a living area of 6.5 metres by 6.0 metres with an external chimney measuring 3.0 metres by 1.25 metres. House 2 was not completely excavated, however, the dwelling was estimated to be approximately 8.0 by 7.0 metres in size (Christianson 1984).

The second major archaeological project dealing with an Acadian village was undertaken by Parks Canada at the Melanson Settlement. A complex of structures was investigated, of which six were suspected to be domestic buildings. These cellar depressions were all approximately 6.5 metres square and a metre deep. Another building was extensively excavated revealing at least three different house types at a single location. The third and final structure was a timber frame building with clay walling sitting on a simple stone footing. This dwelling measured 6.5 metres by 7.4 metres (Creapeau and Dunn 1986).

Although this is a limited sample, the dimensions of the buildings excavated or recorded during these projects are consistently in the region of 6.5 metres square. The Dimock house external dimensions are slightly larger being approximately 7.9 metres by 8.3 metres in size.

Archaeological Assessment

The archaeological investigations of the Dimock House were carried out during the first week of August, 1988. A team of two experienced historic archaeologists supervised by Davis and helped by Mr. Ron Dimock excavated eleven one by one metre test units. Nine of the units were situated on the south side of the structure in what should have been a high activity area, that is, the main entrance to the house (Figure 1). The remaining two units were in the basement of the house, one was located at the foot of the outside entrance, the other at the base of the chimney.

The excavation strategy was to test for stratigraphic evidence of occupation in an effort to recover artifactual materials which would detail the occupational history of the house. The units failed to produce any evidence of stratigraphy due mainly to the fact that the south side of the structure had over the years been the location of infilling.

An attempt was made to excavate test unit B to the base of the foundation. This effort was made in the hopes of finding evidence of a builder's trench which would provide datable material for the construction of the dwelling. The test had to be abandoned before the builder's trench level was reached as the dry wall foundation began to crumble endangering the entire structure.

Test units D and E were situated immediately in front of the south entrance. These units were excavated to a level which produced stone footings for a possible porch-like addition to the house (Figure 2). The excavation was stopped at this level to maintain the integrity of the feature.

Test units G and F were situated in the basement of the structure. Unit G was located in the high activity area at the base of the outside entrance to the basement. It was hoped that it would provide evidence of a builder's trench and thus meet the objectives set for test unit B. Once again the unit could not be fully excavated due to the presence of an interior drain feature which appears to run along the east side of the structure. The unit also produced evidence of a cobble floor as did test unit F located at the base of the chimney. It was decided not to remove the cobble flooring until a detailed photographic inventory of all the architectural elements was completed.

A series of random shovel tests around the property was conducted by Mr. Dimock. These tests resulted in the location of a well to the northeast of the house and a concentration of stones to the southwest. The concentration was outlined using a probe and appears to be a rectangular structure. The random tests produced a quantity of cultural material which represented late nineteenth and early twentieth century occupational debris.

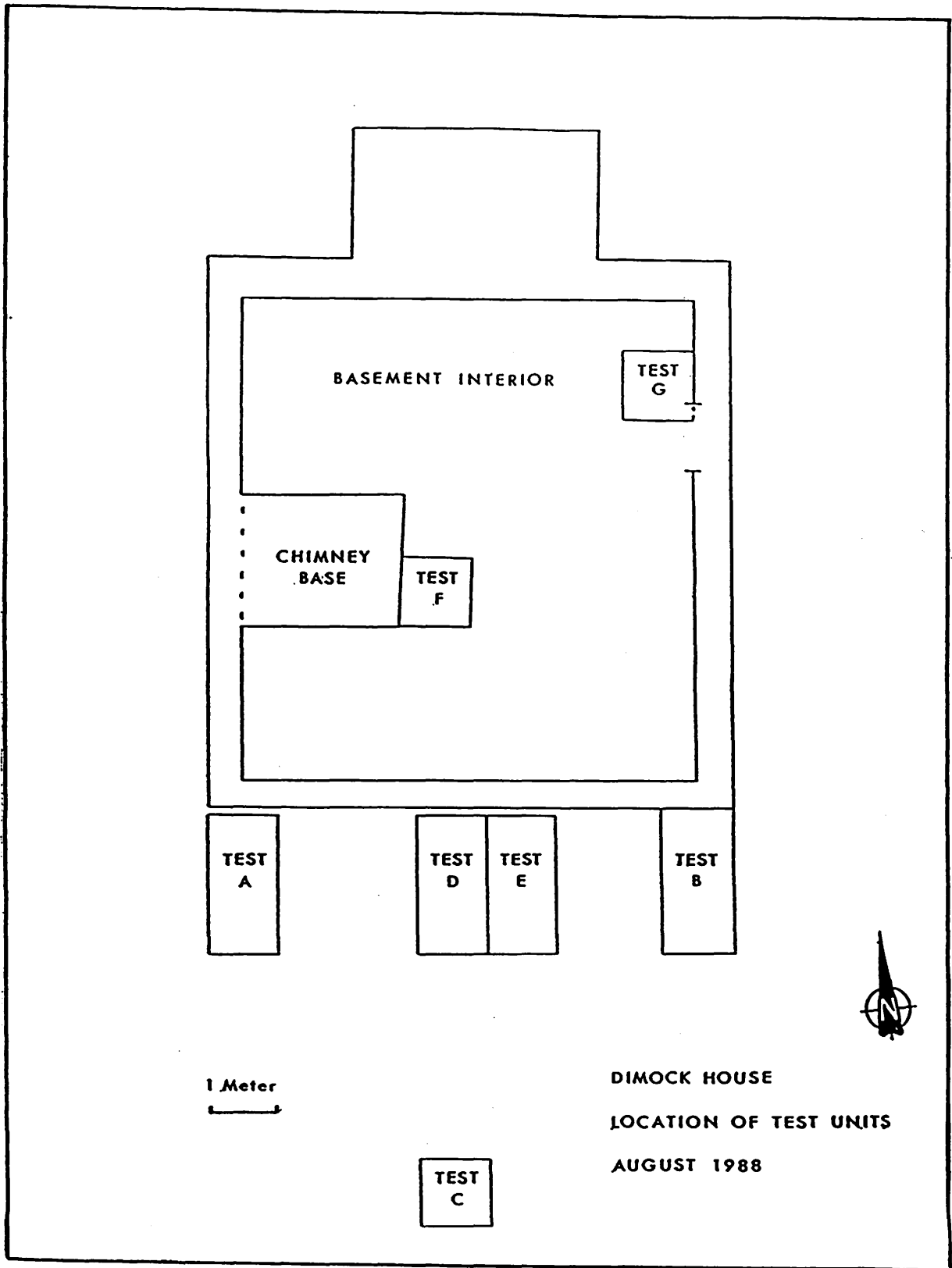
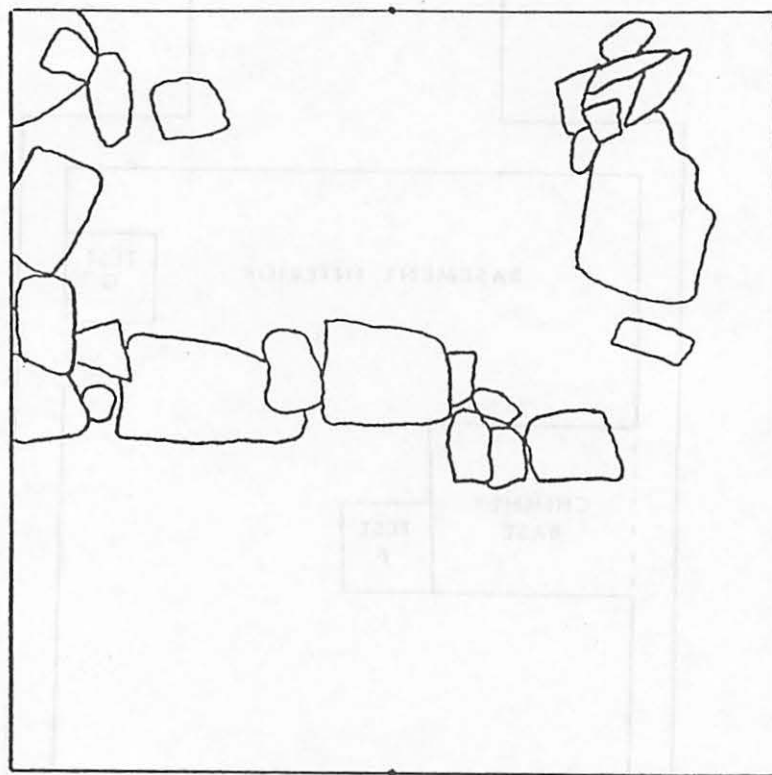


Figure 1



D

E

0 50 1m



DIMOCK HOUSE
TEST UNITS D AND E
FRONT PORCH FOOTING
AUGUST 1988

Figure 2

The eleven test units produced surprisingly little evidence towards understanding the occupational history of the dwelling. The most diagnostic specimens recovered were ceramics. A total of 122 ceramic sherds were recovered during the Dimock House test excavations (Table 1). The majority of these are refined earthenware, namely pearlware, white refined earthenware, and to a lesser extent, creamware. This report will focus on the refined earthenwares from test units A, B, C, D, E, and G.

Table 1

Ware Type	No. of sherds per test unit							Total
	A	B	C	D	E	F	G	
Pearlware	16	4	5		13			38
White Refined	11	4	21	1	8		14	59
Creamware	1	7						8
Yellow Ware		1		2				3
Coarse Earthenware		2	10					12
Stoneware			1					1
Porcelain		1						1
Total	31	26	29	1	21	0	14	122

Thirty-eight pearlware sherds are present in the collection all of which exhibit nineteenth century traits. Pearlware is a refined earthenware with a bluish white appearance due to the addition of cobalt oxide to the glaze. It was first produced around 1780 (Noel Hume 1980:128) and by 1810 it had become North America's most common tableware (Noel Hume 1973:236).

Three decorative techniques are present on pearlware sherds found at the Dimock House. They are blue transfer-printing, blue shell-edge and hand painting. Stanley South (1977:212) cites a date range of ca. 1795-1840 for transfer-printing on pearlware. Transfer-printing was the dominant decorative technique on pearlware in the 1820's (Noel Hume 1973:247). The rim sherds from plates have a blue shell-edge decoration. These sherds can be placed in chronological groups. One sherd has pronounced moulded shell-edge relief with shallow scalloping. This type of shell-edge decoration is datable to the period

1810-1820 (Lavoie 1984:147). The other two rim sherds have no scalloping and little to no moulded relief. This type of shell-edge decoration is datable to the period 1820 to ca. 1840 (Lavoie 1984:148). One of these later sherds is better described as white refined earthenware rather than pearlware. The hand-painted pearlware sherds are difficult to date with accuracy but are all probably 19th century examples.

Fifty-nine white refined earthenware sherds were recovered from the Dimock House excavations. White refined earthenware, which has a much whiter appearance than pearlware, was introduced around the same time as pearlware (late 18th century) and continued to be produced throughout the 19th century (Lavoie 1984:39). White earthenware became a popular tableware by ca. 1820 replacing pearlware which by this time was declining in popularity (Noel Hume 1980:130). Although less in demand, pearlware continued to be produced until ca. 1840 with sporadic revivals on into the second half of the 19th century.

Creamware represents the smallest category of refined earthenware found at Dimock House. A total of 8 undecorated sherds were found. Creamware was in use as a tableware by the early 1760s (Noel Hume 1980:125) and continued to be produced into and through the 1820's (Noel Hume 1973:236). The Dimock House sherds have a lighter yellow appearance than earlier creamwares and are probably early 19th century examples.

Overall, the Dimock House ceramics reflect a date range of early 19th century to present. In particular, the pearlware is datable to the period ca. 1810 to ca. 1840. Based on ceramic evidence, the author suggests a date range of ca. 1820 to present.

Conclusions

The preliminary test excavations on the Dimock house property were initiated as a third line of evidence to determine the history and possible ethnicity of the builders of the structure. The apparent conflict between the architectural elements, which appear to be of a style associated with the Acadian Period, and the ownership history, which can only be traced into the late eighteenth, remains. The excavations did not produce evidence of an Acadian occupation, rather, the material recovered falls within the early quarter of the nineteenth century. At this time, the three lines of research have generated more questions than answers. A number of hypotheses can be generated:

Hypothesis A:

Given the portability of the timber frame infilling (charpente) and the possibility that not all Acadian structures were destroyed, the Dimock house is Acadian but was moved to its present location at some time after 1755.

Hypothesis B:

Given the fact that many Acadians escaped the expulsion decrees in the Minas area and were later used as labourers by the Planters it is possible that the structure was built by Acadians but occupied by New Englanders.

Hypothesis C:

The structure was built by post expulsion Acadians who returned to the area after 1765.

Hypothesis D:

The structure is not Acadian.

Further Research:

In order to provide additional data towards resolving the date of the Dimock house and ethnicity of the builders all three lines of research must be continued. The focus of this report has been on the archaeological assessment. It should be apparent that the efforts thus far are preliminary and further work is required. It is recommended that a more extensive excavation be conducted on the property. This effort should be directed at testing and evaluating the subsurface feature located to the southwest of the house. Although this feature remains unknown it may represent the original foundation of the house or the remains of an outbuilding.

A second area requiring additional work is the well located to the northeast of the house. Typically, abandoned wells are a rich source of cultural materials. However, depending upon their depth and structure they can be difficult features to excavate.

The third aspect to be investigated by archaeological methods is the location of refuse deposits on the property. As with the well, such features can provide a wealth of cultural debris which can be used to determine the occupational history of the structure.

References Cited**Christianson, David**

- 1984 Belleisle 1983: Excavations at a Pre-Expulsion Acadian Site.
Curatorial report No. 48, Nova Scotia Museum, Halifax.

Crepeau, Andree and Brenda Dunn

- 1986 "The Melanson Settlement: An Acadian Farming Community (ca. 1664-1755)." Research Bulletin No. 250, Environment Canada, Parks, Ottawa.

Cullen, Mary

- 1983 "Pre-1775 Acadian Building Techniques." In Historic Sites and Monuments Board of Canada. Agenda Paper. pp. 491-516, Public Archives of Canada, Ottawa.

Dunn, Brenda

- 1985 The Acadians of Minas. Studies in Archaeology, Environment Canada, Parks, Ottawa.

Eaton, Arthur W. H.

- 1972 History of King's County, Nova Scotia ... Reprint of 1910 ed., Mika Publishing Company, Belleville.

Lavoie, Marc

- 1984 Second Season of Archaeological Activities at Bethune-Thompson House, Williamstown, Ontario, 1981. The Ontario Heritage Foundation, Ontario.

Lescarbot, Marc

- 1911 The History of New France. Translation and editor W. L. Grant, Champlain Society, Toronto.

Noel Hume, Ivor

- 1973 "Creamware to Pearlware" A Williamsburg Perspective", In Ceramics in America (ed. I.M.G. Quimby), pp. 217-254. The University Press of Virginia, Charlottesville.
- 1980 A Guide to Artifacts of Colonial America. Alfred A. Knopf, New York.

South, Stanley

- 1977 Method and Theory in Historical Archaeology. Academic Press, New York.

Postscript:

The Dimock house is a unique structure in terms of representing a rural, domestic house representing at least the early nineteenth century. In its present condition it is endangered by the natural elements. Thus, we would recommend that assistance be made available to the present landowner to stabilize the structure over the winter of 1988/89.

Heritage Research Permit A1988NS03

SUMMARY REPORT

**Brian Preston
Nova Scotia Museum**

Permit A1988NS03 had a general application, and was designed to cover a variety of activities undertaken by the Curator of Archaeology throughout the calendar year, including responses to emergency situations.

CASTLE FREDERICK

The reconnaissance of the former DesBarres estate at Upper Falmouth, Hants County, begun in 1987, was continued. In 1987 the Ross property was examined in detail, and the principal objective in 1988 was to subject the Bremner property to a similar examination.

The site was visited on May 30, 1988, when Mrs. Bremner and Mrs. Ross were informed of the plans for further investigation. The new barn was in place on the Ross property, but at some distance from any known feature, and there were no other major land alterations. Mrs. Ross pointed out what she thought might be another house foundation in the middle of the large field to the north of the field road. This proved to be a small, rather indeterminate and probably natural bump and hollow. However, beside it there is a fairly substantial, rectangular stone feature which was not noticed in 1987. This feature is located at UTM 043765 on NTS 21 A/16.

On the same day the Mount Denson area, to the north of Falmouth, was investigated. The present place name derives from the Mount Denson estate of Henry Denson, developed about the same time as the Castle Frederick estate. John Duncanson stated in his history of Falmouth that the cellar depression of the Denson residence was still visible, and he was contacted in an attempt to locate the site. When questioned, he was not quite sure of what remained at the site, but kindly offered to locate it.

The traditional site is located on the Lancelot Press property, on the east side of highway 1. The property occupies a prominent position on top of the hill to the south of Halfway River and Hantsport, overlooking the Avon estuary to the east (UTM 080894 on NTS 21 H/1). The area indicated is a grassy field, formerly an orchard, immediately south of the Pope house and garden. The area has been intensively utilized, and no surface indications of archaeological features were observed. It seems likely, then, that any features formerly visible have been destroyed, if this is indeed the site.

On June 9, 1988 a foot survey of the Bremner property at Castle Frederick was commenced. Initially, the area bounded by the road on the west, the river on the north and east, and the Ross property on the south was walked. The wooded area immediately north of the Ross field is a gypsum formation, largely in the form of a deep gully. However, to the east

of this there is a small brook outlet with a rather promising knoll on its south side, just inside the Ross property line, and marking the northern limit of their field system. This should be examined when the Ross field is checked again.

The large field to the north of the wooded gully was under hay, but a good view could be gained from several vantage points. No features were observed. To the north of this, another, formerly wooded, area has been cleared within the last few years and is also growing up in hay. However, a belt of woods still extends from the road to the river bank, marking the edge of the rather steep terrace overlooking the dykeland to the north, on the south bank of the West Branch between the bridge and the forks. An apparent foundation depression, roughly oval in shape, was found on the very edge of the terrace, facing east towards the road (UTM 041771). The area to the north of this belt of woods was not investigated during this visit.

The fields to the west of the road and to the south of the Bremner farmyard were examined next, together with the wooded area extending southwest from the end of the Ross driveway which contains the feature pointed out by Mr. Bremner in 1987. The only features observed in the cleared areas were traces of stone foundations just west of the farmhouse. One of these consists of a line of large dressed granite blocks (about 1.5 m x 0.5 m x 0.5 m). Close by are traces of another possible stone footing, not in alignment with the first. There were several outbuildings in this area within living memory. According to the Bremners, these included a "pig-house" and a "wash-house", two fairly substantial structures of considerable antiquity, perhaps originally dwellings of some type. However, the area has been extensively landscaped to provide a lawn and garden, leaving only the remnants of stone footing.

It seems likely that features on the Bremner property will only be identifiable in wooded areas. The cleared areas all seem to have been well cleared and levelled, and those examined exhibited no minor irregularities. No additional features were observed in the wooded area to the south of the farmyard, but the known feature was relocated. It seems to be intact and relatively early, that is, eighteenth or early nineteenth century (this was designated Structure 29 in the 1987 survey).

The foot survey of the Bremner property was continued on June 15, 1988. Initially, the area of the south bank of the West Branch between the road and the forks, and to the north of the steep wooded slope, was examined. There is a large cleared knoll, with a wooded edge, in the centre of this area. This seems to correspond to Mr. Bremner's description of the location of the DesBarres cemetery. There has been extensive levelling on this knoll, presumably by bulldozing, and no cultural features were observed. The supposed location of the cemetery will have to be determined more definitely.

At one point on the wooded southern slope of this knoll there is a suggestive depression. However, there is much gypsum around and it was not convincing as a cultural feature. It is located at UTM 039772. This is just

to the northwest of the possible feature discovered on June 9 on the edge of the slope marking the eastern boundary of this roughly rectangular low area (probably a former river channel). This casts further doubt on the feature recorded on June 9. However, it did appear to be quite regular in outline and should be examined again.

Next, the area to the north of the Bremner farmyard on the west side of the road was examined northwards to the line of the side road. Only the woods edges were checked. However, the remaining wooded areas seem unlikely: they are relatively high and far-removed from the river. Again, no additional features were observed, and clearing seems to have been thorough. Although not examined in detail, the area to the north of the side road and west of the main road, occupied by several small properties, seems to be similar. The whole area has been cleared and extensively landscaped.

The feature pointed out by Mr. Bremner to the northwest of the Bremner farmyard (designated Structure 30 in 1987) was located again. This appears to be very well preserved and perhaps more similar to the feature to the south of the farmyard (Structure 29) than first thought. On second consideration, it certainly appears to be possibly of eighteenth or early nineteenth century origin, and would be worth testing.

It seems likely, then, that these two well preserved foundations (Structures 29 and 30), originally located by Mr. Bremner, are the only ones surviving on his property (with one possible addition). Mr. Bremner is obviously very familiar with the terrain of his property, and it seems reasonable to assume that, if there was anything else surviving, he would know of it. Further inquiries should be made about the former structures in the vicinity of the Bremner house.

Castle Frederick was visited again on August 11, 1988 with the Minas Basin survey crew in order to familiarize them with the locality and the principal features. The Ross property was walked and an additional cellar depression was found in the southern-most group of features (Group A). This new feature is located on the edge of the terrace overlooking the river, to the east of Structure 1 (at UTM 046746).

Another possible feature in this area was pointed out by a farm hand who was making hay in the large field to the east of Structure 2. This is a possible foundation. It lies to the north of Structure 2 at the foot of the steep wooded slope to the west of the field road, at the northern limit of the field (UTM 044748). This is reputed to be the site of a British military outpost. It consists of a long, narrow, rectangular level area, about 10 m x 3 m, bordered by an irregular low ridge. Further investigation is required.

During this visit Mrs. Ross mentioned that the field road is to be widened and upgraded. Much of this work was done during late summer, involving considerable widening, ditching and partial re-alignment of the road. This did not encroach on any of the observed features except the derelict farmhouse (Structure 3), which was removed by burning and bulldozing. A surface scatter of artifact in the vicinity was consistent with

a mid-nineteenth to mid-twentieth century occupation. No significant cultural features were observed elsewhere in the road cut. However, sources of gravel for the road are being sought on the property and there may be a threat to areas of archaeological potential in the future.

In the fall of 1988 an opportunity arose to conduct some preliminary testing when Stephen Davis of St. Mary's University offered to undertake a brief project at Castle Frederick as a field exercise for his method and theory class. This was carried out on two consecutive Saturdays (October 15 and 22), and also involved several volunteers from the Nova Scotia Archaeology Society. Four of the features identified in 1987 were examined, involving the opening of a total of 12 test pits ranging in size from 1 m x 2 m to 2 m x 2 m. The following is a preliminary assessment of these tests.

Three test pits at Structure 19 ("Castle Frederick") revealed a stone wall footing and produced a considerable quantity of bricks and other artifacts. The ceramics recovered seem to fall mainly within the period 1760-1830. This range is generally consistent with the known history of occupation of the residence built by DesBarres.

The three other features tested (Structures 9, 10 and 14) all belong to Group D, which was tentatively identified in 1987 as the remains of the pre-Expulsion Acadian settlement known as Pierre Landry village. Structure 9 was initially identified fairly confidently as an Acadian house foundation. However, four test pits failed to reveal any indication of a structure, and the only artifact recovered was a wire nail. It appears, then, that this may not be a cultural feature at all.

Structure 10 certainly appears to be a house foundation, but very few artifacts were found in the three test pits dug. The evidence is insufficient to date the structure with confidence, although an eighteenth century origin seems likely. One of the two test pits opened at Structure 14 was relatively rich in artifacts, including a good sample of ceramics dating to around 1770. This suggests a domestic structure in association with the development of the DesBarres estate rather than a pre-Expulsion occupation.

These tests were very limited, and several could only be partially excavated due to time constraints. It is hoped that this testing can be extended in 1989 in association with a detailed recording of the site as part of the second phase of the Minas Basin survey. In the meantime, Structures 19, 10 and 14 have been assigned Borden numbers BfDb-4, 5 and 6 respectively. A detailed analysis of the tests is being prepared by Laird Niven and Stephen Powell.

Cape Breton Log House Survey

In October 1987 James St. Clair reported a surviving log house at Marble Mountain. This was investigated very briefly in the company of Richard MacKinnon of University College of Cape Breton, Gerald Pocins of Memorial University of Newfoundland, and High Cheape of the Royal

Museum of Scotland. The derelict log house at Alba, discovered in 1978, was also revisited, and it was decided to undertake an assessment of reported log house survivals in Cape Breton.

In March 1988 a meeting was held in Sydney with Ronald Caplan of Cape Breton's Magazine, and a general discussion of log buildings in Cape Breton was published as an article in the spring issue of the magazine with an appeal for information on any known or suspected log houses. This produced only one response, from John Campbell of Cape North. However, Mr. Campbell later proved to have some very useful information.

During the first week of August 1988 a reconnaissance was carried out. Initially, discussions were held with staff at the Highland Village and Richard MacKinnon (who is on their board of directors). The Alba area was then visited in the company of Richard MacKinnon and Fred Cameron.

The small, low white house just west of the J. H. MacKay property on the South Side road was examined (UTM 530897 on NTS 11 F/14). The general appearance of this structure is reminiscent of the log house at West Alba, but glimpses of the sills suggested a frame structure. According to J. H. MacKay, this house was built about 1870, and he confirmed that it was of frame construction. The property is now owned by a U. S. resident Mr. MacKay cited the Alba example as the only log structure in the area.

This derelict log house was visited again and its condition assessed. While it is still standing, it is in a state of imminent collapse and cannot be expected to survive much longer. The possibility of a joint Highland Village/Nova Scotia Museum to either salvage the building, or at least dismantle it and record it, was discussed.

From Alba I proceeded to the Marble Mountain area and re-located the log house seen briefly in 1987 (UTM 547771 on NTS 11 F/14). The access road is on the south side of the Marble Mountain - Malagawatch road, 3 km east of Campbell's Store at Marble Mountain (marked by a brown wooden garbage bin at the roadside). The property and the roof of the log house are clearly visible at the head of MacDonald's Cove from Marble Mountain beach, and from the road as it skirts MacDonald's Cove. The property is owned by Charles Kehoe of D'Escousse, who has built a substantial residence by the water. An associate has built a cottage just to the north of this. A third associate, Wayne Poirier, is renovating the log house, which sits on higher ground to the east of these. This property was formerly occupied by a MacMillan family, the last occupant being Norman MacMillan. Mr. Kehoe acquired the property after his death.

Mr. Poirier was not present, but Mr. Kehoe gave permission to inspect the structure. The house had been re-levelled on its stone foundation; the shingling was being repaired and painted; and power was being installed. The interior is unaltered, but presumably will be gutted to be renovated. The interior is very similar to the Alba example in terms of access and partitioning. Two of the interior window frames are missing, exposing the sawn ends of horizontal logs which form the exterior walls.

The inner and outer faces of some of the logs are squared, perhaps to accommodate sheathing, while others are fully round. The attic is open, unfinished, and very similar to the Alba example, with a top log visible. Indeed, although the walls are perhaps a little higher, the whole structure is very reminiscent of the Alba example. According to Mr. Kehoe, the original intention was to demolish this building, but Lawrence Campbell, of Campbell's Store in Marble Mountain, urged that it be spared because of its significance as one of the oldest surviving buildings in the area. Mr. Campbell was not at the store, and could not be contacted during this visit.

While at the Highland Village, Jim Watson, the Gaelic instructor, mentioned Alfred MacKay of Big Harbour Island as the owner of a log house which might or might not still be standing. Consequently, Big Harbour Island was investigated following the Marble Mountain visit. The Malagawatch Indian Reserve occupies the western half of the island. The eastern half of the island is occupied by four farms, with four farm houses on the south side of Big Harbour Island road to the east of the reserve boundary. Alfred MacKay's is the second of these from the boundary, a dormered house visible from the road. Mr. MacKay, who is in his mid-eighties, proved to be interested and informative.

There was indeed a log house on this property until about 30 years ago, when it was demolished. It was of horizontal log construction with some peg fastenings, but no nails. According to Mr. MacKay, there was also one on the property to the west of his which burned down within living memory. He also mentioned that he suspected that the house on the MacIntosh property, the most easterly of the four, might be of log construction because of its lowness, which he cited as a diagnostic trait of log houses. In particular, he mentioned the Alba log house, which he was familiar with when it was occupied. Mr. MacKay also suggested that the interior of the Little Narrows - Iona peninsula might have surviving early house forms. Mr. MacKay's house is located at UTM 595807 on NTS 11 F/15. No further investigation was undertaken at the time, but Big Harbour Island would certainly seem to merit a closer examination.

The North East Margaree area was visited next in an attempt to locate an abandoned log house reported by Ed Tompkins in 1981. According to his description, this structure was by Gallant River, to the northwest of Marsh Brook, at UTM 504415 on NTS 11 K/6. This area is reached by taking the Marsh Brook Road from Margaree Centre. This gravel road leads northwest about 2 km to the small community of Marsh Brook, clustered around the bridge over Marsh Brook. To the north of the brook Elmer Hart runs a building supply business. He was visited for potential information and directions.

He immediately recognized the description of the structure. He has seen it himself, and apparently it is now in a state of imminent collapse. However, he stated that it had been built only about 50 to 60 years ago by a George Binton, a local recluse known as "the hermit." It has been abandoned since his death. Further investigation of this structure was not considered worthwhile.

The Cape North area was visited next to interview John Campbell, whose home is located at the end of the west fork of the gravel road on the south side of the Cabot Trail, 3 km west of Cape North (UTM 861917 on NTS 11 K/15). Mr. Campbell is a native of the Malagawatch/Marble Mountain area and a brother of Lawrence Campbell. He has an avid interest in local history, particularly vernacular architecture, and is a potentially valuable informant.

He is familiar with the known surviving log structures in that area, and also remembers a log house which stood on the former MacInnes property on Militia Point. This structure fell down some time ago, and the property is now owned by an American who has built a substantial residence. In addition, he mentioned that George MacIntosh of Militia Point, aged 79, had told him that there were seven "French cellars" on his property. This was quite unexpected and led to what is potentially the most significant discovery of the season.

John Campbell has also been making extensive inquiries in the Cape North area, but has not yet found any hint of surviving log structures. A major problem is that any such survivals are not likely to be immediately identifiable by external observation. It became obvious during the course of a week's travel around Cape Breton that there are examples throughout of the basic form represented by the Marble Mountain example in particular, and, of course, there is usually no way of knowing from the exterior whether the structure is log or frame. The identification and detailed examination of such likely structures might reveal additional early log structures, but this would be a major undertaking.

The Kehoe property at Marble Mountain was visited again at the end of August. No one seemed to be present, but there had been very little progress in the restoration of the log house, and work was still confined to the exterior. Then Lawrence Campbell was located. He has relinquished the stove at Marble Mountain and is now living in the house on the west side of the marble Mountain road, just north of the Militia Point road (UTM 570804 on NTS 11 F/15).

Mr. Campbell is in regular contact with the Kehoes, and he indicated that they had recently moved permanently to their Marble Mountain residence. He undertook to alert them to the desirability of having the log house interior recorded if it is to be radically altered, and agreed to keep the Nova Scotia Museum informed of further developments. After this visit Richard MacKinnon was contacted by phone and brought up to date on the investigation. He indicated that he would try to monitor the structure during the fall.

Boisdale, Cape Breton County was the final area investigated. Several years ago Reverend Allan MacMillan of West Arichat brought a section of log from a log house to the Beaton Institute in Sydney. Reverend MacMillan was contacted by phone on September 28, 1988. He confirmed that the log

had come from a derelict log house at Rear Boisdale, the former property of "Little" Peter MacIntyre, and offered to help locate the site on October 9.

Reverend MacMillan was met at St. Andrew's Church, Boisdale on October 9. The church is located on Bourinot Road, just off Highway 223. Bourinot Road runs across the Boisdale Hills, connecting Boisdale and East Bay. The log house site lies on the west (right) side of this road, just under 5 km from the Highway 223/Bourinot Road intersection. The access driveway to the property is the first clear one on that side of the road, 4.8 km from St. Andrew's Church, and 4.9 km from the Highway 223 intersection.

The driveway leads to a still fairly extensive clearing containing the remains of two domestic structures. One is a house cellar with no superstructure surviving. Reverend MacMillan has photographs of the former structure, a modest L-shaped house, one element of which was of log construction, reputedly the second dwelling erected on the property. A frame addition was later added to this to produce the final L-shape.

The other feature is a small, collapsed log structure, described by Reverend MacMillan as having been the original log house on the property, later used as an outbuilding. Reverend MacMillan has photographs of this building taken about 15 years ago when it was still standing. Now only four courses of one gable are still standing, and the remainder of the structure consists of an overgrown rectangular ridge. Original dimensions are difficult to estimate from surface indications, but must have been in the 6 m x 4 m range. The surviving portion and the photographs indicate horizontal, partially squared, log construction with saddle-notched, neatly squared corners. Wooden peg fastenings are also reported by Reverend MacMillan. As in the case of other known examples, this structure appears to have been sheathed in at least the later stages of its existence.

This property must be the clearing indicated at UTM 934038 on NTS 11 K/1 edition 2. No buildings are indicated at this spot, but several are indicated elsewhere on this stretch of road, and the 1920 military map has a building indicated at this location. No buildings are indicated between Boisdale and the Frenchvale Road on NTS edition 4, and there is not even a clearing indicated at this location.

According to Reverend MacMillan this was always a MacIntyre property, the last occupant being "Little Peter." The church map (1877) indicates two MacIntyres on this side of the road, close together in this area. The property is now owned by a Jobe family of Glace Bay. The site appears to have considerable archaeological potential and merits testing.

This brief survey did not identify any additional standing examples of early log houses, and the count remains at three (Alba, Marble Mountain, and the Blue house at Valley Mills). Of these three, the Blue house is a mid-nineteenth century central chimney example which happens to have been built of logs; and one of the two presumably earlier examples is not likely to remain standing for much longer. On the other hand, the locations of five

former examples have been identified, and these provide opportunities for an archaeological testing programme. The Boisdale site is particularly significant since it is the first to be found outside of the River Denys Basin/West Bay area of Inverness County. With increasing interest it is also possible that additional examples will be reported: for instance, Reverend MacMillan suspects that there are probably surviving log structures in the Lennox Passage/Isle Madame area of Richmond County, and is pursuing inquiries.

Militia Point

While visiting Marble Mountain in connection with the log house survey on August 31, 1988 the opportunity was taken to investigate the "French cellars" reported by John Campbell on August 5. Directions were obtained from Lawrence Campbell, who lives close to the Militia Point road. He and a local companion of his who happened to be present were asked if they had heard of the cellars on the MacIntosh property at Militia Point. They had indeed, and the companion stated that, "the French were all through here", including some of the islands in West Bay, on one of which there was even a French cemetery.

The MacIntosh property was then located. It is reached by taking the second driveway on the left (north) along the Militia Point road. It is posted "Private Road" and leads to the MacIntosh farmhouse, an interesting frame structure built c.1860 according to Mr. MacIntosh. The house is indicated at UTM 594792 on NTS 11 F/15 edition 2. However, the house is actually located further south in the large clearing which constitutes the farm. To the east of the house there is a large cleared pasture on a terrace overlooking Pellier Harbour and the bar leading to Pellier Island, which forms the east side of the harbour.

Mr. MacIntosh confirmed that there were seven cellars located in an approximately linear arrangement along the eastern edge of the terrace. However, he has filled in all but the most northerly of these. This remaining example was examined briefly. It is located in the bend of the field road where it descends to the bar, and is quite small, rather nondescript, and partially filled with field stones. To the south of this a slight depression, also near the edge of the terrace, appears to mark the location of a second cellar, and Mr. MacIntosh indicated that there were at least two other cellars still identifiable by surface indications. Mr. MacIntosh confirmed Mr. Campbell's report that unfamiliar ceramics have been found in the vicinity of these foundations at various times. However, he does not know the whereabouts of any of these finds.

Essentially, the origin of these cellars is unknown to Mr. MacIntosh. The property has been in his family since the initial Scottish colonization of the area, c. 1820-30, and the features probably predate that event. If that is the case, the suggestion of a French occupation is a plausible one. The MacIntosh house and barn are the only buildings in the vicinity indicated on the 1884 GSC map, and the contemporary Church map confirms this, with the attribution "K. MacIntosh."

The Church map also has a building and "W. Pellier" indicated on Pellier Island. There is no indication of anything on the island on the GSC map, but it is called "Pellier Point." According to Mr. MacIntosh, Pellier was a Jersey merchant who had an establishment on the island in the nineteenth century. Mr. MacIntosh also said that the site of a smithy had been uncovered on the island in the past. No connection is made locally between this nineteenth century mercantile establishment and the group of cellars on the terrace, and the latter features probably represent a separate occupation.

The obviously strategic location of Militia Point and Pellier Harbour may help to explain the nineteenth century mercantile presence and a possible pre-Scottish occupation. The area is located in the centre of the main lake, about half way between St. Peter's Inlet and Grand Narrows, with a commanding view of the lake between those two points from the terrace on the west side of the harbour. The south-facing harbour itself is well sheltered, and the importance of the location in an era when water transportation was of greater importance is suggested by the indication on the GSC map of a steam boat wharf on the point.

The name, Militia Point, is explained by Mr. MacIntosh as deriving from the use of the point as the site for the muster and training of Cape Breton militia units at the time of the North-west Rebellion (1885). However, since the name appears on both the GSC and Church maps, it must surely have originated prior to the mid-1880s, and may refer to earlier activity of a similar nature.

Research undertaken at Louisburg indicates that Acadians were located on the Bras d'Or and elsewhere in Cape Breton prior to the expulsion, and particularly in the early 1750s. Exact locations have not been identified, but one settlement is believed to have been in the vicinity of Grand Narrows. Moreover, following the second fall of Louisburg, some Acadians are thought to have dispersed in to the hinterland (John Johnston, personal communication).

There is a reference in Holland's Description of Cape Breton (1768) to the remains of a French village in the area of the entrance to River Denys Basin, just to the north of Militia Point. This area was also used as a base by the French missionary, Maillard, during the second quarter of the eighteenth century, and a cellar depression on the Malagawatch Reserve is believed locally to be the site of the mission.

There are indications, therefore, that Militia Point could be a likely location for eighteenth century French settlement. Indeed, the West Bay area in general may have potential since there is a reference in MacDougall's History of Inverness County to the unearthing of artifacts of "French design" at the head of West Bay by Scottish pioneers in the early nineteenth century. Certainly, the features on the MacIntosh property should be tested. The reported nineteenth century mercantile and military activities are also of potential interest, and should be investigated further.

Loch Lomond

During the course of the log house survey in Cape Breton the opportunity was taken to investigate a prehistoric find reported by Mrs. Shirley Woodland of New Waterford. The find proved to be a medium-sized, contracting stemmed point which had been considerably water-rolled. Her husband, Wayne, found it about 1976 on the shoreline of Loch Lomond by a small brook outlet in front of a cottage which he then owned. He has since sold the cottage to a cousin. The point was photographed and the location of the find determined (UTM 897718 on NTS 11 F/15).

The Loch Lomond area was then visited. The cottage is one of a group of small cottages on the east side of the northern portion of Loch Lomond, where the road skirts it, about 1 km northeast of The Passage, and in a small bay. The cottage in question is a small yellow structure towards the southern end of the bay and apparently in a state of disuse. A very small brook does enter the bay beside it, and a brief examination of the immediate shoreline revealed no traces of prehistoric occupation. The find remains another intriguing hint of the potential of the Loch Lomond/Grand River system (a large stemmed point was reported from Grand River in 1981). Further investigation of the system might be profitable.

Merigomish

On May 31, 1988 East Pictou Rural High School at Sutherlands River was visited to meet Dan Bourque, a teacher who has a display of artifacts from Smith and Winternberg's site 0 (Kerr Point, Merigomish) in his classroom. The collection is on loan from the Miller family, the property owners, and proved to be lithic and formal material typical of North Shore shell middens. According to Mr. Bourque, artifacts are still found when the area is ploughed, every four to five years, and David Miller, the present farmer, has an additional collection. The area is being used as pasture or hay field this year.

The site was located. Kerr Point is a prominent bluff extending north into Merigomish Harbour, about 3 km east of the Merigomish post office. It is clearly visible from the highway, and the actual point is located at UTM 474556 on NTS 11 E/9. The Miller farmyard lies on the north side of the road, at the base of the point. On the south side of the road there is a modern bungalow which is the Miller residence, just to the east of a church. No one was around and the area was simply viewed from the road. With the exception of a few small wooded areas, the entire point was under grass, with cattle grazing. Any investigation should be coordinated with the next ploughing. The Smith and Winternberg report indicated that there was only a small remnant of shell midden at this location. However, continuing finds suggest that there may be a more substantial resource.

From Merigomish the coast road was followed around Cape George to Antigonish. This seems to be a promising area for early housing data, with

a number of surviving examples of the mid-nineteenth century large central chimney form throughout. There are also a few hints of possible earlier forms. In particular, there are two abandoned central chimney examples and a derelict, long, low composite form of unusual appearance, to the north of the road between Livingstone Cove and Cape George Point. This is an area of concentrated early Highland Scottish settlement, and could provide useful comparative data for the investigation of early housing forms in Cape Breton. Further evaluation is required.

Porters Lake

While investigating some finds on the property of Mr. William Farrell at the south end of Porters Lake in 1987 he also reported a stone feature on the summit of Smelt Hill. This is also on his property, located at UTM 744442 on NTS 11 D/11. Because of the possibility of bulldozing on the hill in late 1988 Mr. Farrell offered to point out the feature before any possible disturbance, and the site was visited on June 24, 1988.

The top of the hill is quite heavily wooded, but, if cleared, would provide a view of the coast from Sambro to Jeddore according to Mr. Farrell. There is indeed an apparently circular, low stone feature, formed of field stones, at the very summit, about 10 m in diameter and 1 m high. However, it is very poorly defined on the north side, and an apparent central depression gives it almost a doughnut-like appearance. No artifacts were observed in the vicinity.

Much of this area was formerly cleared, and clearance piles of field stones are visible on the side of the hill. On the other hand, the highest point seems an unlikely location for a clearance pile, and this feature does not closely resemble the obvious clearance piles. There was a Second World War bombing range on Porters Lake, immediately to the east, but it seems equally unlikely that the feature can be connected with this. Mr. Farrell agreed to fore-warn of any disturbance in the area, when further investigation may be undertaken.

This investigation was followed by a brief visit to West Chezzetcook. This was a very early post-expulsion Acadian settlement, and may have potential both in terms of Acadian settlement and the log house survey. From the road the area certainly seems to have a number of small, single storey houses, and there may be potential for surviving log structures here.

Grand Pré

In March 1988 Mrs. Betsy Goodstein of the Grand Pre Pottery informed the Nova Scotia Museum that she and her husband had purchased a derelict early house on the Biggs farm, known as the Biggs House, and were going to move it to a lot immediately east of their house. The Biggs farm lies to the south of Highway 101, overlooking the Gaspereau Valley (UTM 968932 on NTS 21 H/1), while the Goodstein property is located on the

southeast corner of the Grand Pré Road/Mitchell Hill Road intersection, to the north of Highway 101 (UTM 972952). The Biggs House is believed to date back to the New England immigration of the early 1760s, and there is a tradition that part of it may be an Acadian house which survived the Expulsion.

The site was visited in May in the company of the Goodsteins as preparations were being made for the move. The house certainly did appear to be composite, but there was nothing that definitely suggested an Acadian origin for any of it. During the process of dismantling about half of a coarse earthenware vessel was found sitting on top of the basement wall. This was identified by Denise Hansen of the Canadian Parks Service as a pudding dish of Anglo-American redware, dating to about 1760-80, which would be consistent with an immediately post-expulsion occupation. Tentative permission was given for the site to be tested by the Nova Scotia Archaeology Society in the fall, after the removal of the superstructure.

The site was visited again in July when the house was moved. Contrary to the Goodsteins' prediction that the basement would be left virtually intact, it was, in fact, almost completely destroyed. Only traces of wall footings remained, and much of the area immediately surrounding the basement had been dug out. Apart from structural débris, very little cultural material was exposed by these excavations, and the only relatively early material comprised a few very small sherds of pearlware and redware.

Since the Biggs family was anxious to clean up the area, and areas suitable for testing were now covered by large piles of fill, it was agreed that the former foundation should be filled in. Subsequently, because of the extent of the disturbance and the lack of cultural material in soil exposures, it was decided to abandon the planned testing.

Ross Farm

At the request of branch staff, Ross Farm was visited on May 30, 1988 to investigate and assess the traditional site of a log shelter said to have been used by the Ross family prior to the erection of Rosebank Cottage in 1817, and a possible early road line to the east of Highway 12, perhaps associated with this early structure. The area was examined with Miles Russell, Assistant Curator, as guide.

This first feature investigated was a low stony ridge along the margin of the swamp on the western shore of Lake Lawson which has been interpreted locally as a possible early road. This is highly improbable, and the feature appears to be completely natural, the result of seasonal ice rafting.

The traditional site of the log "cabin" is in a clump of woods at the edge of the slope down to the lakeside swamp. This wooded area juts into the pasture about 100 m to 150 m northeast of the house. Within the woods there are two shallow, irregular depressions, roughly oval in shape, and about 2

m apart. The more southerly of these does appear to represent a small foundation, partially excavated into the slope to create a level base. The other is less convincing and may be natural. A thorough clearing of the interiors of the depressions and the immediate surrounding area would assist a more detailed evaluation since there is a fairly deep covering of debris and leaf mould. Testing may be required to provide additional data. However, if the features do represent a brief temporary occupation, the archaeological record is likely to be minimal and probably undiagnostic. These features are located at UTM 848533 on NTS 21 A/9.

Immediately east of these features a well-defined roadway is terraced into the foot of the slope, and can be traced north and south to the limits of the pasture. However, to the south it ends at another swampy area, and to the north there is no trace of it in the rough terrain beyond the field. It seems probable, therefore, that it is a feature of this property exclusively. It seems likely that the line of the public road was the present one from quite early times, although there may have been a very early pioneer trail that followed the edge of the swamp. The Church Map (1883-87) shows the public road approximately on its present alignment, and has no indication of any other road between it and the lake.

Liaison and Monitoring

The site of the Whites Lake burial mound was monitored throughout the year, and liaison was maintained with the SSHRC-sponsored excavation by St. Mary's University which completed the excavation of the site in May and June. In July and August liaison was also maintained with the Lunenburg County Historical Society excavations at Fort Point, LaHave, directed by Marc Lavoie.

The Minas Basin survey project, directed by Michael Deal, was the Nova Scotia Museum's main archaeological field effort of the year, and logistical support and field assistance were given throughout July and August. In conjunction with this survey, a brief reconnaissance of the north shore of Gaspereau Lake was undertaken. This area is very accessible from Highway 12, where there is a small parking lot with a short trail leading to the dam at the Gaspereau River outlet. There is a concentration of eroded prehistoric sites in this area, and there was extensive evidence of very serious disturbance by artifact collectors. Unauthorized digging has obviously become extremely popular at this very accessible location in recent years. Attempts should be made to monitor and control this activity.

In late August, the Bain site at Cheggogin, Yarmouth County was extensively tested by a combined St. Mary's University/University of Maine expedition with financial support from the Nova Scotia Museum. This project was visited and assisted with additional field crews from the museum. In conjunction with this a reported find on the north shore of Molega Lake, Queens County, was investigated briefly.

In the summer of 1987 a small, corner-notched quartz point was found in a wheel rut on the beach on the west side of Baker Point, which forms the east side of a bay into which Pleasant River flows. Ohlman Point, an almost identical feature, forms the west side of the bay. The find spot is located at UTM 516148 on NTS 21 A/7, and has been designated BcDf-3. This area has obviously been opened up for cottage development quite recently. A new road provides access from New Elm on the Chelsea to Pleasant River road, and branches extend out on both Baker Point and Ohlman Point. Power lines have been installed and several cottages already exist, although there are many more undeveloped lots advertised for sale. The beach on the west side of Baker Point was examined briefly, but no indications of prehistoric occupation were observed. However, since this section of the lake is just being developed, further investigation should be considered.

In September, excavations at the new Grace Maternity Hospital site at the corner of Robie Street and South Street in Halifax were monitored as a result of concern about possible archaeological potential expressed by the civic historian. Excavations were quite far advanced by the time the site was visited, and had revealed late nineteenth or twentieth century foundations underlain by bedrock. Nothing of archaeological significance was observed.

Similarly, excavations for the new Dartmouth Civic Centre on the waterfront between Portland Street and Ochterlony Street were monitored in November and December at the request of the city of Dartmouth. This area was considered to have a low potential and, in a general context of extensive fill, the only features revealed were the remains of the foundations of nineteenth century buildings which occupied the area between Portland Street and Queen Street until about 1970.

Other sites visited during 1988 were the site of the new museum of industry at Stellarton and the Debert Palaeo-Indian site.

Heritage Research Permit A1988NS07

**PRELIMINARY EXCAVATION OF THE
ALBION IRON FOUNDRY**

**Helen Sheldon
Private Consultant**

Introduction

The Albion Iron Foundry was established in 1828 by the General Mining Association for smelting and founding iron. A disastrous accident in 1829 in which the furnace seized saw the end of the smelting operation, but founding continued until the early twentieth century when the foundry was dismantled and moved to New Glasgow.

In the fall of 1987 the Nova Scotia Museum commissioned a survey of the foundry location on the site of the new Nova Scotia Museum of Industry, to determine if any remains existed. The location of two brick foundations during the survey proved that such was the case.

Spurred by this discovery, a longer field season was planned for the fall of 1988. Three people excavated a larger area of the foundry for eight weeks. They revealed several features and thousands of artifacts related to the foundry.

An 1841 article on the Albion Foundry describes a complex and efficient operation. At this time the foundry consisted of:

a large brick building erected on the western bank of the East River, and at the northern extremity . . . of the group of coal shafts now open. This building comprises casting houses, fitting shop, pattern marking shop, engine house and sawmill; with two smelting cupolas for smelting iron, and one for copper and brass, also a large reverbretory air furnace, (capable of smelting five tons of pig iron at one time), a drying stove, powerful crane, etc. The steam engine, of 14 horse-power, drives the sawmill, lathes, etc., in the fitting and pattern shops, and a powerful blowing apparatus for working the cupolas and smiths' fires. It also contains a boring mill, for boring cylinders, pipes, pumps, etc.

"Foundry work is the name applied to that branch of engineering which deals with melting metal and pouring it in liquid form into sand moulds to shape it into castings of all descriptions" (Raymond 1917).

The least complicated way of casting iron is called green-sand moulding. A wooden pattern of the desired casting is made and placed in a mould box called a flask. Damp moulding sand is then pounded over the pattern in both halves of the flask. When the pattern is withdrawn the moulding sand retains its shape and the mould is ready to pour. Molten iron is poured into the mould before the sand dries and the flask is clamped together until the mould has hardened.

Some patterns require the use of cores in moulding. Cores are shapes made to create hollows or cavities in castings, for example, casting a length of pipe requires the use of a core to create the hollow interior of the pipe. Without a core the pipe would be a solid bar. Cores are held in place by the mould sand or by small supports called chaplets.

Sand used for moulding must have specific properties. Good quality moulding sand should be capable of withstanding the extreme heat of molten iron, should be porous to facilitate the release of gases, should contain some clay for strength, and should have regular grain. Different sands are used for different purposes. For example, sand used to cast thin stove plate with detailed decoration has to be fine-grained, high in clay content but not necessarily porous. Sand for large castings must have a coarse grain, be high in silica and have a low clay content. Moulding sand can be used more than once if some fresh sand is added.

Excavation

The 1988 excavations at the foundry consisted of two separate events: one day's digging by a team of 15 volunteers in May and eight weeks of excavation by a crew of three in October and November. Additionally, tests were made in an area believed to be the coke ovens. These tests are treated separately at the end of the report.

May

For the volunteer excavation a 9 x 2 metre rectangle was strung off over an area of the site that promised to be productive, located 14 metres east of the datum on the north-south baseline. The rectangle was divided into smaller pits of 1 x 2 metres with two people assigned to each pit. Excavation proceeded with trowels, all backdirt being screened through 1/4 inch mesh.

Because of the limited time available, the excavation did not reach great depths, varying from five to ten centimetres. At the end of the day a layer of plastic was placed over the pits and the backdirt and sod were replaced.

Numerous foundry-related artifacts were recovered including mould clamps, risers and wedges. The only feature revealed was a small section of the upper course of a brick foundation wall. Only a few bricks of this wall were uncovered before excavation ceased.

October

In the fall field season excavation concentrated upon the 9 x 2 metre area started in May. Sod and soil were quickly removed to the level of the plastic and excavation began. The 1 x 2 metre pits of May were combined into 2 x 2 metre pits to speed excavation. The field crew consisted of the author, Kevin Robins and Larry Bjarnason.

Trowels were used for the most part, combined with the discretionary use of pick and shovel.

By the end of November 15 m² had been completely excavated, including eight of the original nine 1 x 2 metre pits. A 2 x 2 metre pit was excavated immediately east of the original area to follow the vent feature and additional 1 x 2 metre and 1 x 1 metre pits were opened to the south to expose greater amounts of the brick walk. The northernmost pit started in May was not touched as other areas were deemed more important. Four brick features and several thousand artifacts were recovered. These are described in detail below.

An exceptionally informative tour of the New Glasgow foundry greatly added to the crew's familiarity with iron working. The older section of the foundry was erected in the late nineteenth century and probably does not differ significantly from the Albion foundry. The modern casting process used at the New Glasgow foundry does not vary greatly from nineteenth century descriptions, and many of the excavated artifacts are the same as those currently used at the New Glasgow foundry. The foundry staff were extremely helpful in answering questions and identifying artifacts.

Stratigraphy

The stratigraphy of the excavated area can be divided into two major sections: the area northwest of the foundation wall, i.e., the interior of the building; and the area southeast of the foundation wall, i.e., the exterior of the building.

The site varied in depth from approximately 50 cm at the southern end to approximately 100 cm at the northern end.

Interior

In the interior of the building is a basal layer of hard-packed reddish clay and gravel. This probably is the original base, with the interior features (the foundation walls and vent) being set into it.

Above the basal layer is a concentration of black-brown sand, which probably resulted from buildup of used casting sand on the floor of the foundry. The black sand was sent with some black casting sand from the New Glasgow foundry to T.U.N.S. for analysis to determine if the two were similar. The report was inconclusive in that it did not verify that the excavated sand was used casting sand. However, the similar grain size of the two sands indicates that the excavated sand could be casting sand.

At the interface of the sand layer and the one above many artifacts were found. These were deposited on the foundry floor at the time the foundry was closed.

The next layer is orange-brown sand with inclusions of brick fragments and mortar. This layer represents collapse of the building after the foundry fell into disuse.

Capping the area is a layer of loam and sod from post-occupation soil accumulation.

Exterior

On the exterior of the building the basal layer consists of hard-packed brown sandy clay and gravel. This is the original sub-soil. The two exterior features, the foundation wall and the brick wall, rest upon it.

Immediately above the brick walk is a thin layer of tightly-packed ash. The ash probably originated from the foundry and accumulated during use of the walk.

Above the ash are several layers of grey sand with brick fragments, cinders and some wood. These layers appear to have accumulated after the walk was disused but while the foundry was still operating. Possibly at some time in the latter end of foundry operation modernization made use of the walk obsolete.

Above the grey sand is a sandy loam containing mortar and red brick fragments. This layer represents building collapse.

The area is capped with a post-occupation soil buildup of loam and sod.

Features

Four features were discovered during the excavation, a walkway, two walls and a vent. All are composed of red brick and are in relatively good condition. The only unstable area is the upper course of the northern section of the foundation wall which has slumped to the southeast. None of the features were excavated entirely because of their size and lack of time. Future excavation should concentrate upon fully exposing them.

Brick Walk

This feature was located at the southern end of the excavation. It consisted of a single course of red brick approximately 140 cm wide, with an excavated length of 230 cm. The walk is nine rows of brick wide. The centre seven rows are laid end to end, with the two outer rows being laid edge to edge, forming a border.

The surface of the bricks is polished smooth and slightly cracked, showing signs of much activity. This walk leads from its northern terminus to an undetermined location to the south. Further excavation is needed to discover where it leads.

At the northern end of the walk is a raised double row of bricks with a square block of bricks at the west end of the row. This part of the feature forms a terminus for the brick walk. It might have supported a door or step leading to an exterior porch area of the building.

Brick Wall

The brick wall located primarily in Pit B consists of two sections. The first 90 cm is a well-built foundation, five courses of bricks high with the bricks being tied together by alternating rows of headers and stretchers. The wall is 50 cm wide.

The next 220 cm consists of a flimsy foundation two courses high. The bricks are not tied together at all; each brick is laid as a header resting on its narrow edge. This relatively unstable wall would not support much weight and probably served as a foundation for a porch or similar light structure. The wall ends abruptly at its northern extreme. This appears to be the location of an entrance to the structure.

The brick wall is believed to be an external foundation wall for the foundry building. Therefore, all areas to the northwest of the wall are in the interior of the building and all areas to the southeast are on the exterior. This hypothesis is supported by the artifact distribution which shows a significant difference in the numbers of artifacts found in the two areas. After adjusting for the difference in area excavated,

over twice as many artifacts were found inside the wall as were found outside.

Vent

This brick structure ran through pits C, D and E. Approximately 630 cm of this structure was uncovered. At the northeast corner of Pit D the structure butts against the outer edge of the brick foundation wall described below. However, the interior tunnel continues under the brick wall, curving slightly to the east (Figure 7).

The structure consists of two parallel rows of red brick spaced 30 cm apart, covered at their northeast end by two large rectangular iron plates. These plates measure 120 x 50 cm. Traces of mortar on bricks in the uncovered sections indicate that these areas also were covered at one time, presumably also by iron plates. The interior of the feature contains a fine black dust lying upon a fine brown sand.

Lying along both the southeast and northwest exterior edges of the bricks was a concentration of broken clay tile, only a few centimeters wide. The tile appears to have been deliberately placed along the bricks, possibly to enhance drainage.

The function of this feature is uncertain. One possibility is that it housed the pipe that channeled air into the blast furnace. A powerful blowing apparatus was present in the foundry for providing air to the furnaces and forges. An illustration in Ure (1851) shows this function for a structure similar to the one excavated.

Brick Wall

A tiny section of wall was exposed in the northeast corner of Pit D. The wall runs northwest-southeast. Further excavation is required to reveal the function of the wall. A protruding lip is similar to the lip on the wall found in Test Pit 2 in 1987. The elevations of the two lips differ by 50 cm. However the two walls are similar and might be related.

Artifacts

Approximately 2500 artifacts were recovered from the Albion foundry. They were sorted into three groups based on activity or function: the foundry group, those artifacts relating directly to operation of the foundry; the architectural group, artifacts associated with buildings; and the domestic group, artifacts related to personal human activity, such as drinking and smoking.

The vast majority of artifacts belong to the foundry category. The one exception was nails which were classed as architectural but also might have been used, or made, by foundry activity. Most of the

artifacts are iron, and, thus, require conservation if their continued existence is to be assured. For future excavation at the foundry budgetary allowances have to be made for conservation of the iron artifacts.

The domestic artifact group was, by far, the smallest, with only 49 artifacts. This included all glass, ceramics and pipes found. Obviously, little eating, drinking or smoking was done in this area of the foundry. It is to be expected that few personal items will be found in the foundry, as activities such as eating probably were done at home, the workers' cottages being located only a short distance away.

Foundry Artifact Group

Mould Clamps

Eighty-seven mould clamps were found. All but four were within the building. The clamps were used to hold together the two halves of a mould to prevent the pressure of the molten metal from separating them. The clamps are of many sizes, ranging from 63 cm to 14.5 cm in length and from 10 mm to 2.5 mm in width. The size of the clamp would correspond to the size of the mould (Figure 1).

All the clamps have blunt ends except two that are spiked. These might have had another function, such as holding wood in place.

Small Clamps

Nine were found, seven were outside the building in Pit A. They are basically the same shape as the mould clamps but much smaller, ranging from 7.6 cm to 9.1 cm in length. Distribution of the small clamps suggests a function other than mould use. This function is unknown (Figure 2c).

Wedges

Forty-nine wedges were excavated, 46 of which were inside the building. Wedges were used in conjunction with mould clamps to hold flasks tight.

The wedges are iron, fairly uniform in size and shape, ranging from 9.5 cm to 11.5 cm in length and 3.5 cm to 4.0 cm in width. The tops are about 8 mm thick, tapering to a dull point at the base. Most have a slight lip at the top (Figure 2a). One wedge has a hole through the top.

Iron wedges were used with clamps on iron flasks used in dry-sand work, which used shorter clamps. Hardwood wedges were used on the floor flasks, none of which have survived at the foundry site.

Gaggers

Ninety-one artifacts were classed as gaggers. Seventy-four of these were found within the building. The majority are about seven millimeters in diameter and of various lengths.

Gaggers are L-shaped iron rods used to help support the casting sand in a mould (Figure 3).

Chaplets

Chaplets were used to support portions of cores in the casting sand within the mould. New nails often were used for small cores. Some of the nails that are classed as architectural artifacts could have been used as chaplets.

Risers

Risers are one of the larger groups of artifacts recovered from the foundry, with a total of 536. Only 33 of them were found outside the building (Figure 4).

Risers and vents are holes made through the casting sand to allow for the escape of gases when pouring a mould. During pouring metal enters the risers and solidifies. When the casting is removed from the mould the metal-filled risers are detached and discarded or used as scrap metal in future pourings.

The resulting cylindrical rods are risers. They usually have a rough surface, a round cross-section and are of a variety of lengths. Diameter ranges from a few millimeters to a few centimeters.

Some of the artifacts identified as risers may be gates. Gating refers to the practice of making several channels in the sand through which the molten metal enters the mould. The metal that solidifies in these channels after the pour are called gates. As both gates and risers are created from metal solidifying in channels during pouring a mould, and difficult to distinguish, all such artifacts have been called risers.

Rods

Thirty-seven rods were found. They range from three mm to 11 mm in width. They have either round or square cross-sections and come in a variety of lengths. All are wrought iron.

Some of these may have functioned as venting rods, used to create risers in the casting sand. Others may have been used to strengthen cores, similar to using gaggers to strengthen casting sand.

Bar Stock

Bar stock refers to square or rectangular cross-section lengths of wrought iron. Twenty pieces of iron were classed as bar stock, 16 found within the building. They range in length from 7.7 cm to 34.5 cm. The cross-sections are: 3/8 x 3/8" (1), 1/2 x 1/2" (6), 5/8 x 5/8" (1), 7/8 x 7/8" (1), 1 x 1" (1), 1 1/4 x 1 1/4" (1), 1 x 1/4" (4), 1 x 1/2" (1), 1 1/2 x 1/2" (1). The bar stock probably was imported into the foundry in this form to be subjected to further shaping as required.

Cast Iron Pieces

Twenty-five pieces of broken cast iron were found. These either were pieces of casting made in the foundry or pieces of cast iron tools used in the foundry. They are in a variety of forms, all broken, all unidentified (Figure 6a, b).

Casting Waste

Twenty artifacts are casting waste. They are plano-convex in cross-section and often slightly curved in longitudinal section (Figure 6e). They result from metal overflowing the mould during pouring into shallow grooves in the sand floor surrounding the mould. In manner of creation they are similar to risers and gates.

Splashes

A large number of iron splashes were excavated. Most were discarded during excavation, as was other industrial waste; some were kept and catalogued. They are solidified splashes of molten iron, of irregular outline, usually flat on one side and curved on the other.

Wire

These artifacts are called wire rather than rods as they were drawn, not pounded into shape. Seven pieces are iron wire, varying from three to five mm in thickness. One of these pieces obviously is a length of modern fence wire.

The wires could have had several functions within the foundry, from venting castings to fasteners.

The single piece of copper wire still has some fabric insulation adhering to it. This probably is electrical wire dating to the turn of the century.

Chisels

Eight chisels were recovered. Four have round shanks and four have square shanks. Three of the chisels are crudely made. The smallest is 11.4 cm in length, the largest is 52.5 cm.

On one chisel the upper end is narrowed and flattened with a bolt hole to accommodate a wooden handle.

Chisels could have been used for many tasks from forming wooden patterns to roughly smoothing castings to cleaning moulds.

Washers

Twenty large washers were found. All are iron except one, which appears to be brass. They range from 36 mm to 66 mm in diameter (Figure 2b). They would have been used on various and assorted foundry machinery.

Staples

A total of four staples were excavated. These U-shaped objects range from 3.6 cm to 11.5 cm in length.

Wrought Iron Scrap

Nine pieces of wrought iron were classed as scrap. They may have been intended for inclusion in a future melting of iron, or may have been discarded on the foundry floor.

Wrought Iron. Unidentified

Two pieces of unidentified wrought iron were uncovered from the iron foundry.

Handle

This iron handle is narrowed at one end to accommodate a wooden lever. It could have been used on a variety of machines.

Wrought Iron Plate

Nine pieces of wrought iron plate were excavated. Three of these are small fragments. The others are as follows: two curved sheets, each with one hole at each end, of unknown function, 10.7 cm wide and 7 mm thick; a rectangular piece of sheet iron with a rectangular hole in each end, 1.4 cm thick, 21.5 cm long and 6 cm wide; a rectangular piece bearing two circular holes placed at irregular intervals, 15.6 cm long,

6.2 cm wide and 6 mm thick; a rectangular piece with four circular holes, one in each corner, measuring 25.5 cm in length, 12.8 cm in width and 3 mm in thickness; and a rectangular piece with no holes measuring 17.9 cm by 6.3 cm by 1.3 cm.

Files

Four files were found. Two files have flat faces, with file grooves evident on one face only. They are 21.9 cm (broken stem) and 23.3 cm long (top possibly broken), 2.8 cm and 2.5 cm wide and 0.9 cm and 0.7 cm thick.

The other two files each have one flat face and one convex face. These are 28.5 cm long (broken stem) and 28.4 cm long, 3.3 cm and 3.4 cm wide and 1.1 cm and 1.4 cm thick.

Square Nuts

Six square nuts were found, with an additional artifact being tentatively identified as a square nut.

Of the six, four are complete and two are halves. The complete nuts range in size from 35 x 35 x 20 mm to 56 x 56 x 28 mm.

Pipe

Three sections of iron pipe were found. All are of 1/2" diameter.

Strapping

Five artifacts are classed as strapping. All are iron. Two pieces are perforated, one with three holes and one with five. Two pieces range from 1.5 cm to 7.7 cm in width, 4 mm to 8 mm in thickness and 11 cm to 48.2 cm in length.

Eye Rings

All six eye rings are wrought iron. Five are of similar size, ranging from 11.5 cm to 12.8 cm in length. The sixth has an eye attached to a much longer rod, measuring 23.9 cm in total length.

This longer eye ring as well as some of the shorter ones may have been draw sticks used to manipulate patterns in the casting sand.

Stove Parts

Several pieces of cast iron stove were excavated, appearing to represent one stove. The stove could have been either manufactured for sale by the foundry or a piece of foundry equipment.

A circular plate of iron with an eye ring handle penetrating its center was identified as a stove top lid. It has a diameter of 13.8 cm.

Two pieces of stove top bear sections of the circular openings into which stove lids would have fitted.

Two sections of stove side panel have an elaborate moulded relief decoration of beaded rows and thistles. The panels are 6 mm thick.

Tap

One tap for threading holes was found. It has a total length of 10 cm with the threading element being 7 mm wide.

Cog

A large iron cog would have been a component of one of the foundry machines. It has a round shaft 23 cm long and measures 11 cm across the cog spokes.

Damper

One iron artifact might be a damper for a small furnace or forge.

Spacers

Three spacers of different types were found. One was circular, tapered, with a central hole, measuring 2.3 cm in thickness and 7.2 cm in diameter.

Another was rectangular with a central hole measuring 6.5 x 5.0 x 4.4 cm. These two spacers probably were used on a bolt to maintain a gap.

The third spacer is 14.8 cm long. This object would have been used as a prop to maintain a space between objects.

Pipe Flange

One large pipe flange had an inside diameter of 13.5 cm and an outside diameter of 24 cm. It is circular and threaded on the inside. One of these flanges would have been used on each side of a valve in a pipeline.

Iron Ring

Two iron rings were found. One is large, measuring 2.7 cm high with an inside diameter of 17.5 cm and an outside diameter of 20.4 cm.

The other ring is much smaller, having an inside diameter of 4.0 cm and an outside diameter of 5.5 cm.

The functions of these rings are not known.

Collar

This broken cast iron collar would have been used on a pipe. It measures 6 cm in height with a maximum diameter of 12.1 cm.

Supports

Two identical cast iron supports were for supporting a pipe or ring. They are rectangular with a bolt hole at each end and a raised curved central piece. They measure 17.5 x 4.3 x 1.8 cm.

Iron Plate

This piece of iron plate has an iron ring attached to its centre. The dimensions of the plate are 11.5 x 8.2 cm.

Another piece of iron plate has a large square shank nail through it. The plate measures 6.9 x 4.0 cm.

Unidentified

This unidentified object is complete, 5.0 cm long, with an oval cross-section of 2.1 x 2.9 cm. It is shaped like a knuckle bone.

Hook

A small iron hook measures 3.6 cm in length.

Horseshoe

One small horseshoe was found. It has a maximum diameter of 9.5 cm. Its small size indicates that it was made either for a small pony or as a good luck piece.

Pin

For lack of a better term this object was called a pin. One end is flattened with a hole through it. The other end is pointed. The round shank is 10 mm in diameter. The total length of the pin is 26.6 cm.

Stakes

Two large stakes both have square shanks. The head of the longer one has been pounded repeatedly. They measure 2.1 cm and 2.3 cm in diameter and 58.7 cm and 72.9 cm in length.

Rod

One long wrought iron rod has a length of 87.4 cm and a diameter of 7 mm.

Specialized Bolts

An iron bolt measuring 31.7 cm long has three nuts on the threaded end. The other end is squared with a slit through it.

Another bolt has two pieces of cast iron and two nuts on it. One piece of casting swings freely around the bolt, the other is firm. The nuts are 2.4 cm and 3.4 cm square. The total length of the bolt is 8.9 cm.

Bolts

Bolts are classed as foundry rather than architectural artifacts as they are more likely associated with machinery than building elements.

Thirteen bolts were found at the foundry site. Five have square heads, seven have round heads and one is headless. One bolt has a washer and a nut attached. Another bolt has a single nut attached.

Brass

The common alloys used in foundries for casting are brass and bronze. Sometimes the term "brass" is used to cover all alloys of copper, tin and zinc, but more commonly brass is defined as an alloy of copper and zinc and bronze of copper and tin.

Greater attention is paid to detail in brass work as the moulds are often small with fine detail. Tools used are basically the same as those used for iron work. Usually all spilt brass, and chips and filings from cleaning are re-used in future heats, thus significantly reducing the amount of brass waste accumulation on the foundry floor.

Brass Risers and Waste

Ten brass risers were found. These are thin tapering cones with roughened exterior surfaces, formed when brass flows into vent holes in the mould.

Two pieces of semicircular brass strips are waste from mould work.

The presence of the risers and waste at the Albion foundry confirms that brass work was done here.

Brass Casting

A curved piece of broken brass casting may have been a product of brass work at the foundry.

Brass Bushing

The brass bushing served as a receptacle for spinning rods. Brass was preferred for bushings as it wears cleanly and evenly. It measures eight cm in length, with two holes measuring 2.2 cm in diameter on the inner face and 1.2 cm diameter on the outer face.

Pipe Fitting

The brass pipe fitting is for connecting a small pipe to a larger pipe. The larger pipe would measure 6.1 cm in diameter, the smaller pipe 4 cm in diameter.

Bar

A brass bar of undetermined function measures 0.5 cm by 0.5 cm by 6.0 cm.

Pipe Fitting

This end piece for brass pipe is 1.9 cm in diameter and 6.6 cm in length.

Sheet Metal

One fragment of sheet brass was found. It has been cut and folded.

Nails

Eleven of the excavated nails were brass. Ten have no heads and one has a rivet-type head. All have square shanks. The exact use of these nails is not known.

Unidentified

Three small brass objects are unidentified.

Lead

Small amounts of lead were sometimes added to brass and bronze mixtures just before pouring to make the metal pour smoothly and be softer for machining. Lead was not used where the lustrous colour and conductivity of the brass or bronze was desired.

Six pieces of scrap lead sheet recovered from the site may have been intended to use as an additive.

Lead Strapping

Three pieces of perforated lead strapping were found. Two are extremely flexible, being only 1 to 2 mm thick. The third piece is firm, curved, with three nail holes, two with nails in them. It measures 9.4 cm long, 1.0 cm wide and 0.2 cm thick.

Lead Caps

Lead caps were used to cap the ends of lead pipes. Two were recovered from the foundry. One is roughly shaped. The other is well-made, threaded on the inside.

Lead Pipe

A curved fragment of cast lead probably is a piece of lead pipe. It is 8 mm thick.

Moulded Lead

Two decorative pieces of moulded lead were recovered. One piece is a crown shown in relief on one face. The reverse face is plain, slightly concave and shows signs of working. It is 6.5 cm long, 5.3 cm wide and 13 mm thick (Figure 6d).

The second piece is two leaves or feathers, made by the same technique as the crown. It measures 14.3 cm long, 3.5 cm wide and 0.5 cm thick (Figure 6c).

These decorations were made by pouring molten lead into moulds and roughly smoothing the back after hardening. The crude nature of the decorations suggests they were made by workmen for their own amusement or use.

Pattern

The only wooden artifact recovered from the foundry is a worked two-piece oval that is interpreted as being a mould pattern.

The two pieces of the pattern consist of a seven cm cylinder, 11 cm diameter, nailed to the centre of a 29 x 13 cm oval board. The nails are the square-shank, flat-head type.

The pattern appears to be of a large plug or stopper.

Architectural Artifact Group

Nails

Nails are the largest artifact class from the foundry, with 1132 recovered. Most of these (75.7%) were found within the building.

All but 26 of the nails are the square shank, flat head, machine-cut nails that date to the nineteenth century. They range in size from small finishing nails to large structural nails.

Twenty-six nails are wire nails, which post-date the square-shank type.

Spikes

Of the 12 spikes recovered from the foundry seven have square, flat heads. Five have rose heads with four facets.

Screws

The 46 screws all have slotted type flat heads.

Slate

Fourteen pieces of roofing slate were collected. One of these bears a portion of a nail hole (Figure 5c). This dark purple slate was a popular roofing medium in the nineteenth century. Seven pieces have mortar adhering to them.

Shingle Tacks

Two shingle tacks were recovered. They have a short round shank with a large round head. They are attached to pieces of asphalt shingle, and probably date to the later period of site occupation.

Window Glass

Window glass recovered from the site consisted of 322 sherds ranging in colour from clear, through aqua to green. The majority are aqua in colour.

Window Leading

One small corner of window leading was found. This strip of lead served to hold individual panes in place.

Hinge Plates

Three hinge plates were found. Two are of similar size and shape, 13.6 cm and 12.5 cm long, tapered with no visible nail holes.

The third hinge plate is in better condition. It has four nail holes, one with the nail still in place.

Support Bracket

An iron support bracket may be part of a hinge plate. It has four holes.

Supports

Two similar supports may have been for holding a sliding door in place.

Tile

Several pieces of red clay tile were collected. These are flat, rectangular, 12 to 15 mm thick. The two supports present on some fragments (Figure 5a) suggest use as roofing material. However, quantities of broken tile found beside the brick vent feature suggest tile was used to enhance drainage.

Bricks

Of the hundreds of bricks and fragments excavated only one was collected. It is a large fire brick measuring 21 cm in length and 12 cm in thickness. The width cannot be determined as the brick is broken. It is stamped on one side with "HUGHES & EAD . . . STOURBRID . . ."

Domestic Artifact Group

Smoking Pipes. Clay

Six stem fragments and three bowl fragments of white clay smoking pipes were found. They are unusually uninformative in that no makers marks exist on any of the pieces, the stems are undecorated and the bowl fragments are so small that only tiny portions of moulded relief decoration can be seen (Figure 5f, g).

Smoking Pipes. Wood

One brown plastic pipe mouthpiece was found. It has a brass or copper band that attached it to a wooden stem. This piece is of twentieth century date.

Ceramics

Very few ceramics were found at the foundry, only 23 sherds from three vessels.

Eighteen of the sherds are from one ironstone vessel. This vessel has a cream fabric with a clear glaze on the inside and outside. The vessel has high relief moulded contours. A motif on the underside of the base is the lion and the unicorn surrounded by "STONE CHIN . . ." and "ST JOHNS P Q" (Figure 5e). This vessel is of late nineteenth or twentieth century date.

Two fine earthenware vessels were found. One vessel is represented by a single plate fragment with a blue transfer printed floral motif on the interior. The fabric is white with a clear glaze on the exterior (Figure 5b).

The other vessel is represented by four sherds having a light orange fabric and a white glaze. The over-glaze decoration is shiny in appearance.

Bottle Glass

Five fragments of dark green bottle glass were found. Four of these are body sherds from one bottle with a thin-walled rectangular body. The other is from a thicker walled round body bottle.

Five fragments of bottle glass are aqua in colour. Three of them are from one mould-made bottle with a rectangular body. One sherd is from a round body bottle. The fifth fragment is the neck and portion of the shoulders of a rectangular bottle. Mould seams indicate it was made in a two-piece mould. A portion of a glass stopper is in the neck (Figure 5d).

Two fragments of clear bottle glass were found. One is a small body sherd. The other is part of the top of a glass stopper.

Table Glass

Two sherds of clear glass appear to be from drinking vessels. One is the rim sherd of a tumbler. The other is tentatively identified as table glass. It is a small rim sherd, thick-walled with evidence of rough usage on the rim.

Bone

One piece of mammalian bone was found. It is a butchered vertebrae of the cut commonly known as "chop".

Leather

One small triangular piece of cut leather was found. It appears to be scrap material.

Summary

The excavated area to date is the western extremity of the foundry building, including segments of the furnace blowing apparatus, at least one exterior wall and an exterior walkway. The furnaces or forges should be in the vicinity, and could be exposed by excavation to the north and/or south of the blowing apparatus.

The vast majority of artifacts are related directly to foundry activity. The prevalence of mould clamps, gagers, risers, wedges, etc. indicates little activity other than foundry work occurred at the site. The scarcity of domestic artifacts indicates that workers pursued personal activities in other places. Over ninety percent of the artifacts are iron, which presents a major conservation problem for excavation of the site.

The preliminary excavation undertaken thus far has exposed an undisturbed site in stable condition. The brick ruins of the foundry are in good condition and have good potential for stabilization. The maze of walls and features that exist leave no surface indications, and can only be discovered through excavation.

Future excavation should involve expanding the existing area, to discover the heart of the operation - the furnaces. Exposing large areas in one field season would facilitate interpretation of the inter-relationships between features and artifact concentrations, and between separate features.

References

Raymond, H. M.

1917 Modern Shop Practice, Vol. IV Foundry Work. Chicago:
American Technical Society.

Ure, A.

1851 Dictionary of Arts, Manufacturers, and Mines. New York:
Appleton.

FIGURE 1
mould clamps



FIGURE 1

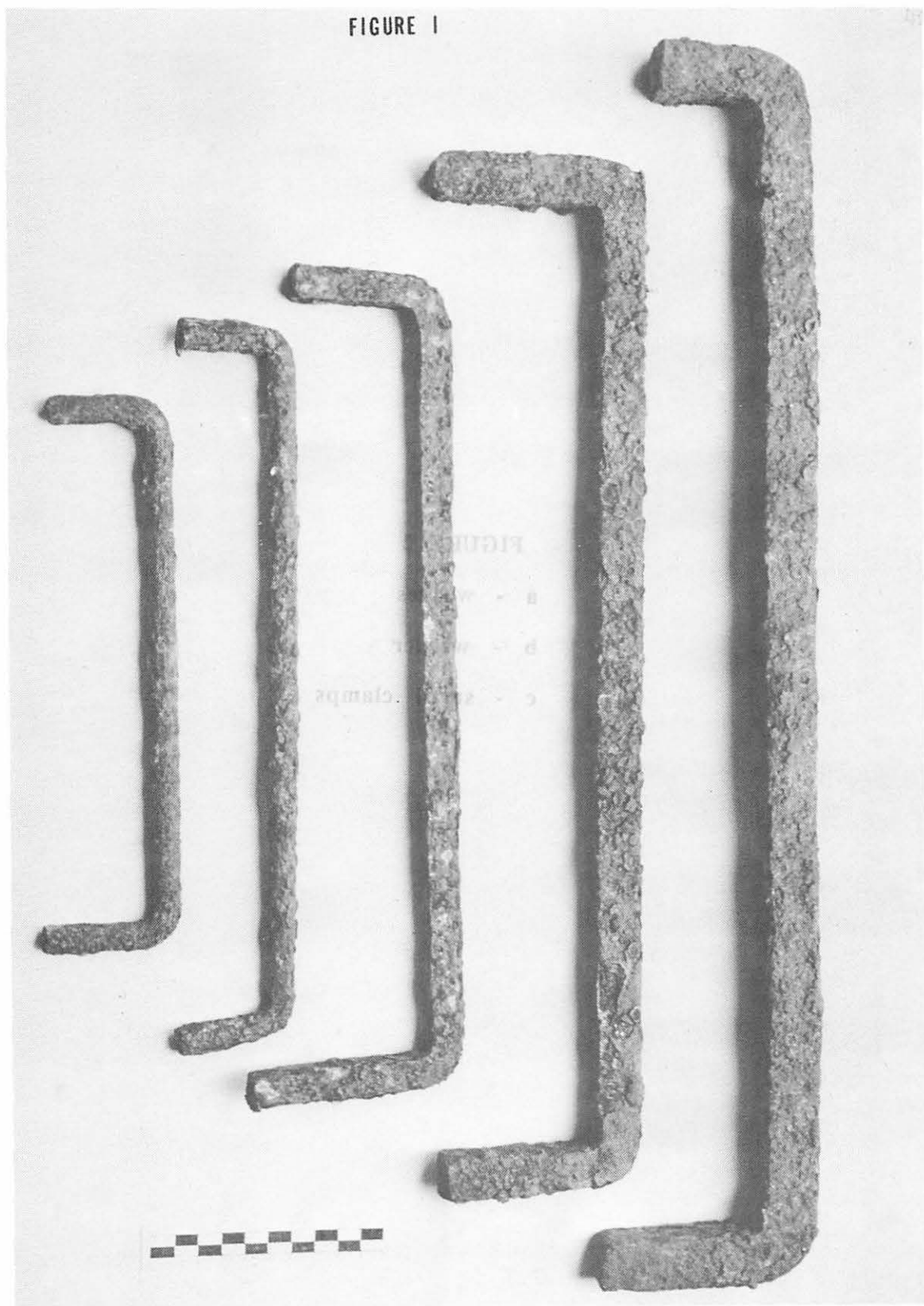


FIGURE 2

a - wedges

b - washer

c - small clamps

FIGURE 2

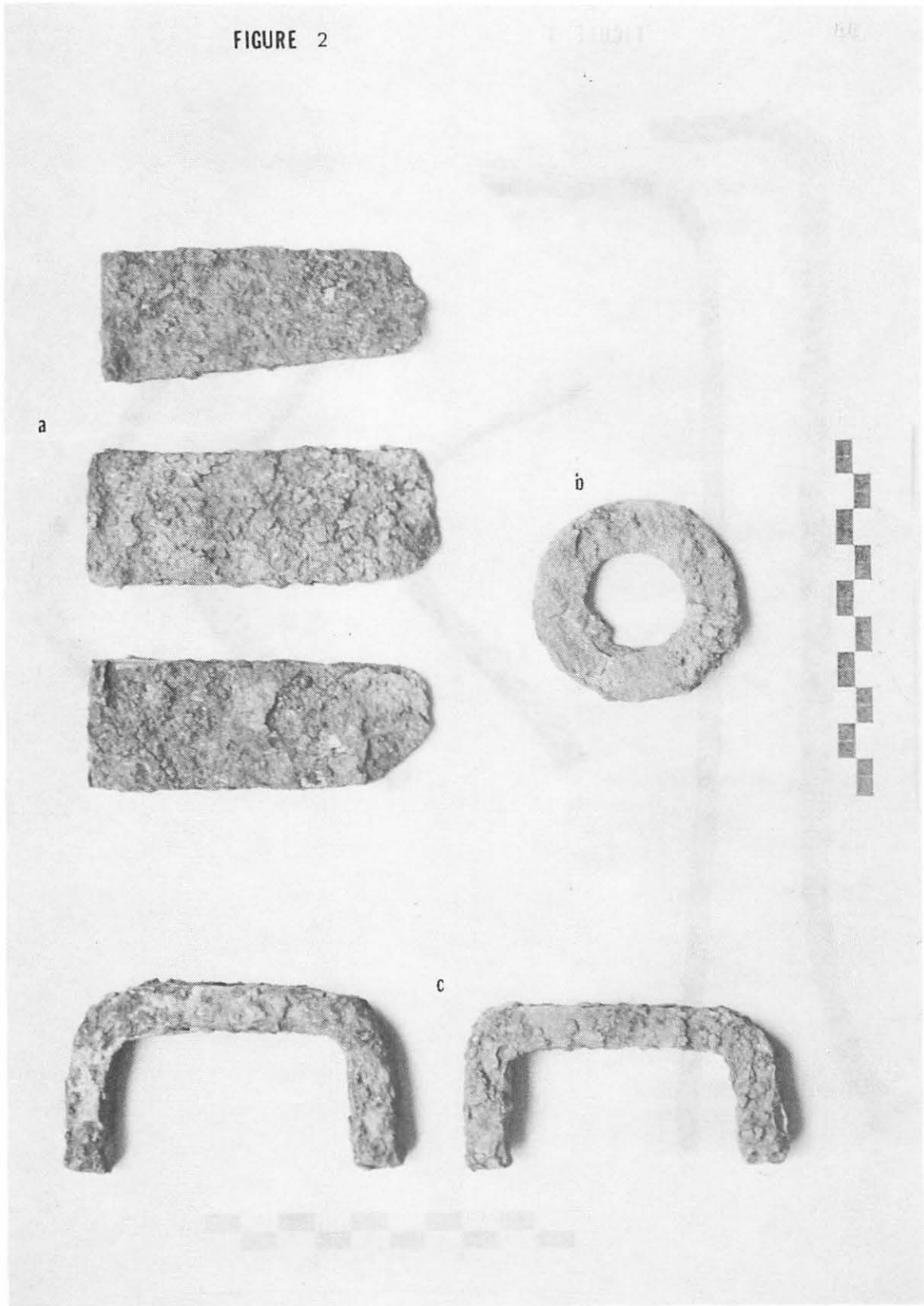


FIGURE 3

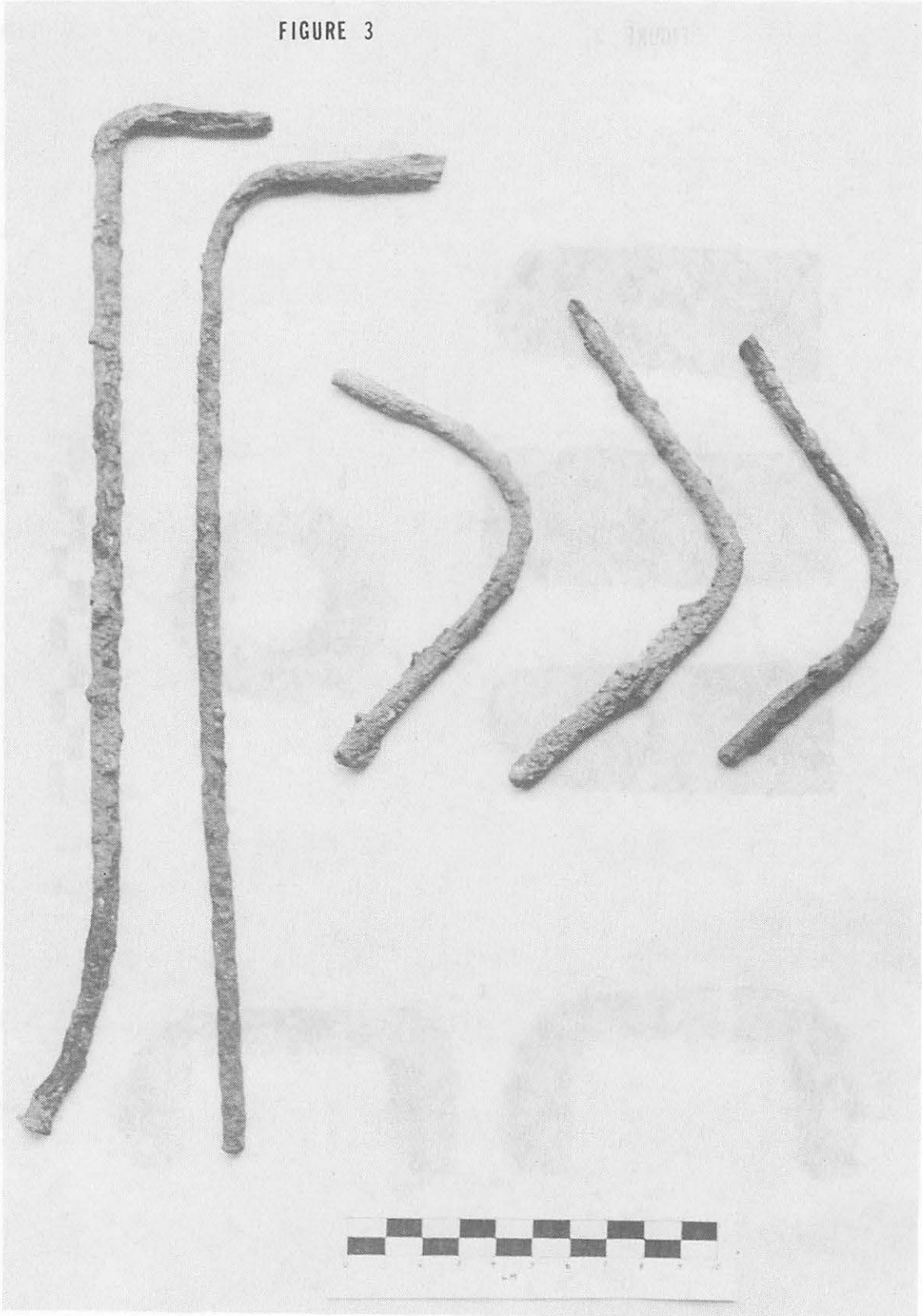


FIGURE 4

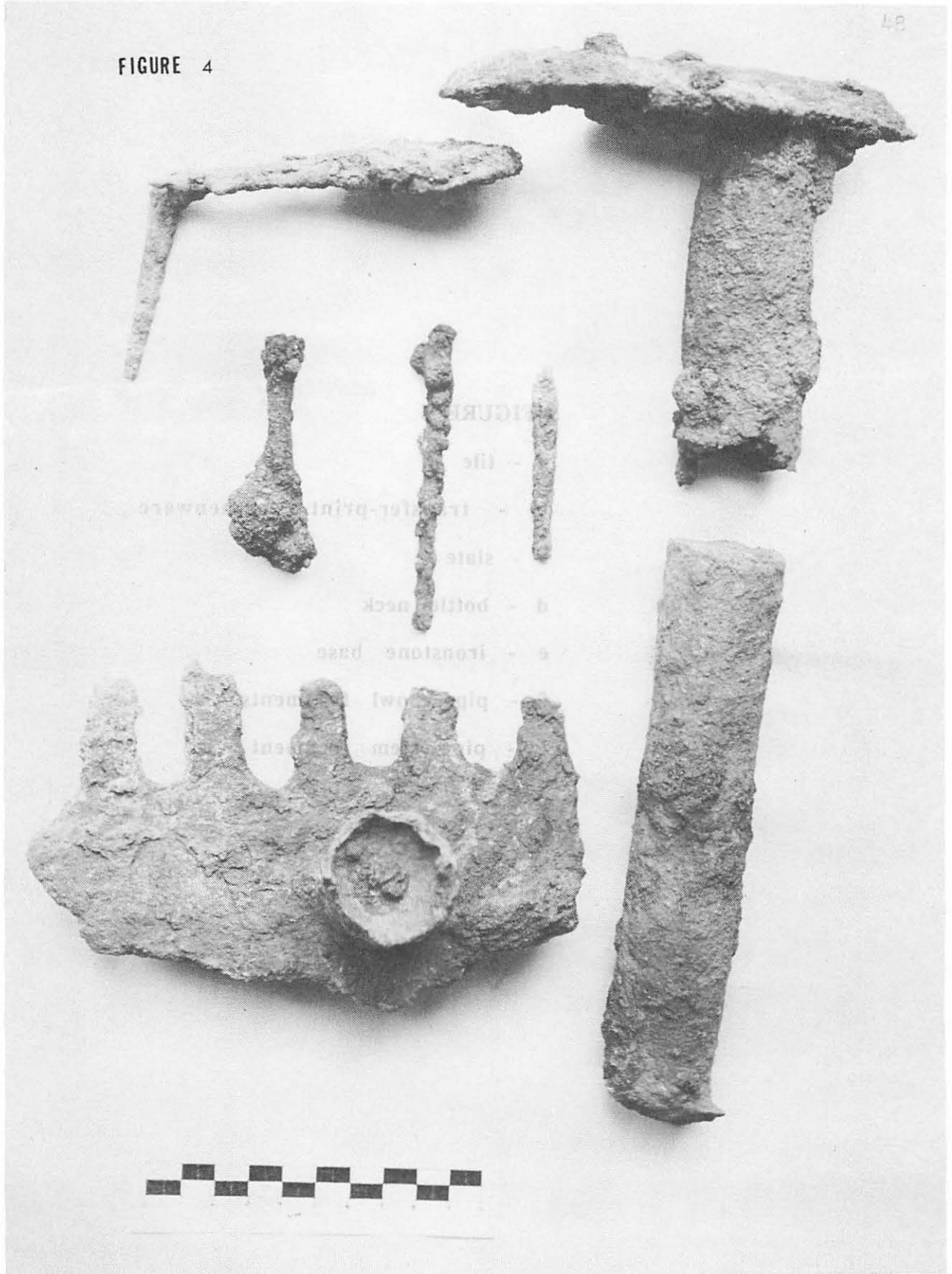


FIGURE 5

- a - tile**
- b - transfer-print earthenware**
- c - slate**
- d - bottle neck**
- e - ironstone base**
- f - pipe bowl fragments**
- g - pipe stem fragment**

FIGURE 5

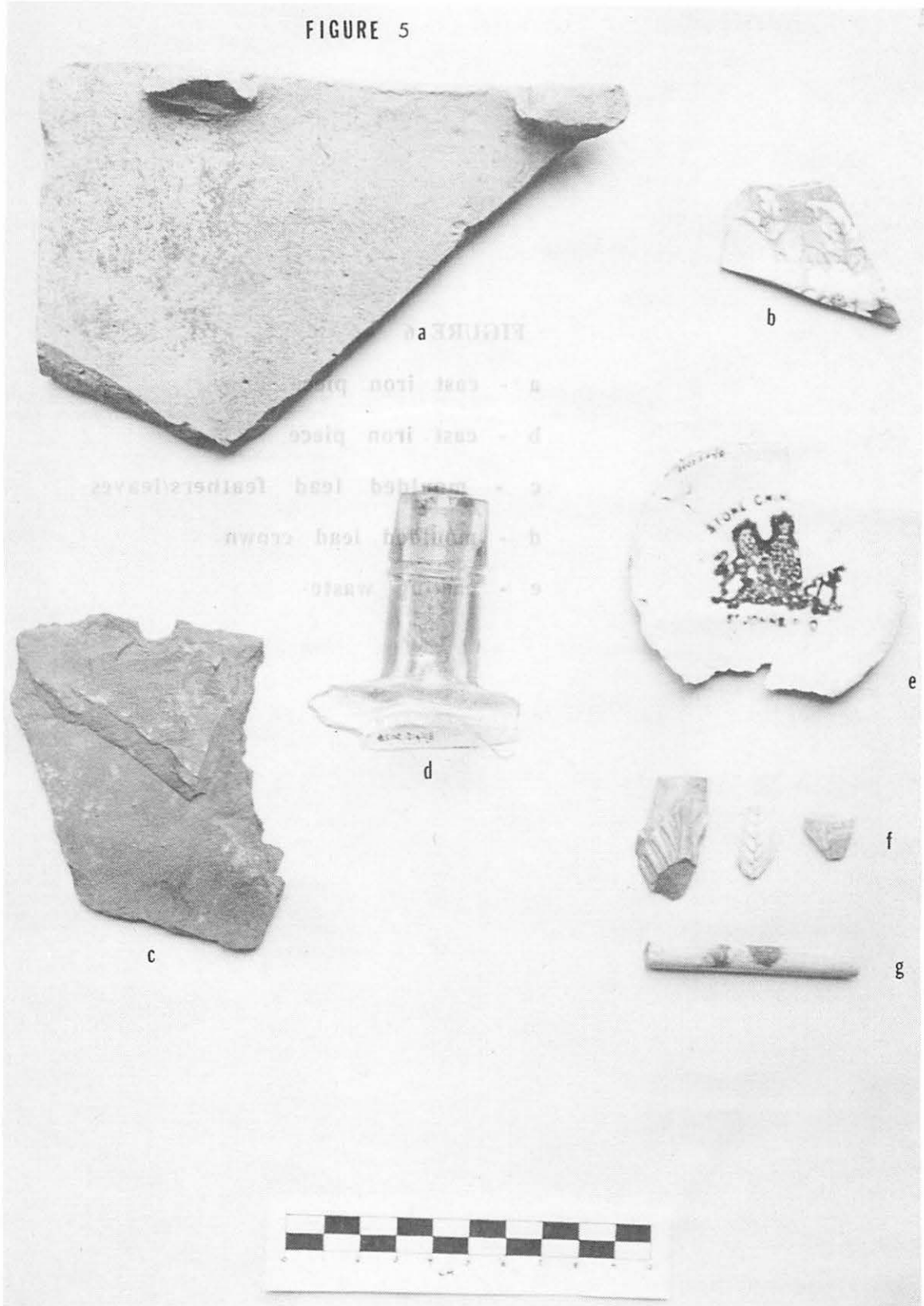


FIGURE 6

- a - cast iron piece**
- b - cast iron piece**
- c - moulded lead feathers/leaves**
- d - moulded lead crown**
- e - casting waste**

FIGURE 6

52





FIGURE 7

Interior view of vent feature

FIGURE 8

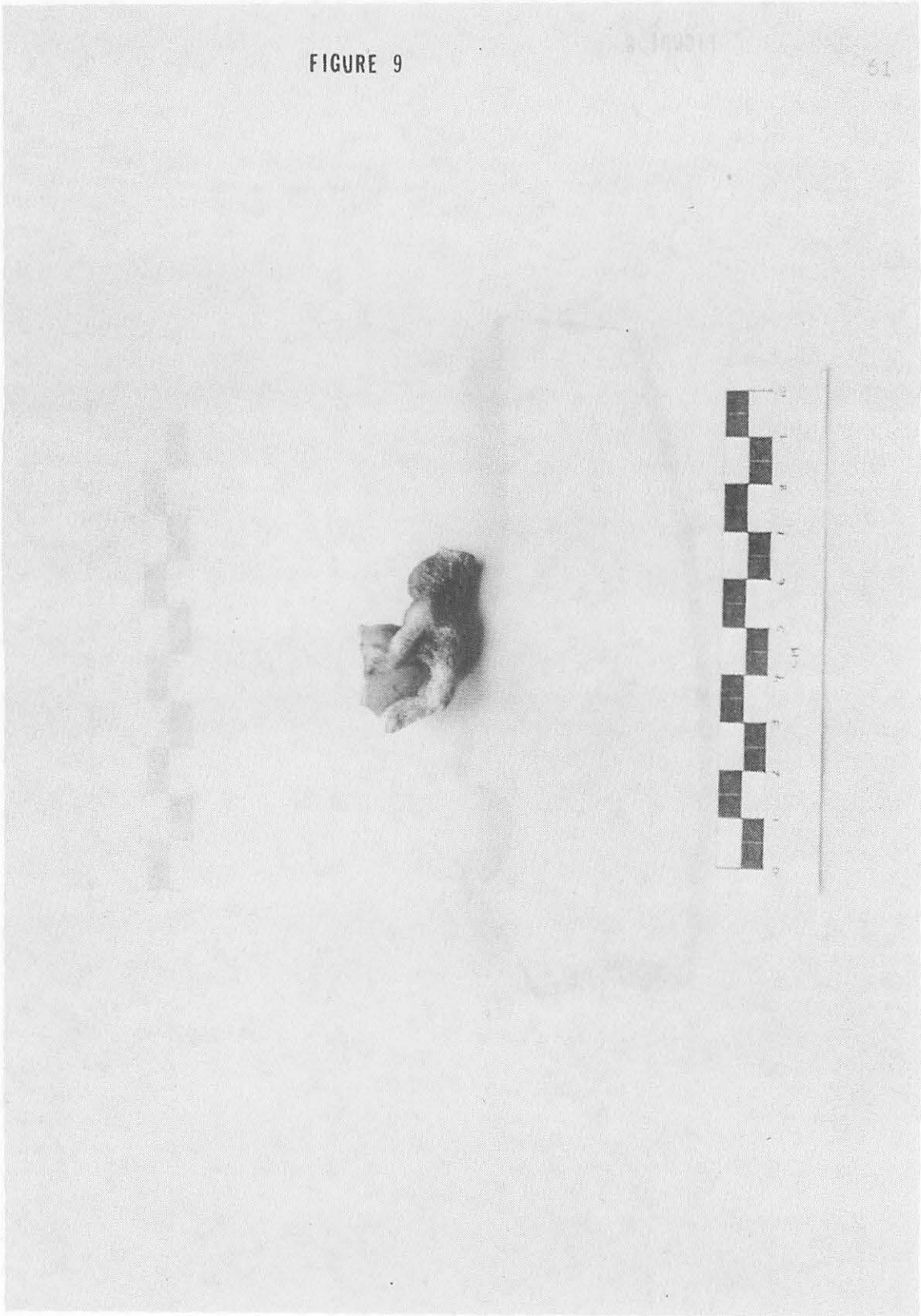
FIGURE 8

59



FIGURE 9

51



Coke Ovens

The Albion Iron Foundry was the first foundry in Canada to use coke rather than charcoal to smelt iron. Coke is a cleaner, more efficient fuel, capable of realizing higher and more stable temperatures in smelting. Coal is reduced to coke in coke ovens. Simple coke ovens were built of fire-bricks in a beehive shape, often laid in rows, covered on the sides and top with loam, sand, or slack and sometimes sealed with clay.

A large rectangular mound south of the foundry was investigated in 1988 to determine if it contains the remains of the Albion coke ovens.

Two 1 x 2 metre test pits were placed on the mound, one on the northern slope and one in the centre. No features and only a few artifacts were found.

Stratigraphy

Although the two pits were separated by only five metres their stratigraphy was vastly different.

The central pit opened upon a layer of dark brown loam containing some brick fragments. At a depth of 20 cm a layer of orange-brown clay was encountered. The clay was very dense, approximately 40 cm thick, containing few inclusions and no artifacts. Beneath the clay was at least 50 cm of loose shale. The shale was not completely excavated due to a lack of time.

The stratigraphy of this pit is compatible with a coke oven area - the ovens being surrounded by shale fill and capped with clay to prevent water penetration. Soil accumulation on top of the clay occurred after construction of the ovens.

The stratigraphy of the second pit, however, is not reflective of coke ovens. Here, underneath the sod and loam are several layers of clay, coal, coke and brick fragments. Under these, opening at a depth of 70 cm below surface, was a layer of extremely loosely consolidated sand, coke and shale. This layer was excavated to 180 cm below surface, and, when tested with a probe, was found to be at least an additional 130 cm deep. The sand and shale were completely different from the shale layer of the central pit, and had the appearance of a dump of waste products. The sand extended well below ground level, thus, at one time, a pit must have existed here which was filled with debris.

Artifacts

Only a few artifacts were recovered from the two test pits. The foundry-related artifacts include one riser, two pieces of bar stock and three unidentified broken pieces of cast iron. One curious type of artifact occurred only in the central pit and has not been found elsewhere on the foundry site. These 18 artifacts are circular heads, possibly of rivets or bolts. They are slightly conical with a slightly concave base with a diameter of 42 mm and a thickness of 15 mm.

Architectural artifacts include two square-shank machine made nails and one piece of dark purple roofing slate.

The domestic artifacts are the most unusual found to date on the site. Two pieces of white clay pipe were found. One is an unmarked stem fragment, but the other is an elaborate stem and heel shaped like a bird or reptile claw, showing detail of scales and tendons (Figure 9). Elaborate pipes such as this were prevalent during the latter half of the nineteenth century.

The other domestic artifact is a large rim sherd of a coarse earthenware known as Maritime ware (Figure 8). The sherd is from a large utilitarian bowl. It has a red fabric with a white slip and a clear glaze on the interior (which results in a pale yellow colour). The rim is decorated with a brown slip and the exterior is unglazed.

Maritime wares were produced in the Maritimes and Newfoundland from 1840 to 1900 to compete with imported wares. Usually the vessels were utilitarian jars and dishes.

Summary

The testing of the rectangular mound south of the foundry was inconclusive. While one pit suggests that this is a coke oven area, the other pit does not. The mound certainly is man-made and of nineteenth century origin, but its purpose is unclear. More extensive testing, preferably profiling the entire feature, is needed.

Heritage Research Notice A1988NS10**GRASSY ISLAND: SUBMERGED CULTURAL RESOURCE SURVEY
1988**

**E. Willis Stevens
Marine Archaeology Unit
Canadian Parks Service**

Introduction

Grassy Island, located near the town of Canso at the easternmost tip of mainland Nova Scotia, has a documented history dating back to the 16th century. The island's importance was primarily centered around the lucrative cod fishery. In 1720 a small fort was built by the English to protect both the fishery and a growing trade with European and West Indies merchants. The fort and most of Grassy Island were abandoned in 1744. (Ferguson 1980:2).

Grassy Island was acquired by the Canadian Parks Service in 1977. Archaeological research promptly followed, corroborating much of the historical record as well as providing new insights into the island's inhabitants. A cultural resource management plan was formulated and approved. This plan recommends visitor service activities on Grassy Island. To provide this service the construction of a wharf is proposed along the north shore of the island in an area referred to as Squid Cove (Figure 1). As a prelude to wharf construction, the Marine Archaeology Unit was requested by Parks' Atlantic Regional Office to investigate the possible impact of submerged cultural resources. This investigation was carried out in September 1988 under a Heritage Research Permit (No. A1988NS10) issued by the Province of Nova Scotia.

Wharf Site

The wharf site proposed for Grassy Island was recommended by Strait Engineering Limited under a contract let out by the Strait of Canso Industrial Development Authority. The site selection was based on: 1) ample water depth; 2) shortest approach to the wharf; 3) access to the island without overly steep slopes. (Strait Engineering Ltd. 1988).

The site chosen is located in Squid Cove and is the same location as that used for a wharf during the 1979 to 1981 archaeological field seasons. All that remains of the previous wharf are the lower portions of five ballast piles and some loose timbers. The piles are visible at low

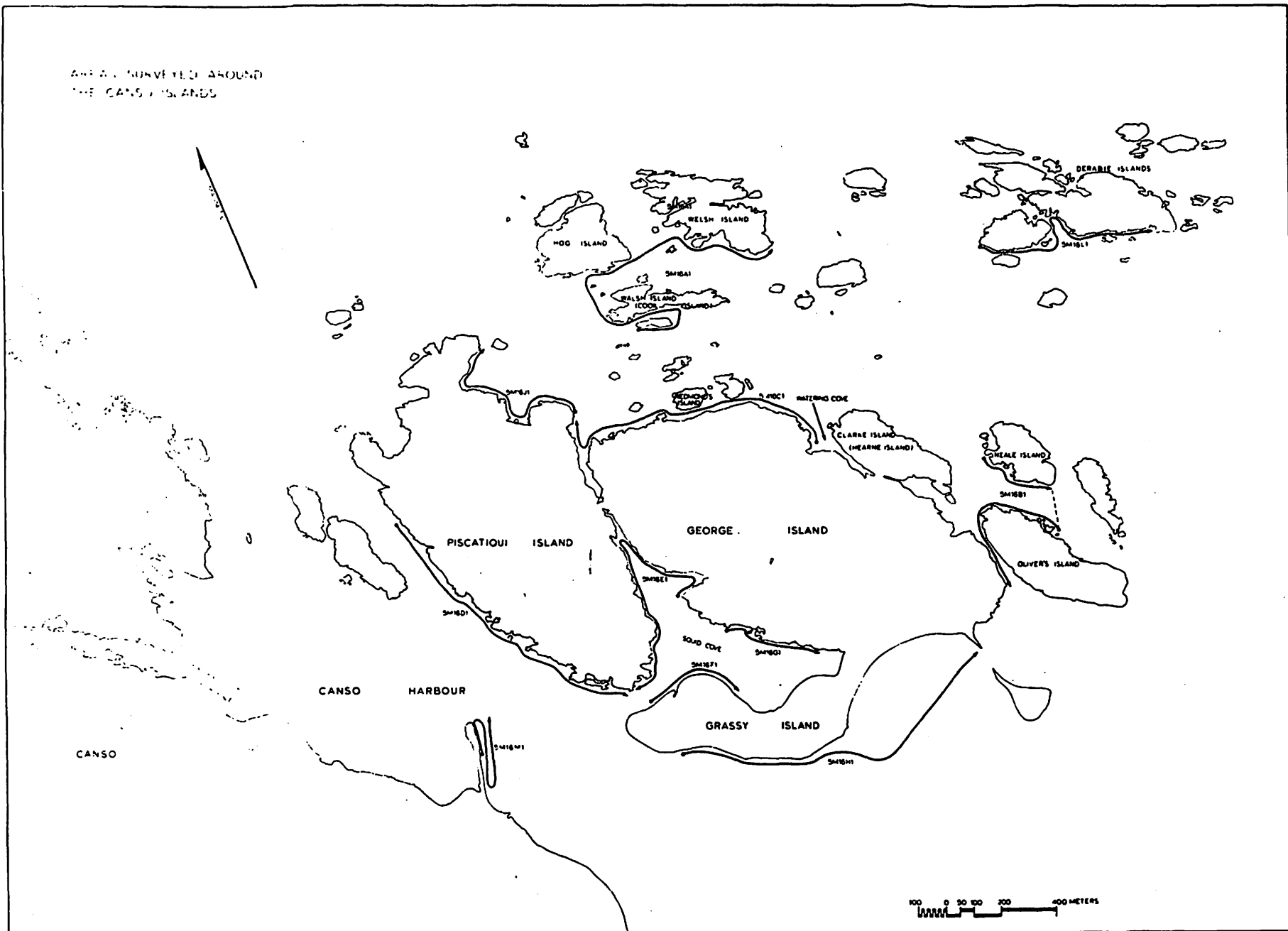


Figure 1. Map of the Canso Islands showing Grassy Island and Squid Cove. (Drawn by C. Piper).

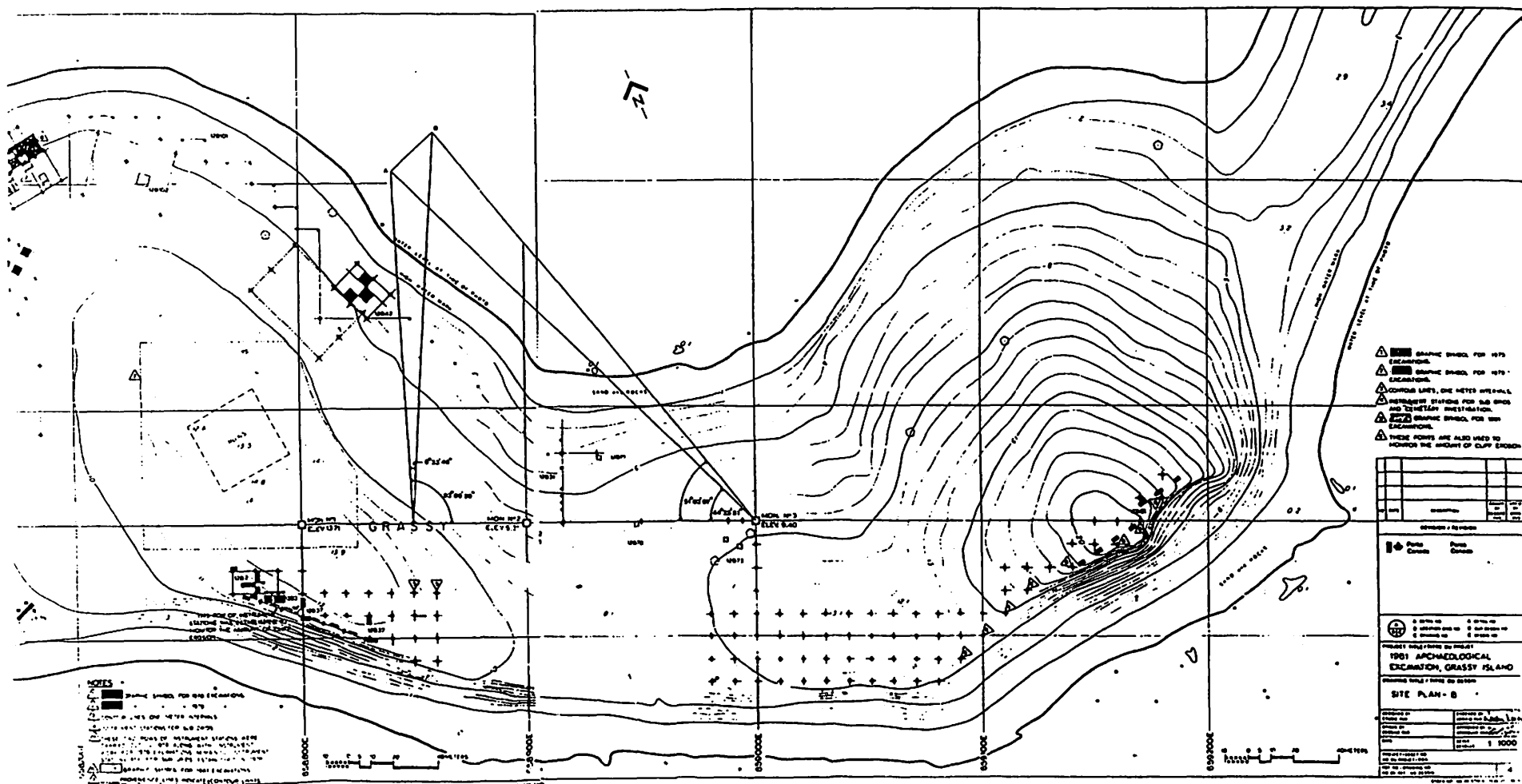


Figure 2. Map of Grassy Island showing the location of datum line AB.

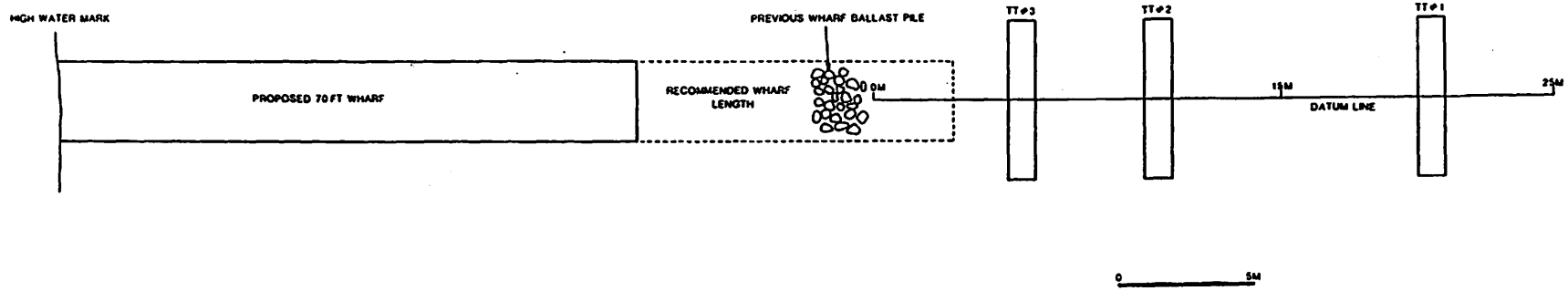


Figure 3. Plan view of the proposed 70 foot wharf, ballast remains of previous wharf and archaeological test trenches.

16-11-88
 W. STEVENS
 C. PIPER

water, resting on a well-packed sand and gravel beach material. A free swimming visual survey of the immediate area revealed no evidence of any previous impact to submerged cultural resources. Strait Engineering has recommended a wharf similar to the previous construction: "the wharf should be at least ten feet wide and 70 feet long, timber crib and fill with a timber deck, floated to the site and placed on a gravel mattress, and filled with rock." Assuming the new wharf will be built at this location, and assuming a timber crib and rock fill construction, the proposed wharf should have no adverse impact on submerged cultural resources. However, of equal importance is the effect of propeller wash, particularly in the very shallow waters near the wharf. For this reason a testing strategy was devised to evaluate the potential impact of submerged cultural resources beyond the end of the wharf in the maneuvering area of the passenger boat.

Testing

To test this area a 25 metre long datum line (AB) was installed in line with the proposed path for the wharf (Figure 2). The datum began at the end of the ballast remains belonging to the previous wharf. (Figure 3). This point is located 30 metres out from the high water mark as located on the 1981 archaeological site plan (Figure 2). It is also over eight metres beyond the end of the recommended 70 foot wharf. The depth of water at the beginning of the datum was 1.5 metres; at the end of the datum it was three metres. These depth readings were taken before the tide reached the low water mark. Time did not permit a more thorough approach to firmly establish high and low water levels. However, the depths do indicate a very gradual slope in bottom topography and very shallow water. Both of these elements will play an important role in determining the overall length of the wharf.

The bottom cover throughout the area was characterized by extensive silt deposits and patches of eel grass. The silt was easily disturbed which resulted in limited visibility throughout most of the testing period. This was in contrast to the immediate beach area which was made up of sand and gravel and had somewhat better visibility.

Three test trenches, measuring six metres by one metre and running parallel to the shoreline, were excavated using a water dredge at specific locations along the datum line. The first trench was located between 20 metres and 21 metres (Figure 3). The excavated material consisted entirely of black silt which became more compact in the deeper deposits. The excavation reached a maximum depth of 1.5 metres into the silt. At this point a 70 centimetre probe was pushed into the silt with little or no resistance. Excavation was stopped, noting a silt deposit in excess of 2.2 metres deep. No artifacts were uncovered.

The second test trench was located between 10 metres and 11 metres on the datum line (Figure 3). A large amount of silt was again

predominant, however, it was possible to record the bottom of the silt at the 70 centimetre level. The underlying layer consisted of a sand and gravel mix similar to the onshore beach material. Artifacts were restricted to one modern day beer bottle.

The third test trench was located between 5 metres and 6 metres on the datum line (Figure 3). At this location the beach layer was reached at the 60 centimetre level. No artifacts were uncovered.

Observations

A free swimming visual survey at the site of the previously constructed wharf has revealed no indication of any submerged cultural resources. The proposed wharf will be resting on a beach material which consists of a well-packed sand and gravel mix. This material, which extends offshore below an overburden of silt, follows a gradual slope for at least 40 metres from the high water mark. The compactness of the material suggests that it would probably be well suited to accommodate the load requirements of the proposed wharf. However, geotechnical testing of the sub-strata, as recommended by Strait Engineering, should still be carried out prior to wharf construction. It may also be advantageous to consult the users of the previous wharf on any experiences they may have had regarding shifting and/or sinking of the ballast cribs.

Archaeological test excavations carried out in the area of propeller wash also failed to uncover any material evidence of Grassy Island's inhabitants. There was no evidence of early wharf structures or water craft; and no indication of secondary deposits (i.e. ceramics, faunal remains, other material culture items).

The recommended wharf length of 70 feet from the high water mark will likely fall short of attaining the minimal desired depth of four feet at low water. This length is in fact eight metres short of reaching the end of the previous wharf's furthest ballast pile. Based on the recorded water depth of 1.5 metres at the end of this ballast pile, a wharf of 70 feet may be high and dry at an extremely low tide. A more appropriate estimate of wharf length would be 33 metres (110 feet).

Conclusion

The results of this survey have concluded that the wharf construction project and anticipated increase in boat traffic proposed for Squid Cove will not have any impact on submerged cultural resources. This conclusion is contingent with the assumption that the wharf will be a timber crib construction and that the location will be at the site of the 1978-81 wharf.

References

Ferguson, Robert

1980

"Grassy Island: Archaeological Investigations of a Nova Scotia Fishing Community." Research Bulletin/Bulletin de Recherches No. 124. Parks Canada, Ottawa.

Strait Engineering Limited

1988

Grassy Island National Historic Park Wharf Investigation and Evaluation. Port Hawkesbury, Nova Scotia.

Heritage Research Permit A1988NS11**PRELIMINARY REPORT ON THE BAIN SITE
AND THE CHEGOGGIN ARCHAEOLOGICAL PROJECT**

Stephen A. Davis
Department of Anthropology
Saint Mary's University
and
David Sanger
Department of Anthropology
University of Maine

Introduction

The Chegoggin Archaeological Project (CAP) had its beginning in the mid 1970's when Davis introduced Sanger to collectors in the Yarmouth County area of Nova Scotia. Despite the obvious richness and utility of the local collections, little systematic work was conducted in the area until 1987, when Sanger obtained a grant from the Canadian Embassy in Washington to carry out a reconnaissance of the Yarmouth area for the purpose of ascertaining the degree of similarity between the prehistory of southwest Nova Scotia and the central Maine coast. The proposal suggested that, because the Yarmouth area and the Maine coast both border on the Gulf of Maine, there would be a parallel history of adaptation to the marine resources. Differences in artifact style from coastal sites might be attributed to ethnic variability expected of the different languages spoken on each side of the Gulf of Maine -- Micmac in Nova Scotia vs Eastern Abnaki in Maine (Goddard 1978).

While early European accounts make it clear that some trading took place among the native peoples, the specific origins, destinations and detailed routes are not known. Lithics generally considered to be of Nova Scotia origin frequently occur in Ceramic Period Maine sites, especially Late Ceramic sites, post 750 B.P. (Bourque 1987). The distribution of these lithics centres on Penobscot Bay and the central Maine coast, and lessens with distance both east and west. If a straight line is drawn between the locus of lithics in Maine and Nova Scotia, the distribution would favour direct contacts with the Yarmouth County area. Mount Desert Island in the central Maine coast features high hills (up to 540 m) which provide a useful landfall for mariners. The distance from the island to Yarmouth is 160 km of open water (Figure 1).

In addition to site survey in the Yarmouth area, we proposed to examine known private collections and, with the cooperation of local owners, catalogue the collections. Much appreciated financial assistance

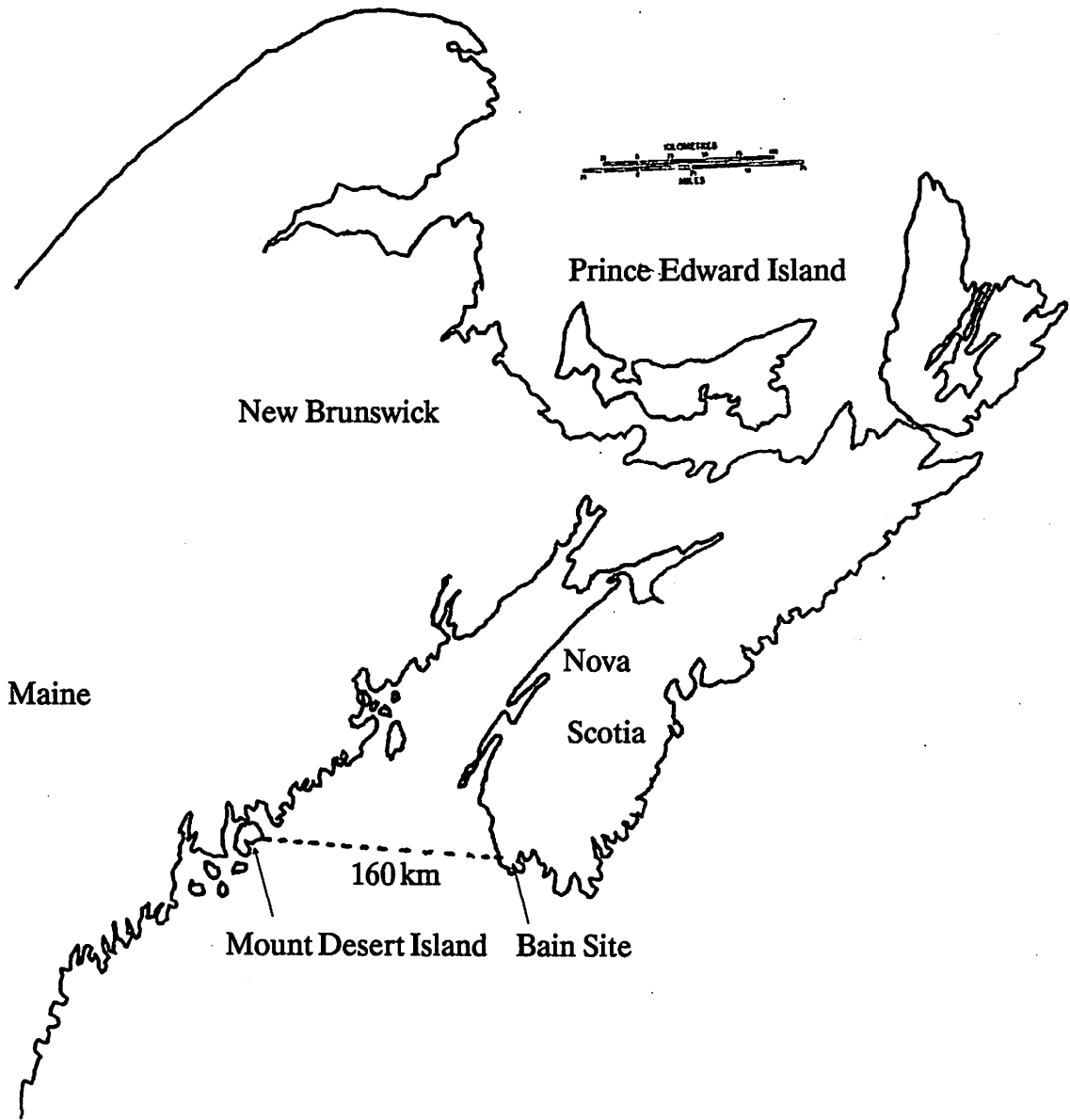


Figure : 1 Maine and the Maritimes.

from the Senate Research Committee of Saint Mary's University made this possible.

Fieldwork 1987

In late August, 1987, Davis joined Sanger and Douglas Kellogg, a PhD candidate at the University of Maine, for a 10 day exploratory field session. It soon became apparent that the coastal sites we sought were extremely few in number. Those that had been reported were either eroded away or were disturbed beyond utility. Further research suggested that the small number of coastal sites reflected a fundamental difference in the nature of the intertidal sediments. While those of the central Maine coast support infaunal bivalves, such as the soft-shell clam (*Mya arenaria*) the shores of the Yarmouth area do not, except under rare, localized circumstances. The much softer sediments of the latter region, we hypothesize, cannot support large, dependable, clam populations. Increased turbidity in the water column may be another factor. Whatever the reasons, the scarcity of intertidal shellfish makes the littoral a less desirable place for habitation.

That shell midden procurement practices occurred in Nova Scotia is abundantly clear: shell midden sites abound east of the Yarmouth area and again on the Bay of Fundy side (Bower 1974, Connolly 1977). Therefore, a localized environmental situation appears to explain the lack of shell midden sites. In addition, a trip around the Tusket Islands illustrated the high rate of shore erosion, such that any sites on exposed beaches would be destroyed.

Once it became apparent that a comparison between coastal sites was not possible, we turned our attention to the many sites and collections on the interior waterways in Yarmouth County. Over a century of damming has severely affected the archaeological record, and many impressive collections have been gathered from washed-out sites during periods of low water. Local residents; namely John Green, Wilbur Sollows and Larry Hemeon kindly showed us collection spots which we entered on maps and assigned site numbers, later to be part of the catalogue submitted to the Nova Scotia Museum under terms of the permit to conduct archaeological field work (Davis 1987).

As part of the site and collections analysis we met Mr. Nathan Bain, a resident of Brooklyn, Yarmouth County. Bain had amassed a most exciting collection of lithics and pottery from a site on the Chegoggin River. The significance of the find was evident immediately. Late Archaic specimens of the Maritime Archaic/Moorehead complex occurred together with Ceramic Period artifacts. Of particular interest was a diary which described Bain's activities on a daily basis. Sketch maps of areas dug, and comments on the nature of associations, provided valuable insights into the digging. In addition, Bain had written find dates on a number of pieces and then made accurate drawings of the specimens in his diary.

Thus, the diary appeared to have the potential to provide reasonably accurate provenance data on some artifacts.

A visit to the site revealed a setting beside a natural set of riffles modified in recent times to catching anadromous gaspereau (Pomolobus psuedoharengus), or "kyacks" as they are known locally, a spring spawning species that ascend the Chegoggin River to reach small lakes and quiet sections of the river. On the basis of the site location, it seemed likely that the native peoples located there in part for the fishing.

The site area lies nestled between two closely spaced drumlins, or a single drumlin dissected by the Chegoggin River. Protection from northerly winds and maximum exposure to the sun is afforded by the location. Examination of numerous boulders of quartz and quartzite eroded out of the drumlins indicated prehistoric quarrying operations.

The presence of the site had been known for some time. An elderly resident of the area told Sanger that the site area had been known as "Indian Hill" throughout her memory. During the early 1980's, Bain heard about artifacts revealed by drainage ditches dug in Mr. Howard Whittaker's pasture. After an exploration of the cut banks, Bain obtained permission to dig to the north of Whittaker's property on land owned by Lloyd and David Sweeney. Part of the site on the Sweeney property had been badly disturbed by a nineteenth century gold mining operation, consisting of a crushing machine designed to extract gold from quartz mined locally and carted to the river bank. However, there were sufficient undisturbed areas to yield many artifacts.

We obtained permission from the landowners and placed two small test pits to examine the sediments. In Whittaker's field we found peat overlying cultural deposits which rested on till or colluvium from the nearby drumlin. Prehistoric artifacts included pottery and bifaces, in addition to quartz debitage.

The artifacts recovered by Nate Bain include a number of stemmed bifaces, many of which match those found in Late Archaic coastal Maine sites such as Turner Farm (Bourque 1975, 1976, 1983), Goddard (Bourque and Cox 1981), Stanley (Sanger 1975), and Nevin (Byers 1979). These are generally dated to between 3,800 and 5,000 B.P. In addition, Ceramic Period bifaces occur together with ceramics and scrapers made of impure quartz (chalcedonies, jasperoids, etc.) usually associated with North Mountain basalts, an Early Mesozoic unit stretching from Minas Basin to Cape St. Mary (Dostal and Dupuy 1984). There are no known units of comparable lithology in Maine. Because impure quartzes (chalcedony, jasper, etc) that are visually indistinguishable occur in Maine sites, their presence in the Bain site is significant, although not unexpected given the widespread distribution of these cryptocrystallines in Nova Scotian sites (Davis, personal communication).

Bain graciously consented to having a photocopy made of his diary, and photographs taken of his diagnostic specimens from the site. With these in hand we terminated the fieldwork and made plans for further research. Because of the splendid cooperation we decided to name the site after Mr. Bain. The Borden system number is A1Dm-1.

During the winter of 1987-88, Anne Hilton, University of Maine graduate student, worked with Bain's diary and the photographs of the artifacts. After much effort she successfully plotted many of the finds on a compass and tape map made in the field, and pulled together the available comments on association and stratigraphy. It provided an excellent beginning for the 1988 field season.

In the meantime, Laird Niven, working under the direction of Davis, initiated the task of placing catalogue numbers on specimens from private collections and then entering basic attributes into a dBase III program. The catalogues and photographs will be curated with the Nova Scotia Museum.

Fieldwork 1988

In August 1988, supported by a generous grant from the Nova Scotia Museum with additional support from the University of Maine and Saint Mary's University, a volunteer crew composed of experienced personnel from Maine and Nova Scotia spent 11 days at the Bain site. We were joined by Michael Deal and his survey crew for several days as well as members of the Nova Scotia Museum.

After establishing a grid system the crew began excavation on the south side of the ditch in an area designated by Bain as "Area B" (see site map, Figure 2). Another unit was opened in Area C, but it proved less productive. The stratigraphy on the south side of the ditch was reasonably consistent where it had not been disturbed by ditching or by previous excavation. Under the pasture sod was up to 25 cm of peaty material containing tree roots and leaves. The peat has developed on top of a black greasy silt that represents the cultural layer. Below this is a grey sediment, possibly an elluviated zone, underlain by brown to yellow sandy silt and gravel (Figure 3).

The cultural horizon(s) lie between the peat and the grey sediment. Once the nature of the stratigraphy was understood, the peat could be stripped and the cultural surface exposed. Because the peat grew over the site since aboriginal abandonment, recent disturbance by digging was obvious.

Once exposed, the cultural surface exhibited a dense litter of fractured quartz and quartzite, the debitage from basic reduction activities using locally available boulders. Large cores lay on the surface together with piles of shattered quartz. Several hearth-like features containing

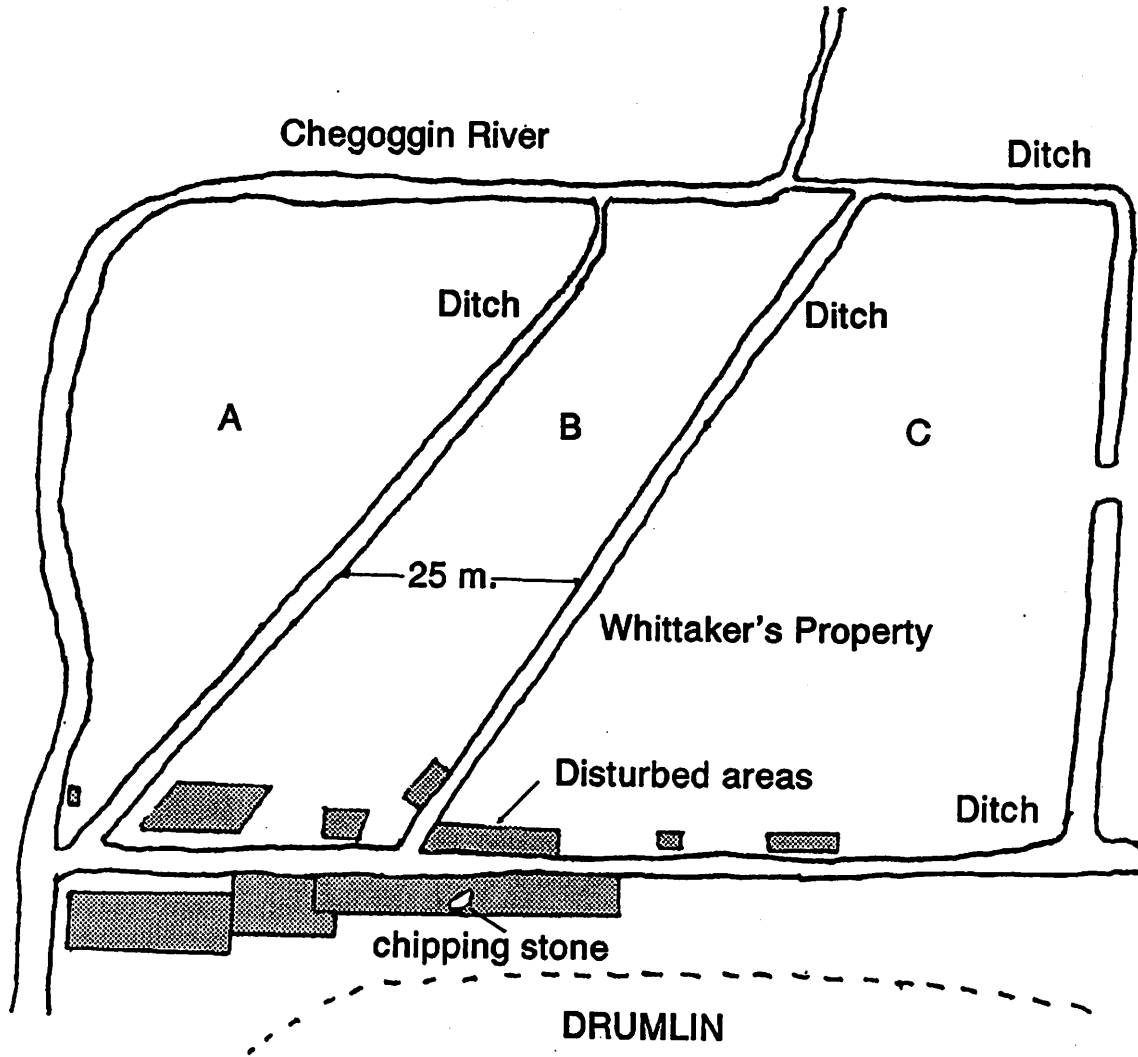
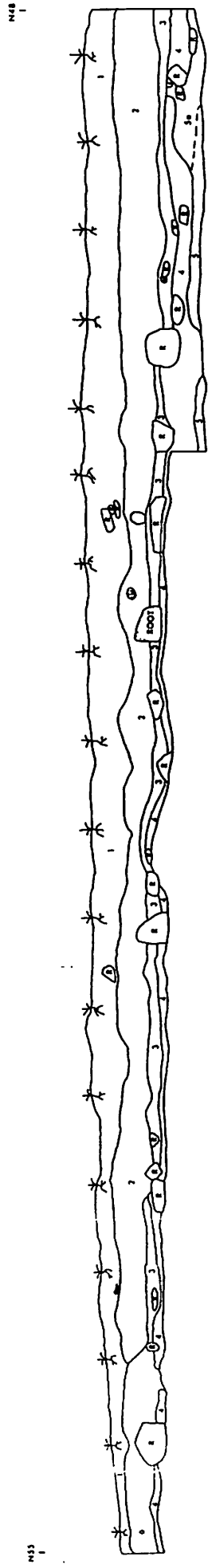


Figure : 2 Nate Bain's field sketch (redrawn).

FIGURE 3



AIDm-1 BAIN SITE
 PROFILE - EAST 84 NORTH 48-55
 AUGUST 1988



- 1 SOD DEVELOPMENT
- 2 REDDISH BROWN FIBROUS PEAT
- 3 BLACK GREASY SILT - CULTURAL
- 4 GREY SAND
- 5 BROWN SANDY SILT
- 5a BROWN SANDY SILT - MOTTLED
- 6 DISTURBED AREA

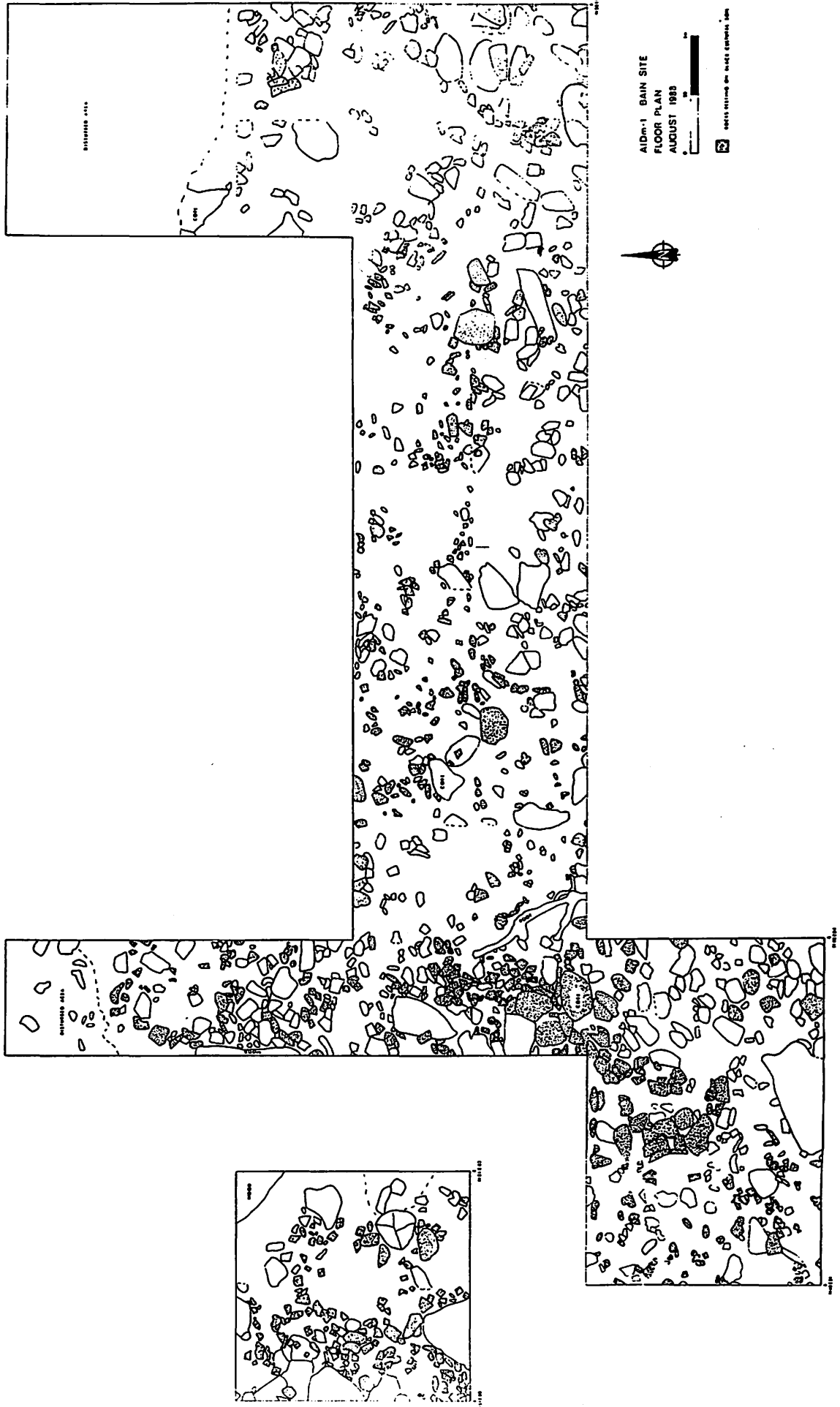


FIGURE 4

charcoal were encountered (Plate 1). It was hoped that the presence of peat over the cultural floor would result in excellent preservation of organic remains. Unfortunately, this was not the case.

Test pits placed north of the trench on Sweeney's land indicated a high degree of disturbance due to the operations of the quartz crusher and the collector digging, some of it very recent.

At the close of the excavation, 55 m² had been dug, mostly to the south of the ditch in a continuous pattern of 2 m by 2 m blocks (Figure 4).

Analysis of the 1988 Fieldseason

The first field season at the Bain site provides many answers to important questions. It established that undisturbed deposits do in fact occur. We estimate that on the south side of the ditch no less than 800 m² of undisturbed deposits await further investigation. On the north side of the ditch, unfortunately, the reverse may be true; locating undisturbed deposits may prove very difficult due to the combination of the quartz crushing operation and amateur digging.

On the basis of our excavations and the collections of Mr. Bain and Mr. Charles Sherman, it is reasonably certain that the Bain site was occupied several times, beginning with a Late Archaic component that produced the stemmed bifaces illustrated in Plate 2. Artifacts representing this component appear to have been concentrated around the base of the drumlin. According to our reconstruction of Bain's find spots, the bulk of the Late Archaic specimens occurred along both sides of the east-west ditch and between the drumlin and the river. The 1988 excavations on the south side of the ditch produced only one stemmed biface, but ample evidence for Ceramic Period occupations.

Ceramic Period lithic artifacts are represented in the Bain collection by stemmed and notched bifaces and by unifaces (scrapers) made of the North Mountain jasperoids. In addition, there are numerous ceramic sherds. A field analysis of the Bain collection undertaken by William Belcher lists 298 total sherds, 142 decorated sherds, which yielded a vessel lot count of 60. An additional 60 decorated sherds were not assigned to a vessel lot. Forty-five of the vessel lots fall within the CP-2 to CP-3 range (Petersen and Sanger 1987) of the Middle Ceramic Period. A minority can be assigned to CP 4-7, and some are of uncertain periods. The pottery suggests that the Ceramic Period occupation was concentrated between 2,200 and 1,500 years B.P.

Thus the Bain site was utilized by Late Archaic and Ceramic Period groups. No radiocarbon dates are available for the earlier occupation(s); however, on the basis of stylistic similarities with Maine sites, we estimate an age range of between 4,000 and 5,000 B.P.



Plate 1

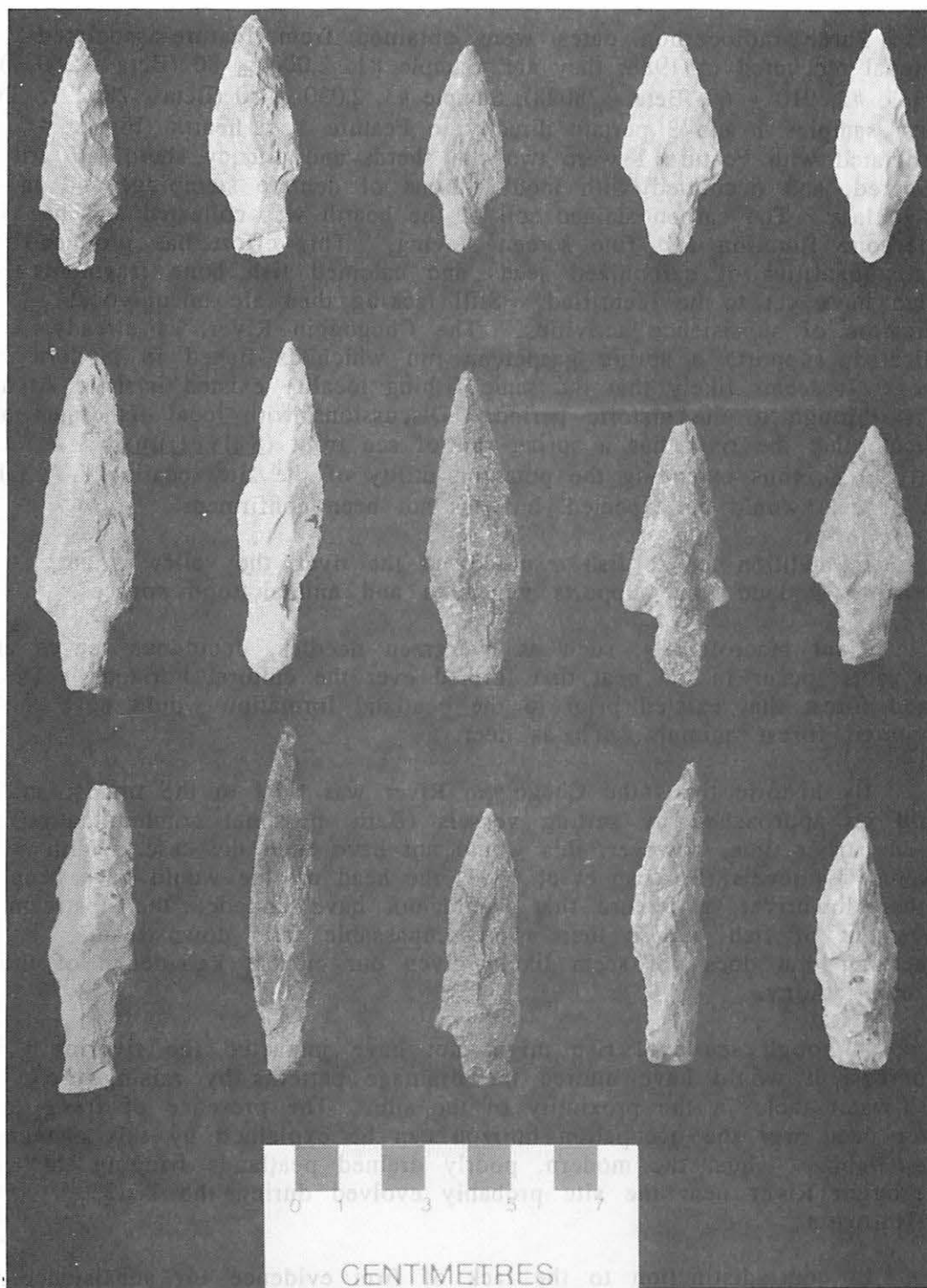


Plate 2

Three radiocarbon dates were obtained from feature-associated charcoal recovered in 1988; they are: Sample #1, $2,000 \pm 80$ (Beta - 28027); Sample #2, 910 ± 60 (Beta - 28028); Sample #3, $2,030 \pm 80$ (Beta - 28029). Two dates; samples 1 and 3 pertain directly to Feature 1, a hearth (Figure 4). Associated with Feature 1 were two rim sherds and a body sherd, all grit tempered, and decorated with modifications of dentate stamping, and in the CP-2 class. The carbon stained soil of the hearth was collected and has undergone flotation and fine screen sieving. This effort has produced small quantities of carbonized seeds and calcined fish bone fragments which have yet to be identified. Still lacking then are unequivocal indicators of subsistence activities. The Chegoggin River, as already indicated, supports a spring gaspereau run which is fished in modern times. It seems likely that the same fishing locality existed in Late Archaic times through to the historic period. Discussions with local fishermen also indicate that the river has a spring run of sea trout (Salvelinus fontinalis), thus extending the potential utility of the site location. A fall run of eels would be expected, but has not been confirmed.

In addition to the fish resources of the river, the valley is an extensive wetland that supports vegetable and animal food sources.

Plant macrofossils, such as evergreen needles, deciduous leaves and tree roots, occur in the peat that formed over the cultural horizons. The mixed forest that existed prior to the peatland formation would have supported forest animals such as deer.

By historic times the Chegoggin River was tidal to the rapids, and could be approached by sailing vessels (Bain, personal communication). At an earlier time, however, this would not have been the case. With lowered sea levels (Belknap et al 1987) the head of tide would have been further downriver, a feature that would not have impeded the upstream movement of fish, unless there were impassable falls downstream, something that does not seem likely given our current knowledge of the valley geology.

Although sea-level rise might not have impacted the riverine resources, it would have altered the drainage patterns by raising the fresh-water table in the proximity of the site. The presence of fresh-water peat over the occupation horizon can be explained by this change in water table. Thus, the modern, poorly drained peatlands fringing the Chegoggin River near the site probably evolved during the last millennium.

In contradistinction to the lack of firm evidence for subsistence, there are abundant data on lithic procurement and reduction. All around the site area, on the drumlin slopes, it is possible to find boulders of quartz and quartzite that have been flaked to produce flakes and core material.

One such example, located on the Bain site, exhibits a striking platform over 1 m in length, from which large flakes have been removed (Plate 3). Cores weighing 10 kilos and more occur on the occupation floor, surrounded by masses of shattered quartz and quartzite. Although no detailed analysis of the drumlins is available, some examples dissected by sea erosion reveal a till core, into which is incorporated quartz and quartzite boulders.

The other lithologies, especially the fine-grained volcanics and the jasperoids, were probably carried into the site by its inhabitants.

Detailed analysis of the artifacts and features uncovered in the 1988 field season has only just begun and its presentation will appear in a later article. Briefly, the Bain site appears to have functioned as a base camp that would be most desirable during the spring and early summer months.

Questions regarding prehistoric contacts with the coast of Maine can be addressed by the Bain site data. The Late Archaic stemmed bifaces are similar to those illustrated from the Turner Farm site (Bourque 1975, 1976), and other related sites in Maine, such as Eddington Bend on the Penobscot River (Petersen and Sanger 1987).

There are some obvious similarities between these bifaces and those found further to the north where they are considered part of the Maritime Archaic tradition (Tuck 1971). Archaeologists working in Maine (eg. Bourque 1975, 1983; Spiess et al 1983) have suggested that although the northern areas shared some characteristics with the Maine region, subsistence strategies were not among them. Sanger (1973, 1975) has expressed similar views relative to shared burial traits, but not extending to other sub-systems of the culture. The southern research group has tended to eschew the term "Maritime Archaic tradition," by which Tuck (1971) implied a "whole cultural tradition," and favours instead some combination of "Moorehead" (eg. Moorehead complex, phase, or tradition), to designate a lifestyle adapted to Maine and the Maritime Provinces between approximately 3,750 B.P. and 5,000 B.P. Detailed studies of the similarities and differences between the Bain site artifacts and those from the coast of Maine should assist in the overall problem of definition and understanding of the cultural phenomena involved. Until these analyses can be conducted, it would seem best to withhold judgment on the utility of any major taxonomic unit at the whole cultural level.

Although there is no evidence from the Bain site, some other collections in the Yarmouth area show clear indications of the presence of the Susquehanna Tradition in southern Nova Scotia (Plate 4). Based on current knowledge of Maritimes distribution, it seems likely that the Susquehanna specimens found in the Yarmouth area resulted from contacts with the Maine coast. Indeed, some of the lithics involved are very reminiscent of Maine coastal volcanics.



Plate 3

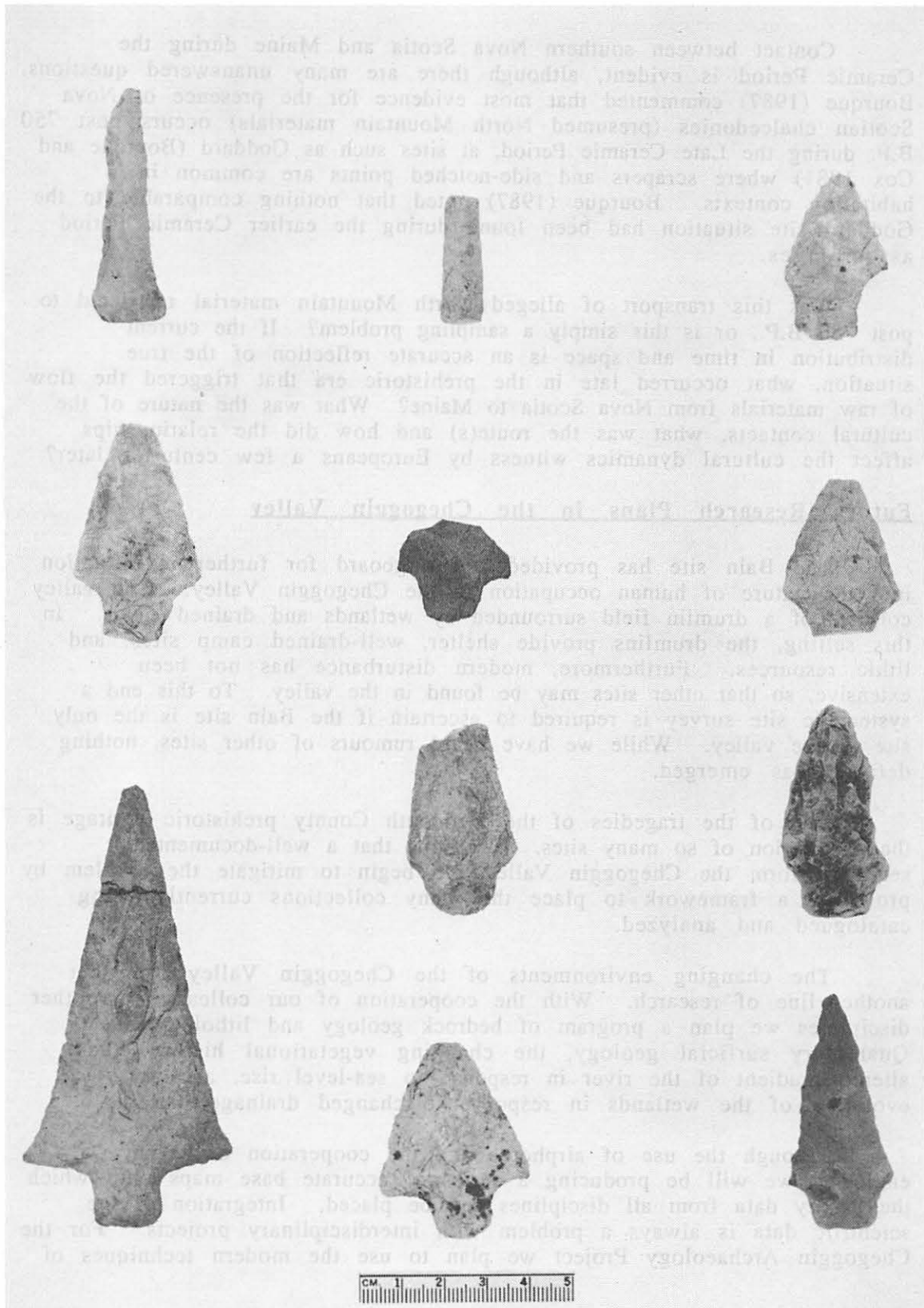


Plate 4

Contact between southern Nova Scotia and Maine during the Ceramic Period is evident, although there are many unanswered questions. Bourque (1987) commented that most evidence for the presence of Nova Scotian chalcedonies (presumed North Mountain materials) occurs post 750 B.P. during the Late Ceramic Period, at sites such as Goddard (Bourque and Cox 1981) where scrapers and side-notched points are common in habitation contexts. Bourque (1987) noted that nothing comparable to the Goddard site situation had been found during the earlier Ceramic Period assemblages.

Was this transport of alleged North Mountain material restricted to post 750 B.P., or is this simply a sampling problem? If the current distribution in time and space is an accurate reflection of the true situation, what occurred late in the prehistoric era that triggered the flow of raw materials from Nova Scotia to Maine? What was the nature of the cultural contacts, what was the route(s) and how did the relationships affect the cultural dynamics witness by Europeans a few centuries later?

Future Research Plans in the Chegoggin Valley

The Bain site has provided a springboard for further investigation into the nature of human occupation in the Chegoggin Valley. The valley consists of a drumlin field surrounded by wetlands and drained fields. In this setting, the drumlins provide shelter, well-drained camp sites, and lithic resources. Furthermore, modern disturbance has not been extensive, so that other sites may be found in the valley. To this end a systematic site survey is required to ascertain if the Bain site is the only site in the valley. While we have heard rumours of other sites, nothing definite has emerged.

One of the tragedies of the Yarmouth County prehistoric heritage is the destruction of so many sites. We hope that a well-documented sequence from the Chegoggin Valley can begin to mitigate the problem by providing a framework to place the many collections currently being catalogued and analyzed.

The changing environments of the Chegoggin Valley represent another line of research. With the cooperation of our colleagues in other disciplines we plan a program of bedrock geology and lithology, the Quaternary surficial geology, the changing vegetational history, the altered gradient of the river in response to sea-level rise, and the evolution of the wetlands in response to changed drainage patterns.

Through the use of airphotos and the cooperation of survey engineers we will be producing a series of accurate base maps onto which the survey data from all disciplines can be placed. Integration of the scientific data is always a problem with interdisciplinary projects. For the Chegoggin Archaeology Project we plan to use the modern techniques of

Geographic Information Systems (GIS) to assist in the management of the various data sets.

Some of the broader, regional issues relative to the prehistoric cultural dynamics have been mentioned. Out of this research we expect to gain new insights into cultural relationships between groups on both sides of the Gulf of Maine. It will require thoughtful analysis not only of the Bain collection, but also of the various Yarmouth collections currently being documented. When combined with ongoing research on the central Maine coast, a much more accurate picture of prehistoric events should be available.

Acknowledgements

We are grateful to the funding agencies - - the Canadian Embassy, the Nova Scotia Museum, Saint Mary's University, and the University of Maine - - for their support to date. Our thanks also to the volunteer crew members and students who worked in the field and the laboratory, and to the landowners of the site. Mr. Nate Bain, who effectively discovered the site and who made his collection and diary available to us, deserves a special vote of thanks. At 80 years of age he visited us every day in the field and inspired us all with his excitement. We know that he is anxious as we are for the next field season to roll around.

References Cited

- Bain, Nate
1987 personal communication.
- Bourque, Bruce
1975 Comments on the Late Archaic populations of Central Maine: the view from Turner Farm, Arctic Anthropology, 12(2):35-45.
-
- 1976 The Turner Farm site: a preliminary report, Man in the Northeast, 11:21-30.
-
- 1983 The Turner Farm archaeological project, National Geographic Society Research Reports, 15:59-65.
-
- 1987 Evidence for prehistoric exchange on the Maritime peninsula, Paper presented at the 1987 Society for American Archaeology annual meeting.

- _____ and Steven Cox
1981 Maine State Museum investigation of the Goddard site, Man in the Northeast, 22:3-27.
- Bower, Carolyn
1974 End of season report: salvage survey of Shelburne County, Nova Scotia - Summer 1973. Archaeological Survey of Canada, Paper No. 26, 12 - 16, Mercury Series of the National Museum of Civilization, Canada.
- Byers, Douglas
1979 The Nevin shellheap: burials, and some observations, Papers of the R.S. Peabody Foundation, Vol. 9.
- Connolly, John
1977 Bear River, Nova Scotia: a collections analysis, Man in the Northeast, 14:35-48.
- Davis, Stephen A.
1987 Report on Heritage Research Permit Archaeology 1987 N.S.7, Southeastern Nova Scotia Survey. Report on file Nova Scotia Museum, Halifax.
- Dostal, Jaroslav and C. Dupuy
1984 "Geochemistry of the North Mountain Basalts, Nova Scotia, Canada." Chemical Geology, 45, 245-261.
- Goddard, Ives
1978 Eastern Algonkian languages, In, Handbook of North American Indians, Volume 15: Northeast, (Bruce Trigger, ed.) Smithsonian Institution.
- Peterson, James and David Sanger
1987 Archaeological phase 2 testing at the Eddington Bend site (74-8), Penobscot County, Maine. Report on file Archaeology Lab., University of Maine.
- Sanger, David
1973 Cow Point: an archaic cemetery in New Brunswick, Archaeological Survey of Canada, Paper No. 12, Mercury Series of the National Museum of Civilization, Canada.
- _____ 1975 Culture change as an adaptive process in the Maine-Maritimes region, Arctic Anthropology, 12(2):60-75.

Spiess, Arthur, Bruce Bourque, and Steven Cox
1983 Cultural complexity in maritime cultures: evidence from
Penobscot Bay, Maine, In, The Evolution of Maritime Cultures on the
Northeast and the Northwest Coasts of America, Ronald Nash, ed.,
Publication 11, Department of Archaeology, Simon Fraser
University, Burnaby, B. C.

Tuck, James
1971 An archaic cemetery at Port au Choix, Newfoundland,
American Antiquity, 36(3):343-358.

Heritage Research Permit A1988NS12**RECONNAISSANCES PRELIMINAIRES DU SITE MINIER GOLDBORO
COMTE DE GUYSBOROUGH, NOUVELLE-ECOSSE**

Marc C. Lavoie
archéologue conseil

REMERCIEMENTS

La tâche de mener à bien la reconnaissance archéologique et l'analyse des données du site minier de Goldboro m'a été facilitée grâce à l'aide de plusieurs individus. Je tiens à remercier M. Jacques Lalancette du Groupe Ecotone de Montréal, M. Martin Dubé de la compagnie St-Michel Géoconseil au bureau de Goldboro, Dr. Brian Preston du Musée de la Nouvelle-Ecosse et Dr. Stephen A. Davis de Saint Mary's University à Halifax pour l'aide qu'ils m'ont gracieusement apportée durant la planification du projet et les reconnaissances à Goldboro.

Mr. Stephen T. Powell était mon assistant à Goldboro et à Halifax. Il m'a été d'une aide précieuse pendant nos travaux en chantier et plus tard quand il a catalogué les artefacts.

Je tiens aussi à remercier trois chercheurs en culture matérielle du Service Canadien des Parcs à Ottawa pour l'information qu'il m'ont fait parvenir sur certains objets de céramique et de verre: M. Gérard Gusset, Ms. Catherine Sullivan et Ms. Lynne Sussman.

1.0 INTRODUCTION

La reconnaissance archéologique à Goldboro dans le Comté de Guysborough en Nouvelle-Ecosse avait pour but d'évaluer le potentiel archéologique d'un secteur de 37 titres miniers qui sont la propriété de la compagnie Exploration Orex Inc. de Rouyn-Noranda (Figure 1). Ces recherches représentent un volet de l'étude environnementale des explorations minières par le Groupe Ecotone Inc. de Montréal. Nous nous étions fixé comme objectif d'accumuler des renseignements sur l'histoire de Goldboro: l'arrivée des habitants, leur mode de vie, et des activités minières à l'endroit. Nous nous sommes aussi renseignés sur les activités archéologiques dans la région, et enfin, nous nous sommes rendus sur les lieux où nous avons identifié des gisements archéologiques qui sont en danger d'être détruits par les activités à Goldboro.

1.1 La Reconnaissance

Nos travaux ont débuté aux Archives de la Nouvelle-Ecosse. Pendant quatre jours, les 17, 18, 24 et 25 novembre, nous avons accumulé une quantité suffisante de données pour préparer un aperçu historique de Goldboro (section 2.0 de ce rapport). Nous avons aussi visité l'archéologue de la province, Dr.

Brian Preston au Musée de la Nouvelle-Ecosse où nous avons obtenu des renseignements sur l'archéologue dans le Comté de Guysborough. Une demande pour un permis de fouille (No. A1988NS12) a aussi été dûment autorisée le 18 novembre.

Nous avons aussi visité l'archéologue Dr. Stephen A. Davis à Saint Mary's University pour obtenir de l'information sur les travaux archéologiques dans le Comté de Guysborough.

Les reconnaissances archéologiques ont commencé le 21 novembre, 1988, et se sont terminées trois jours plus tard. Les travaux étaient divisés en deux parties principales: une reconnaissance générale des lieux et un examen préliminaire des gisements identifiés durant la reconnaissance. Des sondages à la pelle nous ont permis d'identifier certains vestiges et d'accumuler un échantillonnage d'artefacts.

Nous avons localisé les ruines de structures domestiques et industrielles. Les gisements dont le potentiel archéologique est le plus prometteur sont discutés séparément dans les pages qui suivent. Ici, nous nous attarderons à une discussion de l'état général du site.

Le développement d'un site minier nécessite l'accès au site et l'aménagement de facilités nécessaires pour l'exploitation minière. De nouvelles routes, des terrains de stationnement et plusieurs installations ont oblitéré les ruines de plusieurs structures. Le nombre exact de gisements qui ont été détruits nous est encore inconnu. Cependant, nous avons noté la présence d'artefacts en plusieurs endroits, pratiquement sur toute l'étendue du terrain déboisé et nivelé. Certaines concentrations de tessons de céramique et de verre indiquent ce fait. Nous en avons retrouvé au nord des bureaux et dans le secteur déboisé au sud de l'atelier et des bureaux (Figure 1).

Des mesures sécuritaires ont aussi contribué à la destruction d'une vieille exploitation minière à l'est de la petite rivière Gold Brook. Ces installations ont été totalement nivelées.

A environ un kilomètre au nord-est des bureaux, un terrain vague est utilisé comme dépotoir pour le site minier. Les déchets y sont déposés et sont recouverts de terre et de pierre occasionnellement. Nous ignorons si ce site était utilisé avant les activités minières de la présente décennie.

Au sud-est des bureaux à environ trois kilomètres, le flanc d'une colline a été déboisé. Nous nous sommes demandés si ce site ne sera pas sujet à des explorations minéralogiques en 1989. Nous n'avons pu déterminer si ce secteur déboisé avait déjà été exploré par des ingénieurs miniers car le sol était recouvert de neige.

En ce qui concerne le travail encore à faire, nous nous attarderons sur ce sujet dans les conclusions de ce rapport. Cependant, il faut souligner que l'étendue de nos travaux a été limitée par un manque de temps, la mauvaise température et l'attention que nous avons portée aux gisements archéologiques qui ont été identifiés durant notre première journée de travail. Sans vouloir mitiger l'importance de nos découvertes préliminaires, il nous faut insister sur le fait qu'il reste encore beaucoup de travail à faire à Goldboro.

2.0 L'HISTORIQUE DE GOLDBORO

Une histoire détaillée de Goldboro n'existe pas. Cependant, l'ouvrage de Finlay Cooke "History and Stories of Isaac's Harbour and Goldboro" (1976) est un recueil d'anecdotes et d'événements quelque peu confus, surtout en ce qui concerne l'arrivée des colons et pêcheurs d'extraction européenne à Isaac's Harbour et Goldboro. Nous avons donc cru bon d'entreprendre des recherches préliminaires afin d'établir une chronologie des débuts de la présence humaine à cet endroit. A cette fin, des histoires générales sur la Nouvelle-Ecosse, des documents conservés aux archives de la province et des entrevues avec des spécialistes nous permettent d'énoncer les faits suivants.

2.1 Préhistoire

Il y a quelques années un amateur a fait la découverte d'un site préhistorique sur la rive ouest d'Isaac's Harbour. Les artefacts du site BhCj1 sont des tessons de céramique et des outils de pierre. Cependant le site n'a pas encore été examiné par un professionnel et nous en savons donc très peu au sujet des autochtones qui habitaient Isaac's Harbour.

Des fouilles entreprises non loin, près de Canso et à l'ouest près de Jeddore, démontrent que les communautés autochtones exploitaient les ressources fauniques et végétales du littoral atlantique et de l'intérieur du pays, sans se limiter à un endroit ou à l'autre. Toutefois, les autochtones suivaient de près les mouvements migratoires de certaines espèces animales tout en exploitant les ressources du littoral atlantique, de la mer et de l'intérieur du pays. En plus, les autochtones participaient à un système complexe de traite avec d'autres groupes autochtones, peut-être de la Baie de Fundy et même du Labrador (Davis 1974; Sheldon 1988). Cependant, il reste encore beaucoup de travail à faire avant que la préhistoire de la région soit mieux connue.

2.2 La Période Historique

La région sud-est de la Nouvelle-Ecosse est mentionnée par Marc Lescarbot durant son voyage de 1606. Il avait visité le Capitaine Savalet un homme d'affaire français et ses seize employés à Tor Bay (Biggar 1928: 137-138).

Une carte de la Nouvelle-Ecosse préparée par Nicolas Sanson [sic] en 1656 indique qu'une île à l'entrée du Hâvre menant à Country et Isaac's Harbours est nommée Macomode (Trudel 1973:88-89). En 1692, l'explorateur Cadillac parle de cette même île qu'il connaît du nom de "Macodome": un mot Micmac signifiant "la demeure des goéland noirs"; aujourd'hui cette île est nommé "Goose Island". Macodome servait d'abri aux bateaux de pêche (Ganong 1930:83). En 1699 le gouverneur de l'Acadie, Sieur de Villebon, parlait de Macodome comme étant un bon endroit pour la pêche, avec très peu de terre arable mais "assez pour des jardins" (Webster 1934:136). L'endroit demeure connu par ce nom pour la durée du régime français, mais nous ignorons s'il fut habité par des Européens (Trudel 1973:100-101, carte de Bellin, 1757).

La colonisation de la région sud-est de la Nouvelle-Ecosse fut très lente. La province était vue plutôt comme un endroit stratégique pour les pêcheries

que pour son potentiel en colonisation (Harris et Warkentin 1974:173). Vers la fin du XVIII^e siècle des colons sont arrivés au pays, mais même au XIX^e siècle la population de la région est demeurée clairsemée. Il y avait environ deux milles personnes dans le Comté de Guysborough en 1871 (Harris et Warkentin 1974:189, fig 5.3). Des 275,000 acres exploités dans le comté, moins de 20% étaient cultivés ou servaient de pâturage, et plus de 80% demeuraient à l'état naturel (Harris et Warkentin 1974:202, fig 5.5).

Au siècle dernier, on communiquait d'un village côtier à l'autre par bateau. Le système routier de la province est demeuré rudimentaire, les centres principaux comme Halifax et Windsor, étant reliés par des chemins de terre. Vers 1832, une route reliait Halifax à Windsor, et de là, Tatamagouche, Antigonish et Canso (Glazebrook 1964: 94, 120-121).

Simeon Griffin de Lewis Head dans le Comté de Shelburne, fut un des premiers colons à venir s'établir à Isaac's Harbour en avril, 1833 (Fergusson 1967:247). Durant les prochaines décennies, l'économie sera centrée sur les pêcheries et le cabotage. East Isaac's Harbour devint Goldboro en 1898, du fait qu'on y avait découvert de l'or en 1861 (Fergusson 1967:247).

En ce qui concerne le développement d'Isaac's Harbour, une carte nous montre qu'il n'y avait pas de route de cet endroit vers les autres communautés en 1840 (PANS, F1220-1840). En outre, plusieurs pétitions ont été soumises au gouvernement pour la construction de routes carrossables vers les grands centres tel qu'Antigonish (PANS, RG5, Series P, Vol. 16, No. 120, 1839; RG7, Vo. 70, No. 1334, 1862; RG5, Series P., Vol. 112, No. 75, 1862; Vol. 114, No. 59, 1901; Vol. 115, No. 16, 1906).

En 1864, les communautés de la province furent inventoriées. Une carte publiée en 1876 montre qu'Isaac's Harbour avait deux églises, un chantier maritime, deux mines d'or dont une était gérée par Consolidated Mines Co.; on y retrouve aussi une usine pour le traitement du homard, un hôtel et une maison pour chambreurs, quatre marchands, un bureau de poste, un cordonnier, un forgeron, et une population de pêcheurs et surement des mineurs (Church 1876).

Deux cartes marines nous renseignent aussi au sujet du village de Goldboro. Une carte montre dix-sept structures à East Isaac's Harbour en 1855 (H.O. U.S.N. No. 1116). pendant qu'une autre carte nous révèle la présence de trente-et-une structure et d'une route carrossable vers Stormont en 1924 (H.O. G.B. 1856, révisé 1924). La population de Goldboro était de 117 âmes en 1956 (Fergusson 1967:247).

Les exploitations minières de Goldboro sont très peu documentées. La revue mensuelle "The Critic" mentionne la présence de quatre compagnies minières en 1891: la Rockland Gold Mining and Milling Co., anciennement Gallihar Co., Palgrave Co., North Star Co., et MacMillan Gold Mining Co. (The Critic 1891, 2 janvier, p. 12; 9 janvier, p. 12; 13 février, p. 12-13; 27 mars, p. 14). La même revue résume les disputes entre les compagnies minières, leurs découvertes et mentionne des accidents dans les mines à Isaac's Harbour.

Les activités minières à Goldboro étaient sporadiques. Après la petite ruée vers l'or de 1862, on peut parler de grandes exploitations de 1870 à 1891

environ, et durant les deuxièmes et troisièmes décennies du XX^e siècle. Cependant, vers 1942 les mines étaient plus ou moins abandonnées (Fergusson 1967:247). Des travaux d'exploration ont repris au début des années 1980. Les présents travaux ont pour but d'identifier de nouveaux gisements minéralogiques et d'en évaluer le potentiel.

2.3 Résumé

L'histoire de Goldboro n'est pas très bien documentée. Cependant, nos travaux de recherche, très limités jusqu'ici, ont permis quand même d'élucider certains faits saillants de son histoire. Des autochtones ont vécu à Isaac's Harbour où ils menaient une vie de nomades afin de bénéficier des mouvements migratoires de certains animaux, et de participer dans un système complexe de traite avec d'autres groupes autochtones. Plus tard, leur vie a été influencée par la présence de pêcheurs européens. Durant la période historique, les français connaissaient bien le littoral atlantique où ils avaient établi des pêcheries. Les pêcheurs s'habritaient dans les îles à l'entrée de Country et Isaac's Harbours. Ce n'est qu'au XIX^e siècle cependant, que des colons se sont établis à Isaac's Harbour. Ils étaient pêcheurs et marins. La communauté demeura isolé même après la petite ruée vers l'or de 1862, mais elle a néanmoins bénéficié des activités minières dans la région jusqu'à environ 1942. De nouvelles activités minières promettent peut-être un renouveau économique pour Goldboro dans les années à venir.

3.0 DISCUSSION DES GISEMENTS ARCHEOLOGIQUES

Trois gisements archéologiques seront discutés sous cette rubrique: deux demeures domestiques et une affinerie. Ils étaient suffisamment préservés pour en justifier une analyse approfondie.

Cette discussion inclue la location, l'étendue, l'état et la nature de chaque gisement, et l'analyse des échantillonnages d'artefacts qui ont été conservés durant nos sondages. La terminologie pour les variétés de céramiques que nous avons identifiées est définie dès qu'un nouveau terme est introduit dans le texte. Cependant, la terminologie utilisée pour notre analyse des objets en verre est celle qui a été développée par les chercheurs en culture matérielle du Service Canadien des Parcs d'Environnement Canada (Jones, Sullivan et al. 1985).

3.1 Maison No. 1

Les ruines d'une demeure sont localisées approximativement à 60 mètres au sud-est des bureaux et de l'atelier, et à l'ouest, nord-ouest du puit minier (Figure 1, Planche 1). Les ruines consistent en une dépression en forme de "L" -- une cave à provisions ou à charbon -- entourée d'un mur de soutient rectangulaire (7.70 x 10.30 m) construit de deux ou trois épaisseurs de pierres plates sansmortier ou ciment. D'autres débris adjacents et à l'extérieur du mur est de la maison sont de qui reste d'une cheminée faite de briques moulées, cimentées avec du mortier ou du ciment.

Un sondage à la pelle à un mètre au nord de la maison nous a révélé un sol qui n'a pas été remanié par l'homme. La stratigraphie est la suivante: une

couche de terre noire contenant une quantité forte d'humus (environ 8.0 cm) recouvre une terre argileuse de couleur grise ou brune-grise qui est sablonneuse par endroits (environ 10.0 cm); la couleur est peut être due à un feu de forêt ou à l'incendie de la maison. Sous cette deuxième couche nous avons identifié une terre sablonneuse et homogène, rougeâtre ou brunâtre, qui semble représenter le sol typique de l'endroit (Planche 2).

A environ 28 mètres au sud-est de la maison, nous avons découvert le dépotoir de la Maison No. 1. Il est situé sur une pente abrupte à l'extrémité du secteur plus ou moins plat où la maison a été érigée. On peut discerner des artefacts en surface, et des sondages à la pelle ont révélé que la couche d'artefacts est d'une épaisseur d'environ 30 cm dans un sol contenant de l'humus causé par l'accumulation de déchets domestiques et naturels tel que des feuilles d'arbres. Un sol sablonneux et rougeâtre a été identifié sous le gisement.

3.1.1 Artefacts

Dix-sept artefacts ont été conservés pour notre analyse; ceux-ci représentent des objets typiques du gisement archéologique.

3.1.2 Céramique

Un tesson de grès brun anglais a été découvert en surface près de la maison (BhCj2:51). Le grès cérame est composé d'une argile plastique dégraissée au sable et est cuit à haute température, entre 1150 et 1400° c. (Brongniart 1854, II:192-193; Lavoie 1987:113). Il se distingue "des autres poteries par sa structure compacte et vitrifiée" (Décarie-Audet 1979:21). La pâte de notre tesson est d'un gris pâle et contient des grains de sable et des petites pierres. En plus, l'intérieur et l'extérieur sont recouverts d'une glaçure saline brun foncé qui a été endommagée par le feu.

Ce tesson est un fragment d'une bouteille de petit format qui aurait pu contenir une boisson gazeifiée, de la bière, du noir à poêle ou encore de l'encre. Des bouteilles de grès ayant une forme similaire ont été identifiées aux Etats-Unis dans l'épave du bateau-à-roue Bertrand et dans d'autres sites américains, où elles datent des quarante dernières années du XIX^e siècle (Noel Hume 1970:79-80; Switzer 1974:10-12; Wilson 1981:21, figs. 19 et 20). Au XIX^e siècle, les potiers anglais en faisaient l'exportation partout en Amérique, mais l'industrie a souffert vers la fin du siècle, quand des bouteilles de verre ont commencé à remplacer les contenants de grès (Oswald et al. 1982:68). La bouteille de grès provenant de la Maison No. 1 pourrait dater de la fin du XIX^e ou du début du XX^e siècle.

Un tesson de terre cuite grossière provenant d'une terrine ou d'une jatte avec un rebord ourlé a aussi été retrouvé près de la Maison No. 1 (BhCj2:53). Cette poterie est tendre et poreuse; elle est fabriquée avec de l'argile qui a pu être lavée et dégraissée. Elle est cuite à basse température, environ 1000° c. (Brongniart 1854, II:4; Lavoie 1987:64). Notre tesson a une pâte rouge et vésiculaire, et contient des grains de sable ainsi que des particules blanches. L'intérieur est recouvert d'un engobe blanc sous une glaçure plombifère, jaunâtre. Cependant on retrouve aussi une glaçure sur l'extérieur, sous forme de bavures; la glaçure aurait débordé de l'intérieur quand la jatte a été

vernissée avant la cuisson. Cet objet a été fabriqué à Buckley, au Pays de Galles ou dans le nord-est de l'Angleterre (Barton s.d.:8-9, type 12; Davey 1975:18, fig. 59; Moussette 1982:25-28, variété 4.1.2). Cette terrine aurait pu être fabriqués au XIX^e siècle et même au début des années 1900 (Davey 1975:19).

Un échantillonnage de seize artefacts du dépotoir domestique a été retenu pour des fins d'analyse. Des tessons de poterie et des objets en verre représentent les artefacts typiques mis à jour à cet endroit.

Un plat à soupe ou à dessert d'ironstone a un rebord évasé (diamètre, 17 cm) un pied triangulaire mais arrondi vu en coupe, et une ligne d'or peinte sur la surface intérieure à 2.5 cm du rebord (BhCj2:9). (L'ironstone est une poterie cuite à haut feu qui est résistante et durable; elle semble plus résistante que les terres cuites grossières et les terres cuites fines blanches, mais ne l'est pas autant que la porcelaine. L'ironstone était populaire au siècle dernier et l'est encore aujourd'hui [Collard 1984:125-126; Godden 1980:xxiii-xxiv]).

On retrouve une portion d'une marque de fabricant imprimée sur la base de ce plat. C'est la marque utilisée dès 1914 par la compagnie Globe Pottery Ltd. du Staffordshire en Angleterre. Cette compagnie a commencé à fabriquer de la céramique en 1914. Aujourd'hui Globe est amalgamé à Ridgeways ou au Royal Doulton Group (Cushion 1980:130; Godden 1964:275, marque No. 1710; Fig. 2c).

Un autre plat à dessert avec un rebord évasé (diamètre, 14 cm) et un pied arrondi vu en coupe, a une décoration intérieure comprenant deux lignes d'or: une de 3 mm sur le rebord et une autre d'un millimètre, 2 mm plus bas (BhCj2:10). Sur la base de ce bol on retrouve un segment d'une des marques de fabricant et un numéro d'enregistrement de la firme J et G Meakin Ltd. de Hanley au Staffordshire (figure 2d). C'est un symbole qui fut employé dès 1912 (Cushion 1980:162; Godden 1964:427, variation de la marque de fabricant No. 2605). Ce bol est en terre cuite fine blanche, un produit meilleur que les terres cuites grossières mais pas aussi résistant que l'ironstone. La terre cuite fine blanche est devenue populaire durant la deuxième ou la troisième décennie du XIX^e siècle et est encore disponible aujourd'hui (Miller 1980:2; Sussman 1977:106).

Deux autres objets en terre cuite fine blanche dont nous ignorons la fonction sont représentés par des tessons de rebord. Un tesson a quatre lignes dorées, une sur le rebord et trois autres lignes parallèles peintes 5 mm plus bas (BhCj2:12); un autre tesson a trois lignes vertes sur son intérieur, 8 mm sous le rebord (BhCj2:11).

Deux autres tessons de rebord représentent un petit bol ou une soucoupe (BhCj2:13-14). Le rebord a un motif moulé dit "bead and reel" (Savage and Newman 1974:39). La glaçure jaunâtre des tessons suggère la présence dans note échantillon d'une variété de poterie connue sous le nom de creamware, mais la pâte est très blanche; peut-être est-ce un défaut du fabricant -- trop de plamb dans la glaçure --ou on a voulu tout simplement donner à la glaçure un ton jaunâtre.

Deux tessons de porcelaine sont décorés d'un lustre brun-orange. Un premier tesson, le rebord d'une tasse (diamètre, 9 cm) a une d écoration

extérieure comprenant une bande lustrée de 8 mm et une autre d'un millimètre, un millimètre au dessous de la première (BhCj2:16). Le rebord d'un deuxième tesson provenait d'une soucoupe (diamètre, 14 cm) est décoré d'une bande lustrée de 8 mm sur sa surface intérieure (BhCj2:15).

La porcelaine est une poterie durable, translucide, résistante et habituellement blanche; elle est composée d'une argile réfractaire et de pierre blanche, toutes deux à base de feldspath. La glaçure est aussi de feldspath. La porcelaine est cuite à haut feu, entre 1250 et 1450° c. (Jackson 1969:4; Palmer 1976:14).

Originellement la porcelaine était très coûteuse, et aujourd'hui plusieurs variétés de cette céramique les sont encore. Vers le milieu du siècle dernier, beaucoup de porcelaines du continent européen ont été exportées au Canada, où elles prirent une portion des marchés domestiques, jusque là réservés essentiellement aux poteries anglaises (Collard 1984:189-197). Cette porcelaine était peu coûteuse et de qualité acceptable. On en a retrouvé sur les sites de la fin du XIX^e siècle et du début des années 1900 au Nouveau-Brunswick et en Nouvelle-Ecosse.

3.1.3 Verre

Le verre est un composé de silice auquel on a rejouté un fondant (soude ou potasse) sous forme d'un alcali, et un stabilisant (chaux ou plomb) (Jones, Sullivan et al. 1985:12-15). Nous nous limiterons ici aux mélanges et procédés de fabrication qui nous semblent les plus communément utilisés à la fin du XIX^e et au début du XX^e siècle. Après les expériences de William Leighton en 1864, le verre de chaux -- un verre incolore et d'un éclat semblable au verre de plomb mais moins coûteux que ce dernier -- est devenu le verre le plus commun pour la fabrication de contenants par moulage sous pression et par moyens mécaniques (Jones, Sullivan et al. 1985:12-13; McKefarin et McKearin 1948:8; Miller et Pacey 1985:44).

Il y avait plusieurs procédés pour la fabrication des contenants au XX^e siècle (Jones, Sullivan et al. 1985:25-43). Cependant au début du siècle des fabricants ont commencé à utiliser des machines semi-automatiques et automatiques, tout en continuant de se servir du soufflage au moule et du moulage à la presse (Miller et Pacey 1985:40-41; Miller et Sullivan 1984:86-92). Au Canada, par exemple la Diamond Glass Co. Ltd. de Montréal a obtenu les droits d'exploitation de deux machines de type "Owens" pour la fabrication de gobelets et de cheminées pour les lampes à l'huile le 13 juillet, 1897 (Scoville 1972:100). En 1906, la même compagnie qui avait changé sa raison sociale pour Diamond Flint Glass Co. Ltd. (Dominion Glass Co. Ltd. en 1913 et Domglass Ltd. en 1976) obtint les droits d'exploitation pour une machine Owens, pour la fabrication de contenants en verre (Miller et Jorgensen 1986:3; Miller et Pacey 1985:38; Scoville 1972:140-141). En Nouvelle-Ecosse, l'Humphrey Glass Works de Trenton, faisait installer une machine de type inconnu pour la fabrication de contenants de verre en 1913 (McLaren 1968:7). En 1918 cependant, cette compagnie semble avoir fabriqué uniquement des bouteilles par le soufflage au moule à sa nouvelle usine de Moncton au Nouveau-Brunswick (Auteur Anonyme 1918:56). Il semble bien que cette compagnie ait opté de remplir les petites commandes, pendant que les plus grosses compagnies (Dominion Glass et Consumer Glass) remplissaient les grosses commandes avec leurs machines

tout en faisant concurrence aux petites usines en employant des souffleurs de verre pour remplir les petites commandes.

Le verre de chaux et d'autres types de verre utilisés au début du siècle pouvaient être incolore ou de différentes couleurs:

"En général c'est la présence d'oxydes métalliques dans le mélange qui donne au verre sa coloration. Le niveau de concentration des oxydes, leur degré d'oxydation ou de réduction, l'épaisseur du verre ainsi que la présence d'autres oxydes et d'impuretés dans le mélange sont tous des éléments qui influent sur la couleur obtenue (Jones, Sullivan et al. 1985:15).

L'échantillonnage d'objets de verre provenant du dépotoir de la Maison No. 1 comprend du verre incolore, vert pâle (impureté de fer neutralisée ou presque avec un décolorant), bleu (cobalt), et du verre blanc opaque (oxyde d'étain ou du guano riche en calcium) (Jones, Sullivan et al. 1985:16-17).

Durant les sondages archaéologiques nous avons conservé quatre bouteilles, deux bocaux, un verre à boire et un couvercle de beurrier. (Les dimensions de tous les contenants sont résumées au tableau 1).

Les quatre bouteilles sont des spécialités pharmaceutiques. Une bouteille en verre incolore avec l'étiquette moulée de "J. Palmer and Son" a une capacité fonctionnelle de 203 ml (BhCj2:1). Elle a une lèvre de type pharmaceutique, un col rétréci vers le bas et une épaule arrondie; son profil de cul est concave et peu profond. La coupe horizontale du corps est ronde-équarrie, et la coupe verticale est amincie vers le bas (Fig. 3; Jones, Sullivan et al. 1985:97, 101, 103, 106, 110, 119). Le cul de la bouteille porte la marque moulée du fabricant Dominion Glass, un "D" dans un losange (Fig. 2e) et le numéro de moule, de style de contenant ou de client "674" (Miller et Jorgensen 1986:2; Stevens 1979:140). Ce contenant pharmaceutique devait être fermé avec un bouchon de liège ou de verre. Cette bouteille a été fabriquée à la machine par Dominion Glass, donc après 1906, et probablement pas plus tard que 1945 (Miller and Sullivan 1984: 87). En outre, la marque du fabricant, enregistrée le 27 juin 1928 et l'histoire des activités minières à Goldboro indiquent que cette bouteille a été produite entre 1928 et 1942 (Miller et Jorgensen 1986:3).

Une autre bouteille pharmaceutique de verre incolore a aussi la marque du fabricant Dominion Glass Co. Ltd., un "D" dans un losange, et a donc été fabriquée entre 1928 et 1942 (BhCj2:3; Figure 2e; Tableau 1). Elle contenait une spécialité pharmaceutique "OWBRIDGE'S TONIC, HULL" (Figure 2a). Ce contenant a une épaule arrondie, une coupe horizontale rectangulaire à trois pans en retrait et à coins chanfreinés, une coupe verticale droite, et le profil du cul est en retrait et droit (Jones, Sullivan et al. 1985: 103, 108, 110, 119). Le talon est chanfreiné et la base de la bouteille porte une marque d'aspiration du procédé "Owens" "causé par le coupage du verre lorsque le moule est plein" par le passage d'un ciseau sous la bouteille dans le moule, laissant une cicatrice (Jones, Sullivan et al. 1985: 41, 114).

La troisième bouteille pharmaceutique a probablement été fabriquée dans un moule à événements. Elle a une capacité fonctionnelle de 92 ml et est faite avec du verre qui a un ton vert pâle (BhCj2:2; Figure 4a). Son extrémité est en

Numero de Catalogue	Diamètre de l'ouverture	Hauteur de la lèvre	Hauteur de la bague	Hauteur du goulot	Dimension du corps	Dimension du cul	Hauteur du Corps	Hauteur du Contenant
BhCj2:1	1.65	0.65	.	5.25	5.7	4.5	11.5	16.8
	.	.	.	.	5.6	4.5	.	.
BhCj2:2	1.35	1.30	.50	5.85	4.8	4.9	9.0	14.8
	.	.	.	.	3.2	2.9	.	.
BhCj2:3	.	.	.	.	4.6	4.6	10.1	.
BhCj2:5	.	.	.	.	1.7	1.7	2.6	4.9
	.	.	.	.	1.1	1.1	.	.
BhCj2:7	7.11	1.2	.	1.2	9.5	9.2	6.2	7.5
	.	.	.	.	8.5	8.1	.	.
BhCj2:8	4.0	0.9	.	0.9	6.3	6.0	4.4	5.5
	.	.	.	.	5.2	4.0	.	.
(vieille affinerie)								
BhCj2:41	1.55	1.5	.	4.25	.	.	.	.
BhCj2:44	2.06	1.6	.75	.	.	.	.	.

Tableau 1. Dimensions des Contenants de Verre (cm) de la Maison No. 1 et de la Vielle Affinerie.

deux parties ressemblant un peu à une extrémité de type Perry Davis; elle a un col rétréci vers le haut. Sa coupe horizontale est rectangulaire à chanfreins plats et sa coupe verticale est droite. Le profil du cul est concave, mais peu profond et a un memelon (Jones, Sullivan et al. 1985: 91, 92, 103, 106, 110, 116). Ce contenant a aussi des petits points en relief et un autre mamelon sur un pan, près du col indiquant que cette bouteille a été fabriquée dans un moule à évents datant "du dernier tiers du XIX^e siècle jusqu'aux années 1920 (Jones, Sullivan et al. 1985:50).

Une petite bouteille ou fiole de verre bleu cobalt avec une capsule filetée a un anneau sous la lèvre (BhCj2:5). La forme de l'épaule est quasichampenoise. La coupe verticale du corps est droite et sa coupe horizontale est celle d'un flasque (Jones, Sullivan et al. 1985:98, 103, 109, 110; Figure 4b, Tableau 1). Le petit format de ce contenant nous porte à des médicaments pour usage externe (Miller et Pacey 1985:45). Toutefois, nous ignorons où la fiole a été fabriquée mécaniquement et pourrait avoir été produite au début du siècle et avant 1942, date pour la fin des activités minières à Goldboro (Jones, Sullivan et al. 1985:42-43).

Deux bocaux de crème POND'S sont d'un verre blanc opaque (BhCj2:7-8, Tableau 1). Ils ont une lèvre à filetage continu, une coupe horizontale du corps ovale, une coupe verticale du corps amincie vers le bas, et un profil de cul en retrait, droit (Jones, Sullivan et al. 1985:37, fig. 15, 98, 105, 110, 119). Le plus gros des deux bocaux a une capacité fonctionnelle de 190 ml, pendant que l'autre local a une capacité de 55 ml. Le petit contenant a le numéro "11" moulé sur sa base, et au même endroit, l'autre contenant porte l'inscription moulée suivante: POND'S REG'D 1935, MADE IN CANADA. Le petit bocal a une capsule de métal peinte en blanc avec l'inscription "POND'S" en relief au centre de la capsule (Figure 2b); l'intérieur de la capsule est doublé d'un disque de papier. Ces bocaux ont été fabriqués en 1935 ou après.

Un gobelet incolore semble avoir été moulé à la presse (BhCj2:4). Il a une coupe verticale du corps amincie vers le bas et le haut est légèrement évasé; le profil de sa base est en retrait, droit. Les éléments décoratifs sont les suivants: des côtes sur la surface intérieure, et un extérieur uniforme excepté pour une bande de losanges d'une épaisseur de 1.5 cm, 2.5 cm sous le bord du verre (Jones, Sullivan et al. 1985:63, 71, 119). Ce gobelet est de type "Bell Optic Soda". Le catalogue No. 21 de la Jefferson Glass Co. Ltd. de Toronto (propriété de Dominion Glass Co.) contient des illustrations de gobelets semblables (Stevens 1979:162). Ils auraient été fabriqués en 1913 ou après quand le nom de la compagnie est devenu Dominion Glass Co. Ltd. (Miller et Pacey 1985:38). Une liste de prix (sans date) nous informe sur le coût des gobelets de type "Bell": un verre de 5 oz coûtait 0,90\$, dix cents de plus cher qu'un verre de style optic était 25 pour cent plus coûteux qu'un verre de style plus simple tel que "straight or taper shapes". En outre, le style optic était 25 pour cent coûteux qu'un style sans décoration, soit 1,13\$ du verre (Stevens 1979:197). Notre gobelet a été fabriqué au XX^e siècle et avant la fin des activités minières à Goldboro vers 1942, mais il n'est pas nécessairement un objet fabriqué par la Dominion Glass Co. Ltd.

Le dernier objet de verre provenant de nos sondages au dépotier domestique près de la Maison No. 1 est un couvercle de beurrier, de verre pressé incolore (BhCj2:6). Il a un bouton en flèche facetté et hexagonale, se

terminant en pointe et reposant sur une plate-forme hexagonale. La forme du couvercle est celle d'un dôme avec une collerette verticale (Jones, Sullivan et al. 1985:158). La surface extérieure du sommet est décorée avec des facettes quasi-triangulaires sous des lignes convergeantes en losanges, diminuant de grandeur et disparaissant sous la plateforme du bouton. Nous n'avons pu dater cet objet avec précision mais notons toujours que la Dominion Glass Co. Ltd. faisait des beurriers de verre pressé en plusieurs styles au début du XX^e siècle (Stevens 1979:164-166, 170, 185, 193). Ce couvercle par association avec les autres artefacts de verre du dépotoir est probablement un objet fabriqué au XX^e siècle et avant la fin des années 1940.

3.1.4 Résumé

Les artefacts de la Maison No. 1 indiquent cette demeure aurait pu être occupée à la fin du siècle, mais le nombre d'objets fabriqués au début de XX^e siècle et plus tard suggère que cette demeure a été occupée de 1900 à 1940 ou quelques années après. Les artefacts ne sont pas ceux de gens riches, mais les occupants de la Maison No. 1 vivaient quand même bien. Enfin nos recherches montrent que les artefacts étaient des produits d'origine canadienne et anglaise.

3.2 Maison No. 2

La Maison No. 2 est approximativement à 100 mètres au sud, sud-ouest des bureau et de l'atelier miniers sur un petit promontoire dans le secteur boisé. Ces ruines ne sont pas aussi bien préservées que celle de Maison No. 1. Cependant, nous y avons identifié une cave en forme de "L" (7.0 x 8.0 m) mais le mur de soutien de la maison n'est pas visible en surface. Au sud-ouest de ces ruines et sur une pente douce, il y a un mur de pierre en forme de "L" (6.0 x 6.3 m) orienté d'est en ouest. Récemment, ce mur a été partiellement détruit et nivelé par un bulldozer. C'est au sud de ce mur et sous plusieurs pierres que nous avons découvert des tessons de céramique et de verre qui représentent le dépotoir de la Maison No. 2.

3.2.1 Artefacts

Vingt-cinq tessons de céramique et de verre ont été conservés pour des fins d'analyse. Ils représentent des objets typiques du gisement archéologique.

3.2.2 Céramique

Un tesson de paroi d'un contenant en grès a une pâte grise et sableuse, un extérieur avec une glacure saline et un intérieur recouvert d'un englobe brun de type "Albany" (Greer 1981:194; BhCj2:39). Ce produit pourrait être américain ou canadien, et il date du XIX^e ou du XX^e siècle.

Huit tessons de terre cuite fine blanche représentent des petites assiettes ou soucoupes, une tasse, ainsi que des pots à lait ou des saucières, une tasse, ainsi que des pots à lait ou des saucières. Un tesson de côte de paroi et de la base d'une tasse est décoré avec un réseau d'arabesques comprenant des feuilles et des lignes stylisées (BhCj2:27)

Quatre petites assiettes ou soucoupes ont été identifiées. Elles ont des rebords moulés ou l'on discerne des petites ondulations. Une soucoupe ou une assiette a un décor imprimé vert: des feuilles et des perles à l'intérieur d'une bande (BhCj2:24). Un autre tesson a une bordure blue-vert représentant des colliers de perles entre des fleurs (BhCj2:27). Deux tessons ont une décoration dite "flow Blue" où le motif imprimé s'est étendu, oblitérant les détails du décor floral (BhCj2:35-37).

Un pot à lait ou une saucière est aussi décoré d'un motif floral flow blue mais ce motif est rehaussé de dorures (BhCj2:34). Un autre récipient du même type a une décoration bleue florale au pothoir comprenant des feuilles et des tiges (BhCj2:38).

La collection contient six objets d'ironstone. Une tasse a une anse décorée avec des arabesques moulées (BhCj2:26). Un tesson de couvercle d'une soupière est décoré avec une variation du "motif du blé" (BhCj2:17). Ce motif a été produit au XIX^e et au XX^e siècle et a dû être très peu connu du public anglais, puisque sur l'ironstone il était fait spécifiquement pour l'exportation en Amérique du Nord (Sussman 1985:7). Plusieurs variations du motif ont été vendues en Amérique. Cependant, nos recherches montrent que celui que nous avons identifié n'est pas américain ou canadien et ressemble beaucoup aux motifs anglais utilisés par Robert Cochran and Co. de Glasgow jusqu'en 1918, ou de Hollinshead and Kirkham de Burslem et Tunstall, jusqu'en 1891 (Collard 1984; Sussman 1985:20-21m 26-27, figures 11, 17, Wetherbee 1980; 1985).

Deux tessons d'une cruche d'ironstone stone décorés d'un motif imprimé bleu (BhCj2:18-19). Une assiette et un bol ont la même décoration verte, imprimée, comprenant une bande de motifs stylisés, interrompus par endroits par des arabesques et des fleurs (BhCj2:20-22).

Un pot à lait ou une saucière d'ironstone est décoré d'un motif vert foncé, comprenant des arabesques, des coquilles stylisées et des points (BhCj2:23).

Nous avons conservé six tessons de porcelaine du dépotoir de la Maison 2. Un petit plat ou une soucoupe a un rebord ondulé, rehaussé d'or (BhCj2:29). Un autre tesson de paroi est décoré d'or avec un motif en clef grecque (BhCj2:30). Un troisième tesson est décoré d'un motif floral formé à la main et peint (bleu) avant d'avoir été posé sur la paroi de l'objet avec un engobe (BhCj2:32).

Le rebord d'une tasse peint d'une ligne d'or, est aussi décoré avec des feuilles de chêne vertes avec des membrures et des tiges d'or (BhCj2:28). Deux tessons de porcelaine représentent les bases d'objets dont la fonction demeure inconnue (BhCj2:33, Figure 2f). Un de ces tessons porte la marque incomplète d'un fabricant et le nom du style de décoration ou de motif (BhCj2:33, Fig. 2f). La marque est peut-être celle de la firme Jackson and Gosling du Staffordshire (1866 +) où après 1880 le nom du style de décoration est inclu avec la marque de fabricant; en outre, cette marque pourrait être celle de J. Jackson and Co. du Staffordshire (1870-1887) qui inscrivait aussi le nom du style de motif avec sa

marque de fabricant, de 1870 à 1887 (Godden 1964:349-350; c.p. L. Sussman, Ottawa, 8 décembre, 1988).

3.2.3 Verre

Un tesson de verre (bleue-vert) provient de nos sondages au dépotoir de la Maison No. 2 (BhCj:40). C'est un objet de verre avec une surface iridescente de type "carnival" similaire à ceux fabriqués en 1888 et plus tard (Jones, Sullivan et al. 1985:17; Revi 1967:32).

3.2.4 Resume

La Maison No. 2 aurait pu être occupée à la fin de XIX^e siècle car certains artefacts auraient pu être fabriqués à cette époque. Cependant, les décorations sur certaines pièces, comme l'ironstone et la terre cuite fine blanche ne ressemblent pas à celles que nous avons identifiées sur d'autres sites de la fin du XIX^e siècle en Nouvelle-Ecosse, ce qui nous porte à croire que l'échantillonnage d'artefacts représente une occupation qui pourrait dater de 1890 et plus tard, et peut-être jusqu'à la fin des activités minières à Goldboro au début des années 1940. Ajoutons que des services de table d'ironstone blanc et de semi-porcelain avec des motifs monochromes et polychromes ornés d'or - - rassemblant beaucoup aux artefacts de la Maison No. 2 -- étaient disponible chez Sears et Roebuck Co. en 1897 et en 1906 (Sears et Roebuck 1897:678-683; 1906:354-362).

3.3 Vieille Affinerie

Les ruines d'une vieille affinerie sont sur la rive est de Gold Brook Lake (Figure 1). Il existe encore très peu d'évidence pour de complexe, principalement des assises et murs de béton, poutres et pieux et un mur de pierre construits sur trois niveaux pour la séparation et le lavage de minerai (Figure 5, Planches 4 et 5). L'édifice a dû être démoli et la machinerie a été démontée et transportée; on ignore ce qu'il en est advenue.

Un plan de la "Minerals limited" montre l'emplacement de cette affinerie; elle est désignée "Old Mill" ce qui nous porte à croire que l'affinerie était désuète et peut-être abandonnée en 1934 (Minerals Limited 1934).

Le même plan indique la présence de deux compagnies minières: la Boston-Richardson Mine et la East Goldbrook Mine. La première compagnie établie en cet endroit semble avoir été la "Richardson Gold Mine" qui aurait changé sa raison sociale avant 1934 pour "Boston-Richardson Mine". Un plan daté 1893, montre une affinerie sur la berge du lac, probablement la même que celle sur le plan de 1934 (G.S.C. 1893; Minerals Limited 1934).

A six mètres environ au nord des ruines, il y a un amas de briques et de terre. Il contient deux types de brique: des briques réfractaires portant les marques de fabricant "GARTCRAIG" et "GOGHEND / GLASGOW" (Ecosse) et des briques moulées (5.5 x 8.7 x 18.0 cm) probablement d'une briqueterie de la province. La fonction originale de ce tumulus nous est inconnue.

A environ cinquante mètres à l'ouest de l'affinerie nous avons identifié deux rampes orientées vers le lac. Elles sont parallèles une à l'autre; la première rampe est d'une longueur de 12 m et est 3.5 m de large; l'autre rampe est 9.60 m de long et 4.4 m de large. Elles ont pu servir comme assises pour des voies ferrées sur tréteaux qui auraient menées vers l'affinerie (Planches 6 et 7).

3.3.1 Artefacts

Une collection de céramique et de verre provenant du rivage du lac indique que cet endroit a été utilisé comme dépotoir par des mineurs, pêcheurs et visiteurs.

3.3.2 Céramique

Deux tessons de céramique ont été conservés pour des fins d'analyse. Le rebord d'une cruche d'ironstone a été modifié par l'action du feu. Elle avait une paroi avec des côtes et un motif moulé que nous n'avons pu identifier (BhCj2:49).

Le deuxième tesson de céramique est un fragment d'une tuile en porcelaine avec un rebord convexe et des trous sur sa surface (BhCj2:47). Peut-être était-ce un couvercle de drain.

3.3.3 Verre

Nous avons conservé six tessons de contenants de verre. Un fragment de la base d'une bouteille à alcool de "verre noir" avec une coupe du corps horizontale cylindrique a un numéro de moule ou de style moulé sur sa base: 1593 (BhCj2:45; Jones, Sullivan et al. 1985:17). Un autre tesson d'une bouteille carrée a un talon chanfreiné, un point d'appui plat et un profil de cul en retrait et concave. Les coins de cette bouteille sont aussi chanfreinés (BhCj2:46; Jones, Sullivan et al. 1985:114-115, 119). Un fragment de paroi d'un contenant pharmaceutique indique que ce contenant avait au moins un pan et des coins chanfreinés (BhCj2:42). Un autre tesson représente un petit contenant avec une coupe horizontale cylindrique (BhCj2:43). Le col d'un contenant pharmaceutique a une lèvre de type breveté, avec une ouverture à bouchon ainsi qu'un col cylindrique (BhCj2:41, Figure 4c; Jones, Sullivan et al. 1985:97, 103). Finalement, l'extrémité d'une bouteille à alcool a été fabriquée en deux parties; elle a une lèvre arrondie et une bague évasée vers le bas (BhCj2:44, Figure 4d; Jones, Sullivan et al. 1985:91, 97,99).

Tous ces tessons de bouteille excepté pour celui en verre noir sont fabriqués avec du verre qui a des tons verts ou bleus. Aucun des contenants semble avoir été fabriqué suivant des procédés automatiques, mais toutes les bouteilles ont été moulées. Nous n'avons pas de données suffisantes pour suggérer l'âge de cette collection qui nous semble s'être accumulée durant plusieurs années, peut-être dès les débuts des activités minières à Goldboro au XIX^e siècle.

3.3.4 Métal

Un clou de fer récupéré sur le rivage de Gold Brook Lake a la forme de ceux employés pour les voies ferrées, mais il est de petite taille (longueur 8.0 cm). Il a une tête en forme "L" et sa pointe est aplatie en forme de coin (BhCj2:50).

3.3.5 Résumé

La majorité des artefacts provenant du rivage de Gold Brook Lake représente des objets qui y ont été jettés par des passants. Il est possible que la tuile de porcelaine et le clou étaient utilisés près ou dans l'affinerie avant qu'elle soit abandonnée. La collection d'objets, cependant, nous semble moins moderne que celles des deux maisons dont nous avons discutées, mais nous n'avons pu produire une chronologie pour les objets trouvés sur le rivage du lac dû au manque de pièces typiques et suffisamment complètes.

4.0 DISCUSSIONS ET CONCLUSIONS

Les reconnaissances préliminaires sur le site minier de Goldboro ont révélé la présence de deux structures domestiques (circa 1890-1942 ±) et de concentrations d'artefacts qui représentent sûrement d'autres activités humaines à cet endroit. L'information archéologique sur ces concentrations d'artefacts est pratiquement perdue. Nous pourrions toujours entreprendre une collection de tous les tessons de céramique et de verre que nous avons vus sur le terrain, mais ces objets sont hors contexte. Il serait impossible de les associer avec les structures auxquelles ils appartenaient et notre analyse serait donc limitée à un catalogue d'objets. En conséquence, nos efforts devraient se concentrer sur les ruines que nous avons découvertes.

Un plan précis des ruines sur la berge de Gold Brook Lake devra être dressé. Nous devons aussi entreprendre des recherches pour découvrir quand l'affinerie a été utilisée et il nous faudra aussi déterminer le type de machinerie qui servait pour séparer et laver le minerai. Ce qui importe c'est de se renseigner sur les procédés de séparation et de lavage du minerai. Ces procédés étaient-ils uniques à cet endroit, à la province et au pays? Il faut déterminer l'importance de ces procédés dans l'histoire industrielle du Canada, car nous en savons très peu à ce sujet.

Les deux demeures que nous avons localisées pendant la reconnaissance sont aussi très importantes car elles nous renseignent sur la vie des mineurs à Goldboro. Nous pouvons déjà parler de l'écologie humaine de l'endroit. Chaque demeure a été construite sur un petit promontoir, donc un endroit sec, et près d'une petite rivière ou d'un ruisseau d'où les résidents s'approvisionnaient sûrement en eau potable. Les maisons étaient aussi situées non loin des activités minières, mais près des crassiers, où il nous semble que le potentiel minéralogique du secteur immédiat aurait pu être considéré médiocre ou inexistant.

Il est plausible et probable que les résidents achetaient leurs provisions chez les marchands de Goldboro. L'analyse des artefacts a démontré que des produits canadiens, anglais et américains étaient utilisés dans les demeures du site minier. Des recherches plus approfondies nous permettraient d'en savoir beaucoup plus sur les activités économiques et la vie quotidiennes des familles (Maccari-Poisson 1980). Nous pourrions aussi nous renseigner sur les

transactions commerciales entre clients et marchands, sur la demande pour certains produits, sur le mouvement des marchandises et sur la nature des marchés à l'échelle régionale. Les artefacts en eux-même et spécialement le verre sont aussi très intéressants puisqu'ils ont été fabriqués durant une période d'expérimentation avec de nouveaux procédés. Il serait captivant de documenter cette période de mécanisation durant laquelle plusieurs changements se sont produits dans le style de contenants, la standardisation des volumes et le développement de nouveaux produits par une analyse approfondie des artefacts provenant des deux demeures. En général, les poteries du début de XX^e siècle sont très peu connues par les experts en céramique. Des recherches détaillées nous permettraient de se documenter sur les produits et sur l'industrie céramique du début du siècle.

La direction que nous nous proposons de prendre dans nos recherches répondra non seulement aux demandes immédiates de la compagnie minière -- identifier les ressources archéologiques et en déterminer le potentiel -- mais aussi aux questions sur lesquelles un chercheur doit s'interroger face aux données archéologiques des gisements qui ont été identifiés, et aux renseignements qui le seront au cours d'une reconnaissance plus approfondie. Il y a beaucoup de travail à faire car nos recherches ont été limitées par le manque de temps, la mauvaise température, et la nature préliminaire de nos travaux.

En Amérique du Nord, l'archéologie historique est un mélange d'histoire et d'anthropologie. C'est une discipline qui exploite des sources écrites (documents et études) et la culture matérielle (artefacts et vestiges) pour comprendre et discuter l'arrivée, le développement, les changements et peut-être la disparition des populations qui se sont établies sur le continent durant la période historique (Deagan 1988:7-9; South 1977:317). Il ne suffit pas d'identifier les ressources archéologiques. Il faut analyser les données qui nous renseignent sur le mode de vie des résidents d'un site en particulier et nous permettent d'acquérir des connaissances qui seront utiles, et souvent uniques, pour tout autre chercheur dans les années à venir, car toute fouille détruit l'évidence de la présence humaine. Il faut donc procéder d'une manière professionnelle; il faut identifier, enregistrer et analyser toutes les données qui sont disponibles sur un site. Bien sur il faut analyser les données d'une manière qui répond aux questions posées par les commanditaires des travaux, mais il faut conserver un caractère professionnel et maintenir une approche explicative dans notre analyse du site et de ses résidents (South 1977:322-326; Wheeler 1954:182-188).

L'intérêt que porte la province de la Nouvelle-Ecosse à son patrimoine est reflété dans la "Special Places Protection Act" (Chapitre 17, Statutes of Nova Scotia). L'acte a pour but de s'assurer de la préservation, la protection et la gestion des sites archéologiques, historiques et paléontologiques de la province. Elle veut s'assurer que des travaux seront fait par des professionnels et que la province pourra bénéficier des résultats de ces recherches. Les représentants de la province (le Département de l'Education et les Musée de la Nouvelle-Ecosse) peuvent insister qu'un gisement, un site, un secteur ou une région qu'il soit la propriété de la Couronne ou non, soit désigné comme endroit protégé par l'acte. Plusieurs conditions protégeant le patrimoine de la province sont énumérées dans ce document. Enfin, la destruction d'un site est passible d'une amende de 1000,00\$; ce montant pourrait être augmenté de

beaucoup (de 1000,00\$ à 100,000,00\$) puisque des changements seront apportés à l'acte cette année ou l'an prochain.

L'archéologue du Musée de la Nouvelle-Ecosse croit que nos recherches à Goldboro sont très intéressantes car nous en savons très peu au sujet des activités minières en Nouvelle-Ecosse. Ajoutons que les résidents de Goldboro et de la région portent le même intérêt nos travaux.

4.1 Recommendations

Les travaux que nous proposons d'entreprendre se divisent en trois parties complémentaires: 1) documentation; 2) inventaire des ressources et fouilles; 3) analyse des données. Chaque composante est considérée comme une partie intégrale et non-facultative de notre étude. (L'annexe 2 contient une estimation détaillée des coûts).

4.1.1.Documentation

Nous n'aurions pu établir une chronologie préliminaire des événements historiques à Goldboro si nous n'avions pu nous rendre aux Archives de la Nouvelle -Ecosse en novembre, 1988. Nous sommes certains que nous pouvons accroître nos connaissances sur l'historique de l'endroit par une étude plus approfondie de la documentation conservée aux archives. Nous savons qu'une quantité de documents n'est pas inventoriée (cartes, pétitions, lettres et articles). Il nous faut dépouiller ces documents pour préparer un historique de l'endroit. Une combinaison des sources documentaires et des publications est la direction à suivre pour préparer un historique de l'endroit. Une combinaison des sources documentaires et des publications est la direction à suivre pour préparer cette composante d'un rapport beaucoup plus détaillé. Nous estimons que 20 jours aux archives seront suffisants. Ces recherches seront entreprises préférentiellement avant serait d'une grande aide durant les reconnaissances.

4.1.2 Inventaire des ressources et fouilles

Nos travaux à Goldboro en novembre 1988 ne nous permettent pas de discuter le potentiel réel de l'endroit. Nous nous proposons d'entreprendre une reconnaissance d'une durée de 10 jours pour identifier des gisements qui n'ont pas été inventoriés jusqu'ici, qu'ils soient préhistoriques ou historiques. Des sondages seront aussi effectués. A cette fin nous devons connaître les intentions immédiates et futures de la compagnie minière. Les travaux seront-ils toujours limités aux endroits où il y avait de l'activité l'an passé, ou projette-t-on d'autres travaux ailleurs sur une partie ou la totalité des 37 titres miniers? Par exemple, il nous semble que les endroits déboisés pourrait être soumis à des explorations minéralogiques. Aussi, nous devons identifier et inventorier les sites qui pourraient se trouver sur la berge de Gold Brook Lake et de Gold Brook afin d'examiner le rivage pour son potentiel archéologique et peut-être y découvrir des sites préhistoriques et historiques. Nous ne savons rien au sujet des changements possibles des niveaux de l'eau et des travaux à proximité du lac et de la rivière. Nous n'avons pu prévenir le dommage qui a déjà été fait mais une étude approfondie permettra l'identification de gisements archéologiques, une discussion de leur potentiel, et des recommandations pour la marche à suivre en ce qui concerne la préservation

du patrimoine de la Nouvelle-Ecosse. (Cette reconnaissance devra être complétée avant que toute autre activité minière ne commence, et que l'endroit soit déboisé).

En ce qui concerne les gisements qui ont été inventoriés en 1988, nous avons déjà suggéré des travaux plus approfondis à l'affinerie. Nous estimons que trois jours seront suffisants pour produire un plan précis des ruines et effectuer des sondages sur le tumulus au nord de l'affinerie, et à l'ouest près des rampes. Nous proposons trois sondages de 1 x 1 m.

Les fouilles les plus importantes seront aux deux demeures que nous avons identifiées. Nous nous proposons de creuser une tranchée au dépotoir de la Maison No. 1 (10 x 1 m) et de faire cinq sondages de 2 x 2 m à la maison même. Nous ferons le même nombre de sondages à la Maison No. 2, et une tranchée de 5 x 1 m au dépotoir. En plus les services d'un catalogueur pour inventorier les objets sera nécessaire vers la fin des fouilles et après que les travaux seront terminés.

Nous estimons que trois personnes seront suffisantes pour mener à bien ces travaux sur une période de 20 jours. De plus nous allons devoir réserver les services d'une personne pour cataloguer les artefacts pour une durée de 15 jours.

4.1.3 Analyse des Données

On estime que le temps requis pour l'analyse des données versus les travaux en chantier est dans le rapport de 3 contre 1 (Miller 1971:5). Cependant, une fois les artefacts catalogués nous nous pouvons réduire le temps nécessaire à l'analyse vis-à-vis les travaux en chantier dans le rapport de 2 contre 1, soit 60 jours. La documentation et les travaux en chantier sont inutiles si une analyse détaillée n'est pas entreprise. L'information sera présentée suivant le style de discussion et le type d'analyse dont nous nous sommes servis dans le présent rapport de recherche.

4.3 Résumé

Les vestiges archéologiques identifiés pendant la reconnaissance préliminaire à Goldboro indiquent que plusieurs gisements ont été détruits et que trois séries de ruines doivent être soumises à des sondages afin de préserver cette facette du patrimoine néo-écossais. La poursuite des travaux ne peut que nous renseigner au sujet de cette industrie et sur la vie de tous les jours des familles de mineurs qui résidaient à Goldboro. Ces recherches seront les premières de ce genre à être entreprises en Nouvelle-Ecosse et sont considérées importantes. L'étude sera divisée en trois parties: documentation, reconnaissances et fouilles, ainsi qu'une analyse détaillée des artefacts et des vestiges.

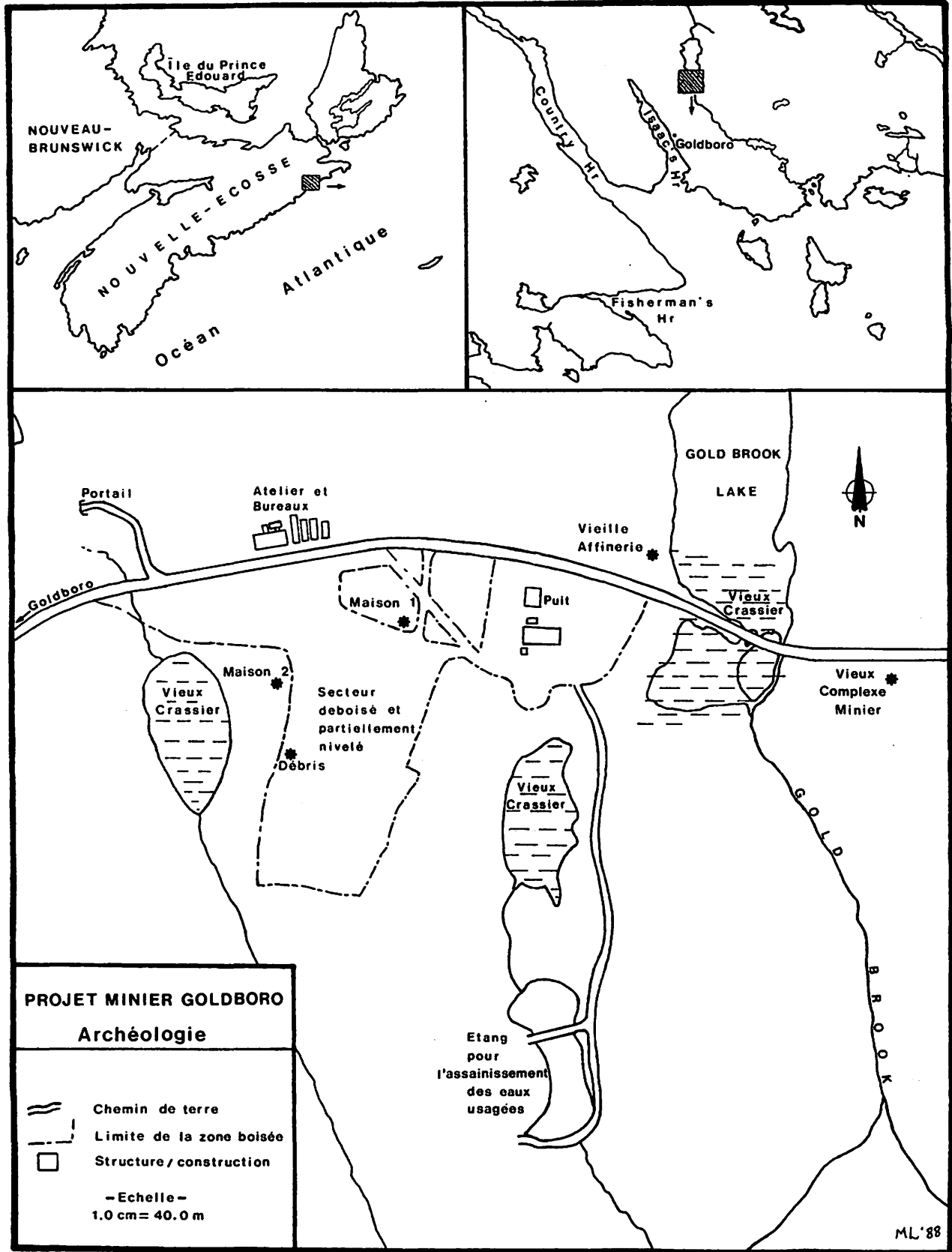


Figure 1

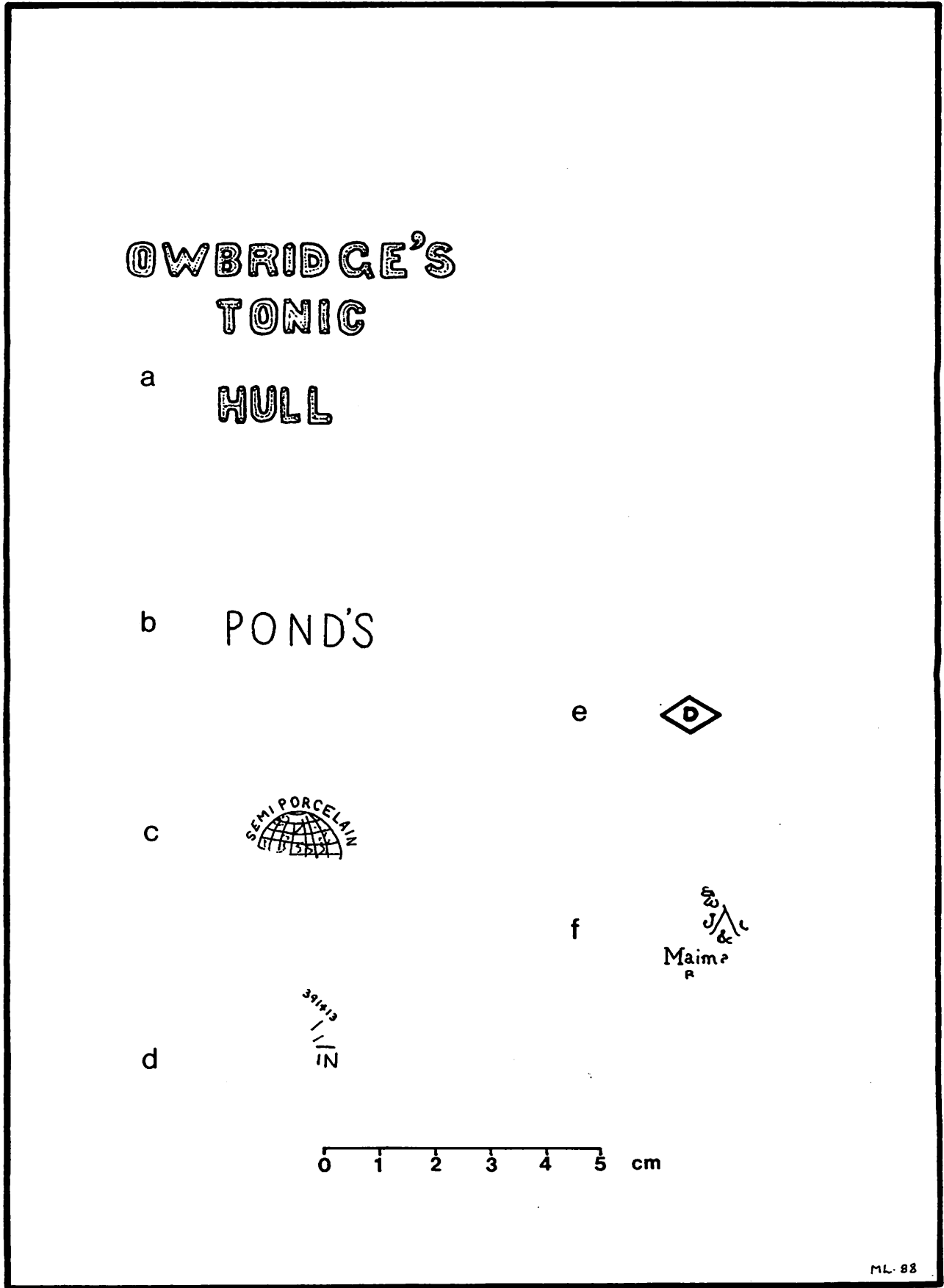


Figure 2

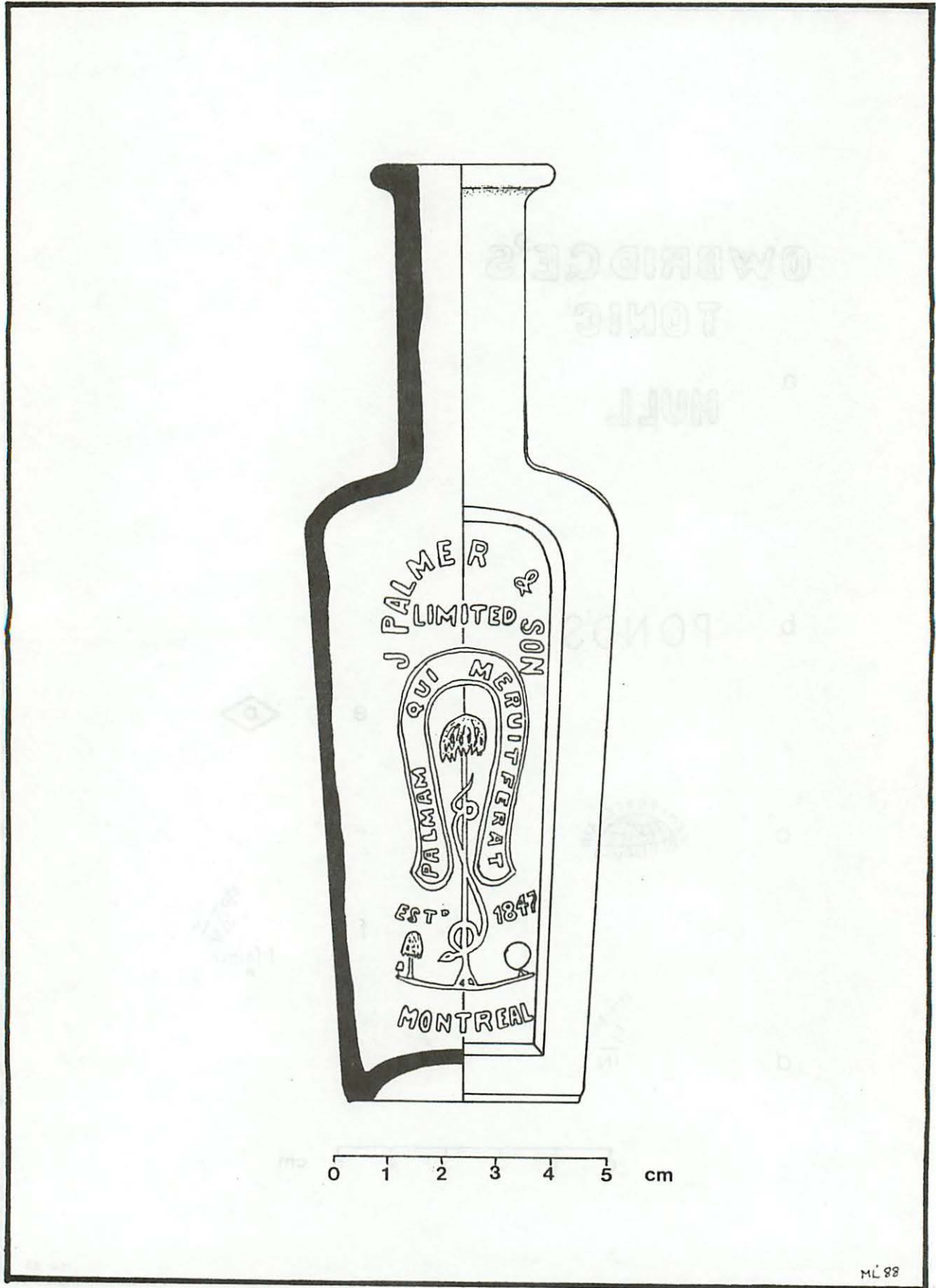


Figure 3

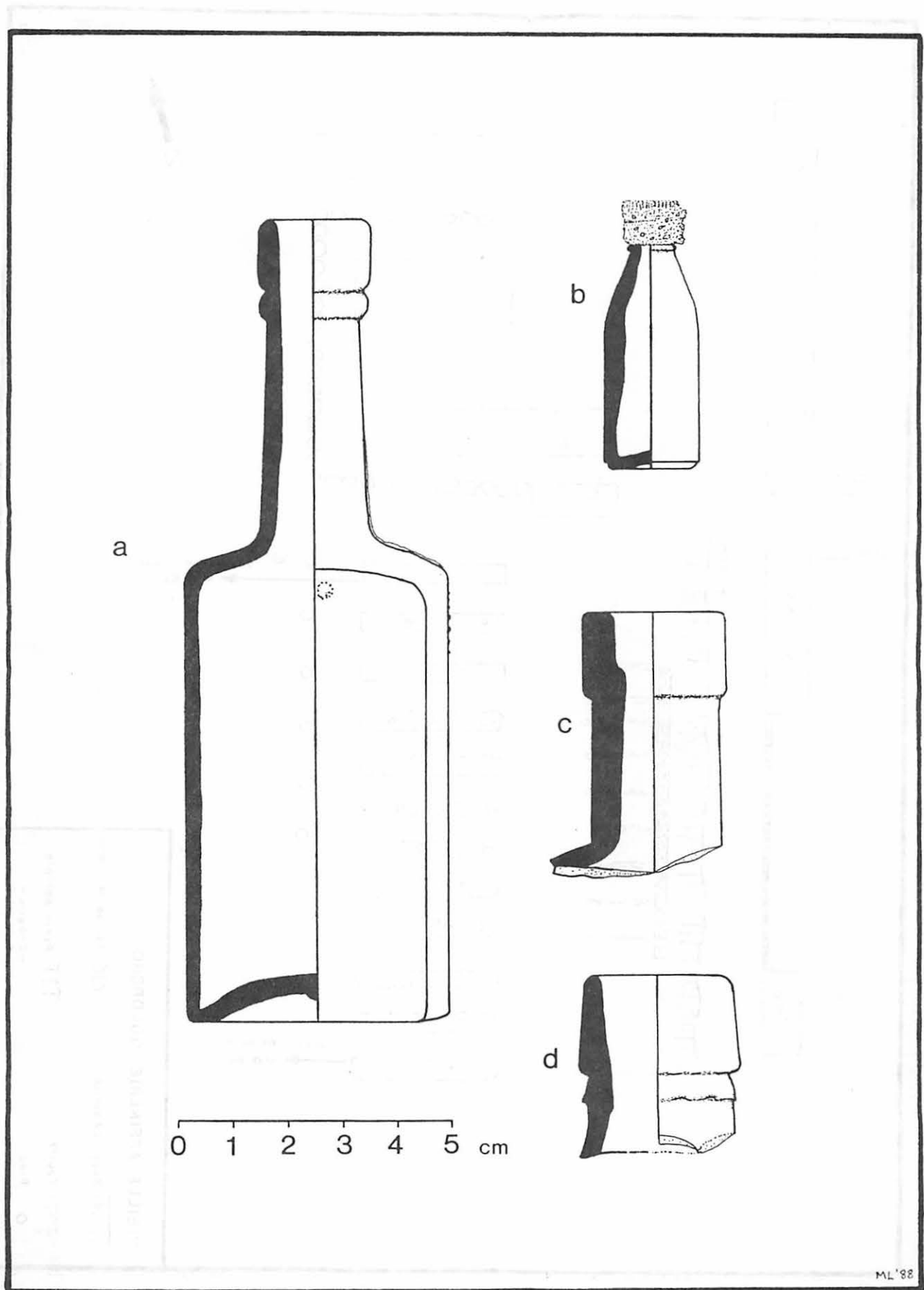


Figure 4

Figure 5

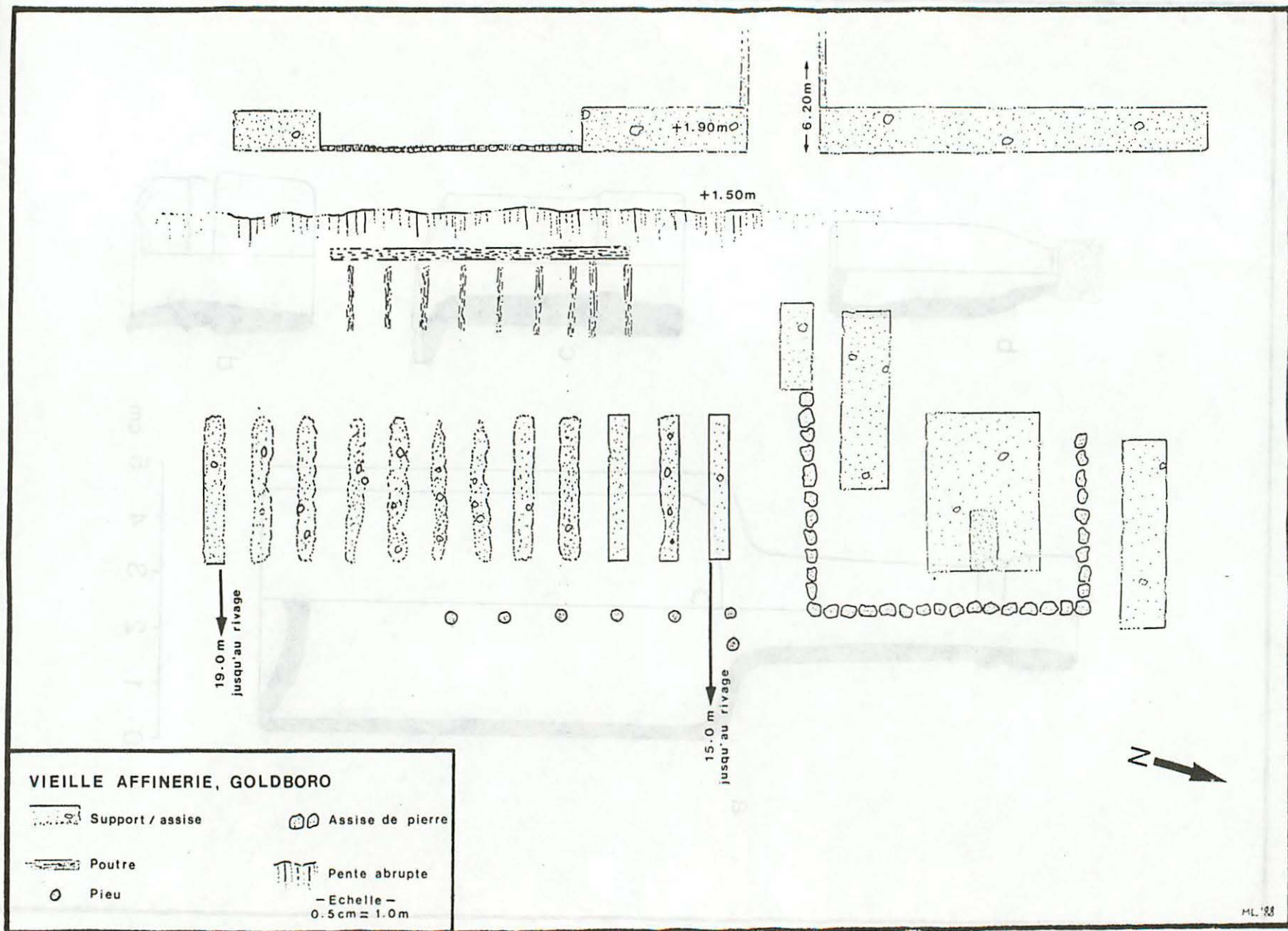




Planche 1. Vue générale. Le secteur déboisé au sud des bureaux de Saint-Michel Géoconseil, vu des ruines de la Maison No. 2. La Maison No. 1 est en ligne avec le puit minier et est en bordure du boisé.

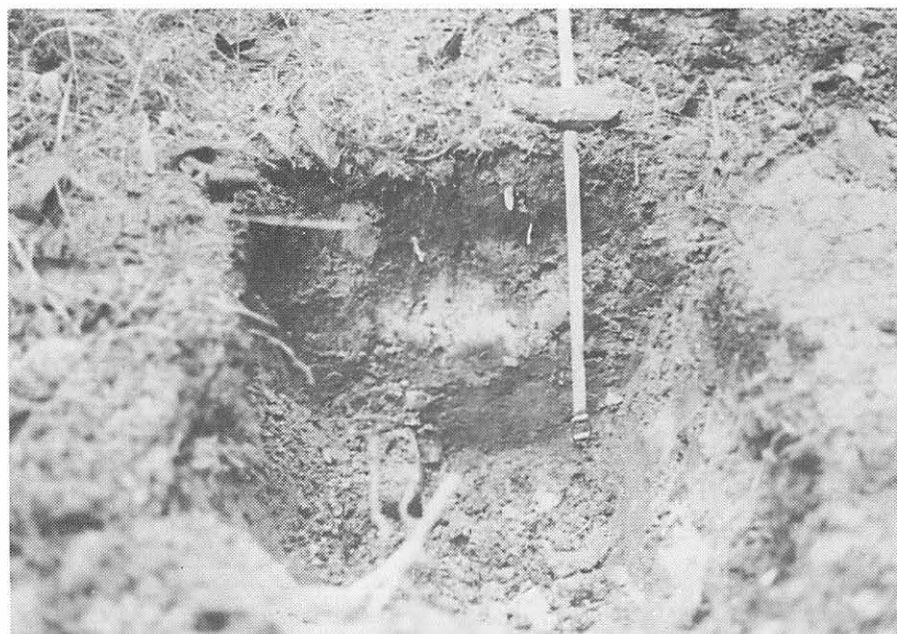


Planche 2. Sondage à la pelle montrant les trois couches de sol près de la Maison No. 1.



Planche 3. Mr. Stephen Powell examine les ruines d'un mur de pierre au sud-ouest de la Maison No. 2.



Planche 4. Les ruines de l'affinerie sur le rivage de Gold Brook Lake.



Planche 5. Mr. Stephen Powell parmi les ruines de l'affinerie.



Planche 6. Mr. Stephen Powell sonde le terrain près d'une des deux rampes localisées dans un boisé à l'ouest de l'affinerie.

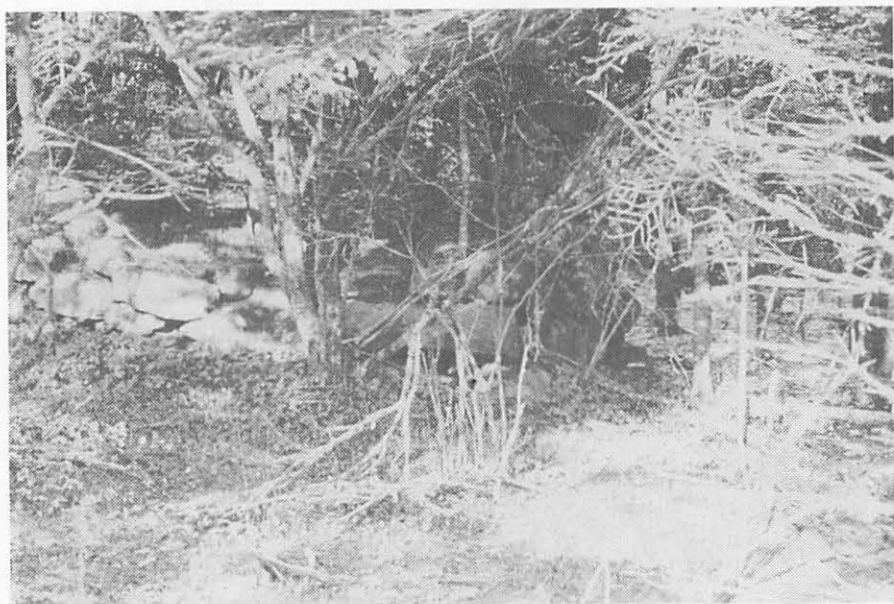


Planche 7. Une des deux rampes de pierre sans mortier
à proximité de l'affinerie.



Planche 7. Une des deux rampes de pierre sans mortier
à proximité de l'affinerie.

BIBLIOGRAPHIE

- Auteur Anonyme,
1918 The making of glass lamp chimneys and bottles.
The Busy East of Canada 8(11):54-56.
- Barton, Kenneth J.
s.d. Description of the Wares. (Fort Beauséjour). ms.
Service canadien des Parcs. Environnement Canada, Ottawa.
- Biggar, H.P. (ed.)
1928 Marc Lescarbot. Nova Francia: a description of Acadia, 1606.
Harper, New York.
- Church, Ambrose F.
1876 Topographical township maps of Guysborough County, Nova Scotia from actual surveys made, drawn and engraved by and under the direction of A.F. Church and Co., Bedford, Halifax County. Entered according to law on the 24th day of March, 1864 by Ambrose F. Church of Halifax, Nova Scotia. J.R. Martin Steam-lith, Montreal. (printed 1876).
- Collard, Elizabeth
1984 Nineteenth-Century Pottery and Porcelain in Canada. (2nd edition). McGill-Queen's University Press, Kingston et Montréal.
- Cooke, Finlay
1979 History and Stories of Isaac's Harbour and Goldboro.
Foremore Press, Antigonish.
- Cushion, J.P.
1980 British Ceramic Marks. Coles Publishing Co. Ltd., Toronto.
- Davey, Peter J.
1980 Buckley Pottery. Buckley Clay Industries Research Committee.
Printflow Ltd., Shotton.
- Davis, Stephen A.
1974 The Archaeological Salvage Survey of the Mulgrave Industrial Area, Canso Strait, Nova Scotia. National Museum of Man. Archaeological Survey of Canada. Mercury Series 26:52-59.
Ottawa.
- Deagan, Kathleen A.
1988 Neither History nor Prehistory: the questions that count in historical archaeology. Historical Archaeology 22(1):7-12.
- Fergusson, Charles B. (ed.)
1967 Place Names and Places of Nova Scotia. Public Archives of Nova Scotia, Halifax.

- Ganong, W.F.
1930 The Cadillac Memoir on Acadia of 1692. Collections of the New Brunswick Historical Society 13:77-97. Saint John.
- Glazebrook, G.P. de T.
1964 A history of Transportation in Canada. Vol. 1. Carleton Library No. 11. McClelland and Stewart Ltd., Toronto.
- Godden, Geoffrey A.
1964 Encyclopaedia of British Pottery and Porcelain Marks. Bonanza Books, New York.

1980 An illustrated Encyclopaedia of British Pottery and Porcelain. (2nd edition). Barrie and Jenkins, London.
- G.S.C. (Geological Survey of Canada)
1893 No. 25 Carte du Comté de Guysborough.

1904 No. 862 Guysborough Co. Isaac's Harbour, Gold District.
- Harris, R. Cole et John Warkentin
1974 Canada Before Confederation. Oxford University Press, London.
- H.O.G.B. (Hydrographic Office, Great Britain)
1856 Carte No. 2519. Liscomb Island Country Island (Green Island). Révisée en 1924.
- H.O.U.S.N. (Hydrographic Office, U.S. Secretary of the Navy)
1855 Carte No. 1116. Dominion of Canada, Nova Scotia. Country Harbour.
- Jackson, George
1969 Introduction to Whitewares. MacLaren and Sons, London.
- Jones, Olive, Catherine Sullivan et al.
1985 Glossaire du Verre de Parcs Canada. Etudes en Archéologie, Architecture et Histoire. Environnement Canada, Parcs, Ottawa.
- Lavoie, Marc C.
1987 Belleisle, Nova Scotia, 1680-1755: Acadian material life and economy. M.A. Thesis, Department of Anthropology, McMaster University, Hamilton, Ontario.
- Maccari-Poisson, Bruna
1980 Méthodes archéologiques de relevé et d'étude de la céramique pour restituer l'espace intérieur des maisons médiévales (Brucato, Sicile). La Céramique Médiévale en Méditerranée Occidentale, X^e-XV^e siècles. Colloques internationaux du Centre de la Recherche Scientifique No. 584, pp. 168-174. Editions du Centre National de la Recherche Scientifique, Paris.

- MacLaren, George
1968 Nova Scotia Glass. Occasional Paper No. 4, Historical Series No. 1. The Nova Scotia Museum, Halifax.
- McKearin, George S. et Helen McKearin
1948 American Glass. Crown Publishers, New York.
- Miller, George L.
1971 Time expended for archaeological excavations vs. technical analysis of artifacts from the Franklin Glasswork site, Kent, Ohio. The Michigan Archaeologist 17(2);91-95.
1980 Classification and economic scaling of 19th-Century Ceramics. Historical Archaeology 14:1-40.
- Miller, George L. et Elizabeth A. Jorgensen
1986 Explications sur le numérotage des moules de bouteilles de la Dominion Glass Company et de ses prédécesseurs. Publication de Recherche. Parcs Canada, Ottawa.
- Miller, George L, et Antony Pacey
1985 Impact of Mechanization in the Glass Container Industry: the Dominion Glass Company of Montreal, a case study. Historical Archaeology 19(1):38-50.
- Miller, George L. et Catherine Sullivan
1984 Machine-Made Glass Containers and the End of Production for Mouth-Blown Bottles. Historical Archaeology 18(2):83-96.
- Minerals Limited
1934 Surface plan of the Boston-Richardson and Goldbrook Mines, Goldboro, Nova Scotia. Drawn by N.S.M. Drawing No. 4. Plan Possédé par la firme Sainte-Michel Geoconseil, Goldboro (No. 140).
- Moussette, Marcel
1982 Les Terres Cuites Grossières des Latrines des Maisons Estèbe et Boisson. Dossier 51. Ministère des Affaires culturelles, Quebec.
- Noel Hume, Ivor
1970 A Guide to Artifacts of Colonial America. Alfred A. Knopf, New York.
- Oswald, Adrian, et al.
1982 English Brown Stoneware, 1670-1900. Faber and Faber, London.
- Palmer, Arlene M.
1976 A Winterthur Guide to Chinese Export Porcelain. Crown Publishers. New York.
- P.A.N.S. (Public Archives of Nova Scotia (Halifax))
1840 F1220 Guysborough Co. Roads.

1839 RG5, Vol. 16, No. 120, Pétition pour la construction et le maintien d'une route.

1862 RG5, Vol. 112, No. 75, Pétition pour la construction et le maintien d'une route.

1962 RG7, Vol. 70, No. 1334, Pétition pour la construction et le maintien d'une route.

1901 RG5, Vol. 114, No. 59, Pétition pour la construction et le maintien d'une route.

1906 RG5, Vol. 115, No. 16, Pétition pour la construction et le maintien d'une route.

Revi, Albert C.

1967 Nineteenth-Century Glass: its genesis and development. (Revised edition). Thomas Nelson Inc., New York.

Savage, George et Harold Newman

1974 An Illustrated Dictionary of Ceramics. Van Nostrand Reinhold, New York.

Scoville, Warren C.

1972 Revolution in Glassmaking. (original 1948). Arno Press Inc., New York.

Sears, Roebuck and Co.

1897 Consumer Guide. Catalogue No. 104. Chelsea House Publishers, New York.

Sheldon, Helen L.

1988 The Late Prehistory of Nova Scotia as Viewed from the Brown Site. Curatorial Report No. 61. The Nova Scotia Museum, Halifax.

South, Stanley A.

1977 Method and Theory in Historical Archaeology. Academic Press, New York.

Stevens, Gerald

1979 Canadian Glass, 1825-1925. Coles Publishing Co., Toronto.

Sussman, Lynne

1977 Changes in Pearlware Dinnerware, 1780-1830. Historical Archaeology 11:105-111.

1985 The Wheat Pattern: an illustrated survey. Studies in Archaeology, Architecture and History. Parks Canada, Ottawa.

Switzer, Ronald R.

1974 The Bertrand Bottles: a study of 19th-century glass and ceramic containers. Department of the Interior, Washington.

Trudel, Marcel

1973 Atlas de la Nouvelle-France. Les Presses de L'Université Laval.
Quebec.

Webster, J. Clarence

1934 Acadia at the End of the 17th Century. Monographic Series No. 1.
The New Brunswick Museum, Saint John.

Wetherbee, Jean

1980 A Look at White Ironstone. Wallace-Homestead Book Co., Lombard,
Illinois.

1985 A Second Look at White Ironstone. Wallace-Homestead Book Co.,
Lombard, Illinois.

Wheeler, Sir Mortimer

1954 Archaeology from the Earth. Oxford University Press, London.

Wilson, Rex L.

1981 Bottles on the Western Frontier. The University of Arizona Press,
Tuscon.

Heritage Research Notice A1988NS13**AN ARCHAEOLOGICAL INVESTIGATION OF JIM CHARLES' CABIN
SITE IN KEJIMKUJIK NATIONAL PARK**

**Robert Ferguson
Atlantic Regional Office
Canadian Parks Service**

On 9 November 1988, the author and Judy MacIntyre, archaeologists with the Canadian Parks Service, Atlantic Region, conducted a one-day reconnaissance, including mapping and limited test excavation, of the cabin site attributed to Jim Charles, in the Jim Charles Campground in Kejimkujik National Park.

Jim Charles holds a special place in the folk history of Kejimkujik National Park. A Micmac resident of the lake shore in the late 19th century, he has been associated with stories of a rich gold discovery and of four violent deaths (Morrison and Friend 1981:84-86; Mullen n.d.; Raddall 1968). Much of his story derives from oral traditions, with conflicting versions of the causes and results of key events in his life. From about 1860 to the late 1880s, Charles lived on a grant of land on the point which bears his name today. There he kept a small farm with his wife, Lizzie, a son, Malti, and an adopted daughter, Madeleine or Charlotte. He was renowned among recreational hunters and fishermen as a guide, but it was his apparent discovery of a source of gold in the area in the 1870s that created his place in history and legend. A few years later, Charles killed a friend, Ben Hamilton, in a dispute over either the secret source of his gold or the love of a neighbouring Micmac woman. Following this, he hid in the wilderness for one to three years, despite the fact that no charges were laid. He was later accused of having shot three men in a canoe, although they appear to have drowned when their canoe capsized.

Jim Charles left Kejimkujik around 1890 and died near the village of Milton c. 1905. He had not been the first occupant of the land grant on Jim Charles Point, however. The land was first given in 1842 to John Jeremy, an enterprising Micmac who had requested the land from the Indian agent, Joseph Howe, so that he could settle and farm the land. The cabin site thus represents two Micmac family occupations from the time of the first establishment of reserves in the park area in 1842 to the end of the nineteenth century.

Purpose of Investigation: To verify the identification of building remains in the Jim Charles Campground as those of the cabin occupied by Jim Charles. This concern was necessitated by proposed improvements to the campground in the area and the anticipated increase in use by park visitors.

Location: The cabin site is located on Jim Charles Point, on the north shore of Kejimkujik Lake beside the entrance of the Mersey River. It is about 100 metres from the nearest water, on a wooded, gentle slope facing the lake, centrally placed between the east and west shores. A broad band of wet alder and briar thicket lies at the bottom of the slope.
UTM: 221181 on National Topographic Series Map No. 21 A/6

Site Designations: Canadian Parks Service no.: 9B29.
Borden no.: BcDh 11

Results: The foundation of a small building and an adjacent outbuilding are located near the southern end of Jim Charles Point. A possible well lies on low ground ca. 40m to the southeast. Artifacts recovered from a limited test excavation beside the main structure are consistent with a nineteenth century date of occupation. Since no other dwellings are known to have been built here at that time, it seems likely that the structure is the dwelling built by the Nova Scotia government in 1843 for John Jeremy and occupied by Jim Charles from ca. 1860 to ca. 1890.

Proposed campground improvements will have no direct effect on visible features. Of greater impact may be the increased use of the area through the construction of a new tenting area ca. 40m east of the site.

Historical Documentation: There is at present no known prehistoric occupation on Jim Charles Point. Earliest noted historic occupation is by John Jeremy and his family.

1842 John Jeremy applied to Joseph Howe, Commissionaire of Indian Affairs for Nova Scotia, for a grant of the land on the point which he had begun improving as a farm. Howe's description of his visit to Kejimkujik that summer, reads as follows:

Early in the spring, two Indians from this County had visited [sic] me in Halifax, representing their anxiety to settle, and become farmers, if they could get land. The more intelligent, John Jeremy, informed me that he had selected a spot on the Fairy Lake [Kejimkujik], but was afraid to improve, or build, until he was assured that he would not be disturbed. Ascertaining that the Crown owned the tract to which he referred, I advised him to return, proceed with his improvements, and if he appeared to evince a desire to become a proprietor, by his perseverance and industry, I

would take the necessary steps to obtain a title for him. It was to visit this man, and some others who it appeared had joined him, in founding a settlement, that led me to Fairy Lake. The excursion was rendered exceedingly unpleasant by the state of the weather and the lateness of the season. After riding for several hours over a very bad road, we approached the last house on the line of settlement wet with the drizzling rain. Having stabled our horses - got some refreshment - obtained the necessary information, and accepted the offer of the Proprietor and his Brother, to join our party, we struck into the woods and, following rather blind paths, but familiar to our guides, through the forest and over swamps and wild marshes, for about five miles, we arrived on the margin of the lake, completely drenched, about an hour before dark. After rowing a mile, we turned a jutting point, and found ourselves in front of Jeremy's clearing, and were sufficiently uncomfortable to rejoice in the evidence of occupancy afforded by the smoke. He [Jeremy] was from home, having gone through to Annapolis for nails. His Squaw received us hospitably although some of her children were ill. a message despatched to the neighbouring camps, brought half a dozen swarthy men, of various ages and sizes, and a kettle of Moosemeat. This was soon cut into small pieces, fried in Carriboo [sic] fat, and, with good potatoes and a cup of tea, enabled us to refresh ourselves, and resist the effects of wet clothing. the camp was square, built of logs and slabs, obtained at a saw mill near the foot of the lake - scarcely wind or water tight, but, with a good fire in the centre, it contrasted rather favourably with our wet walk through the woods, and, after exhausting the topics supplied by the novelty of our situation, we went to sleep, inwardly thanking Providence for the comforts of home, and gathering, from the condition of the simple creatures beside us, our inferiors in no one grace of form, or quality of hand or heart - save only which cultivation had supplied, additional incitements to persevere in the good work the Government had commenced (Nova Scotia. Public Archives, Joseph Howe Indian Journal n.d.:81-3).

Jeremy's cabin was to be replaced by a house built at government expense on Howe's authority:

Jeremy had chopped about 6 acres of excellent land, burnt, cleared, fit for the harrow, about 2 acres - and had raised a crop of potatoes, corn, and pumpkins - he had procured stuff for a Barn 25 feet by 33. As he had set so creditable [sic] an example - as he appeared to stand so high among the Indians, and bore an excellent character among the whites, and, as the site he had selected showed much taste and judgement, I

thought it best, in order to encourage and reward him - to give an example to his neighbours, and a character of permanence to the Settlement - to go to the full extent of the liberality authorized by the Act, and build him a house. Before leaving the neighbourhood, I entered into a Contract with John Minard to build him [Jeremy] a small frame house, 14 by 16, with a Cellar six feet deep, logged and mossed - with a stone chimney, 2 windows, a door, with 2 tables and 2 benches. The work is to be done by July, 1843 (Nova Scotia. Public Archives, Joseph Howe Indian Journal n.d.:84)

This is the house we have identified as Jim Charles' cabin. Howe also agreed to provide nails and hinges for a barn 25' by 33'.

- 1843 Jeremy's house was completed, presumably to the specifications stated above. Howe's report to the Legislative Assembly in 1844, for the year 1843, (Nova Scotia. Legislative Assembly 1844, for the year 1843, (Nova Scotia. Legislative Assembly 1844, Appendix 50) states, "A comfortable house has been erected for John Jeremy, the leading man, and most industrious settler, at the Fairy Lake." The house cost L25. Potatoes and grass seed were also supplied to the Indians at Fairy Lake at a cost of L6 10'. In 1842, Whitman Freeman of Milton had been asked by Howe to lay out lots of 100 acres apiece for each Micmac family wishing to settle around the lake (Nova Scotia. Public Archives, Joseph Howe Indian Journal n.d.:89). He completed the survey of the reserve lands the following year, submitting a map dated 26 December, 1843 (Nova Scotia. Department of Lands and Forests; Figure 1) and charging L29 for the service. Howe appended a map to his report, showing the reserve locations as well as the site of Jeremy's house. This map and the original of Howe's report have not been located in the Public Archives of Nova Scotia or Nova Scotia Department of Lands and Forests records. The eleven reserve grants are shown on Land Grant Index Sheet No. 23 (Nova Scotia. Department of Lands and Forests 1954; Figure 2).
- 1845 "John Jeremy has got his barn framed and raise [sic] to my knowledge and lumber to board it in." (Nova Scotia. Public Archives, Letter from John Minard of Grafton to Mr. Doil, M.G.15, Vol. 3).
- 1860 Jim Charles began living in John Jeremy's cabin, according to Whitman Freeman's report to Samuel P. Fairbanks, Commissionaire of Indian Affairs:

There was one lot set off to John Jeremy (Indian) and a small house was put up for him by the Government. He began very well, but soon died; his family moved off; another Indian [Jim Charles] went into the house, and has resided there three

- years. He has done more towards farming than any other Indian in the county. Jeremy's family are dissatisfied with his proceedings (Nova Scotia. Legislative Assembly 1863, Appendix 16:6).
- Despite their apparent displeasure, Jeremy's family deeded the property to Jim Charles in December, 1862.
- 1862 1 December, deed transferred the land "with all the houses, outhouses, buildings and appurtenances there to belonging" to Jim Charles from John Jeremy's widow, Betsy, and their children, Joseph, John (Jr.), Sally, and Mary Luxie and her husband, James (copy of deed on file, Kejimkujik National Park).
- Charles' family seems to have consisted of his wife, Lizzie, and an adopted daughter, Madeleine or Charlotte, who replaced Charles' wife after her death. A son, Malti (Martin), was born to one of these women (Eric Mullen n.d.).
- 1867 An inscription, "Jim Charles his Moose Sept 19 1867" is carved on the rocks at Fairy Bay, next to an image of a moose. Myers (1972:21-2,490-1) suggests that the moose was carved by Charles and the words by hunters whom he was guiding.
- 1869 A sketch of Jim Charles' cabin, made in September by an unknown artist, with a view approximately south, shows a simple wood-frame structure with a door in the north wall and a chimney at the west end of the building (Figure 3). A rail fence runs around the house. No outbuildings are visible. The presence of cows suggests that a barn must have been located in the area. The surrounding land down to the shore has been cleared of trees. This sketch, purchased by Kejimkujik National Park, is in the collections of the Canadian Parks Service, Atlantic Region.
- 1890s The property was abandoned by Charles, who moved to the Westfield Road in Harmony around 1890.
- 1908 Clarence Mills acquired a lease on all the reserve lands around the lake from the Department of Indian Affairs. The Kedgemakooge Rod and Gun Club had built its first cabin on Jim Charles Point in 1906 (Morrison and Friend 1981:93-4.) The original cabin may no longer have been standing by this time or may have been left to fall to ruin.
- 1964 Dr. Kelsall described the house site as follows: "The old stone foundation of his (Charles') house remains hidden in the tall grass and wild roses which were once part of an Indian garden. Also an old well, probably once a natural spring, lies another 50' in front of the old foundation. This has long since dried up and is now plugged with mud" (copy on file, Kejimkujik National Park).

Features: Features were mapped and tied in to the concrete base of a kitchen shelter and to the grid for proposed campground improvements (Figures 4, 6).

Dwelling - The site of "Jim Charles' Cabin" is marked by a distinct low ridge of rock overgrown with grass (Figures 5,7). This surrounds a shallow, square depression in which old sumac bushes are growing. The outer dimensions of the feature are approximately 8m east/west by 6.75m north/south. The inner depression is more sharply defined, measuring about 3.8m east/west by 4m north/south. this inner measurement falls within the building size of 4.27m x 4.88m (14' X 16') reported by Joseph Howe.

The chimney may have been located on the west side. The low ridge has a width of ca. 1.5m on the north, east and south sides. On the west side, it extends 2.5m out from the edge of the depression, with granite and slate rocks visible on the surface. This configuration agrees with the 1869 sketch and is supported by Howe's specification of stone for the chimney construction.

A slight depression crossing the centre of the east ridge may indicate an entrance to the building. If so, it does not match the sketch, which shows the door in the north wall.

9B29A1 - A small test trench, 50cm X 50 cm, was excavated on the north side, 1m from the northwest corner (Figures 5,8). Three strata of soil were encountered:

1. **Ah horizon** - sod & dark organic silty loam
0 - 9cm below surface.
2. **occupation horizon** - dark organic silty loam with gravel, small rocks; artifacts were recovered from the surface of this stratum.
9 - 15cm below surface.
3. **B horizon** - orange-brown sandy silt.
15+cm below surface.

Artifacts recovered include:

- 1 pc. 19th-early 20th century fine red earthenware
- 3 pcs. white earthenware (2 hand-painted)
- 1 pc. colourless flat glass (possibly window)
- 2 fragments red brick
- 2 pcs. bone
- 1 cut iron nail, resembling a machine-headed type post - dating the late 1830s (Nelson, 1968).

The window glass and brick are likely elements of a domestic structure rather than an outbuilding. They suggest an accommodation for daylight and heat. The ceramics are further evidence of a domestic context. Though not closely datable, all of these materials are compatible with a mid-late nineteenth century date of occupation.

Outbuilding - This feature is located 6m east of the dwelling (Figures 4,5). It is identified by a similar low ridge around a central depression, forming an outline ca. 4m square. As in the dwelling, the centre of the east wall is broken by a depression or trough across the ridge. Function of this feature is not obvious, although the central depression suggests a root cellar. No building is shown in the 1869 sketch of Charles' cabin.

Well - a water-filled depression, about 1m in diameter, with stones located on the edge, may be the site of a well for the dwelling (Figure 9). It is located ca. 40m southeast of the building in a low, wet area towards the shore. Its identification was not verified, but it is probably the feature mentioned by Kelsall in 1964.

Conclusion: The site of Jim Charles' cabin has remained undisturbed since its abandonment at the end of the nineteenth century. As such, it offers an intact archaeological record of Micmac life in the second half of that century. Its historical significance is derived from its association not only with Jim Charles but also with John Jeremy, the man who first petitioned Joseph Howe for reserve lands around Kejimkujik Lake and whose strength of character impressed Howe and led him to provide government support for Jeremy's farming venture.

Much of the material culture of a nineteenth century domestic Micmac site is likely to have been derived from the same commercial sources as that of contemporary non-Native sites. Howe, in his 1842 journal, describes Micmac homes in nearby Bear River which seem to differ from other Nova Scotian homes primarily in the addition of specialized activities within the homes:

The four framed houses had each two or three rooms - windows - stone chimney, and generally appeared clean and comfortable . . . There were beds, chairs, cooking utensils, and other habits of civilization contrasting strangely with those of the more primitive course of life. In one house the man was cutting up a tanned hide, but it was that of a moose - in another a squaw was frying dough nuts and making pumpkin pies, while a [second?] sat beside working quill baskets (Nova Scotia. Public Archives, Joseph Howe Indian Journal n.d.:101-2).

The identification of ethnically-derived cultural patterns in a nineteenth-century context may be difficult, since commercial suppliers of most materials found in the archaeological record in Nova Scotia would have tended to homogenize choices to the standards of the more populous English. However, the identification of variation in patterns of use and of the activities which sustained the Micmac culture may be possible. With its undisturbed deposits and relatively short time span (ca. 50 years), the Jim Charles cabin site offers excellent potential for addressing the

question of Micmac ethnic identity in the archaeological record of the nineteenth century.

Acknowledgements: The author would like to thank Judy MacIntyre for her assistance during the November 9 investigation of the site. Ruth Whitehead of the Nova Scotia Museum, who enthusiastically steered me towards some of the archival documentation, has also earned my gratitude. Finally I would like to thank Bill Wamboldt, Superintendent, Peter Hope, Chief Park Interpreter, and the rest of the staff at Kejimikujik National Park for their assistance in bringing the site to my attention, providing detailed documentation, and helping with the investigation.

REFERENCES CITED

- Morrison, James, and Lawrence Friend
1981 "We Have Our Own": The Western Interior of Nova Scotia, 1800-1940. History and Archaeology No. 47. National Historic Parks and Sites Branch, Parks Canada, Ottawa.
- Mullen, Eric
n.d. "The Story of Jim Charles." Ms. on file, Kejimikujik National Park.
- Myers, H. Brad
1972 The Recording and Mapping of Petroglyphs from Fairy Bay, Kejimikujik National Park. Manuscript Report No. 70. National and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa. 2 vols.
- Nelson, Lee H.
1968 Nail Chronology as an Aid to Dating Old Buildings. Revised Edition. Technical Leaflet No. 48, American Association for State and Local History, Nashville.
- Nova Scotia. Department of Lands and Forests
1843 map by Whitman Freeman of Crown grants around Kejimikujik Lake.
- 1954 Land Grant Index Sheet No. 23.

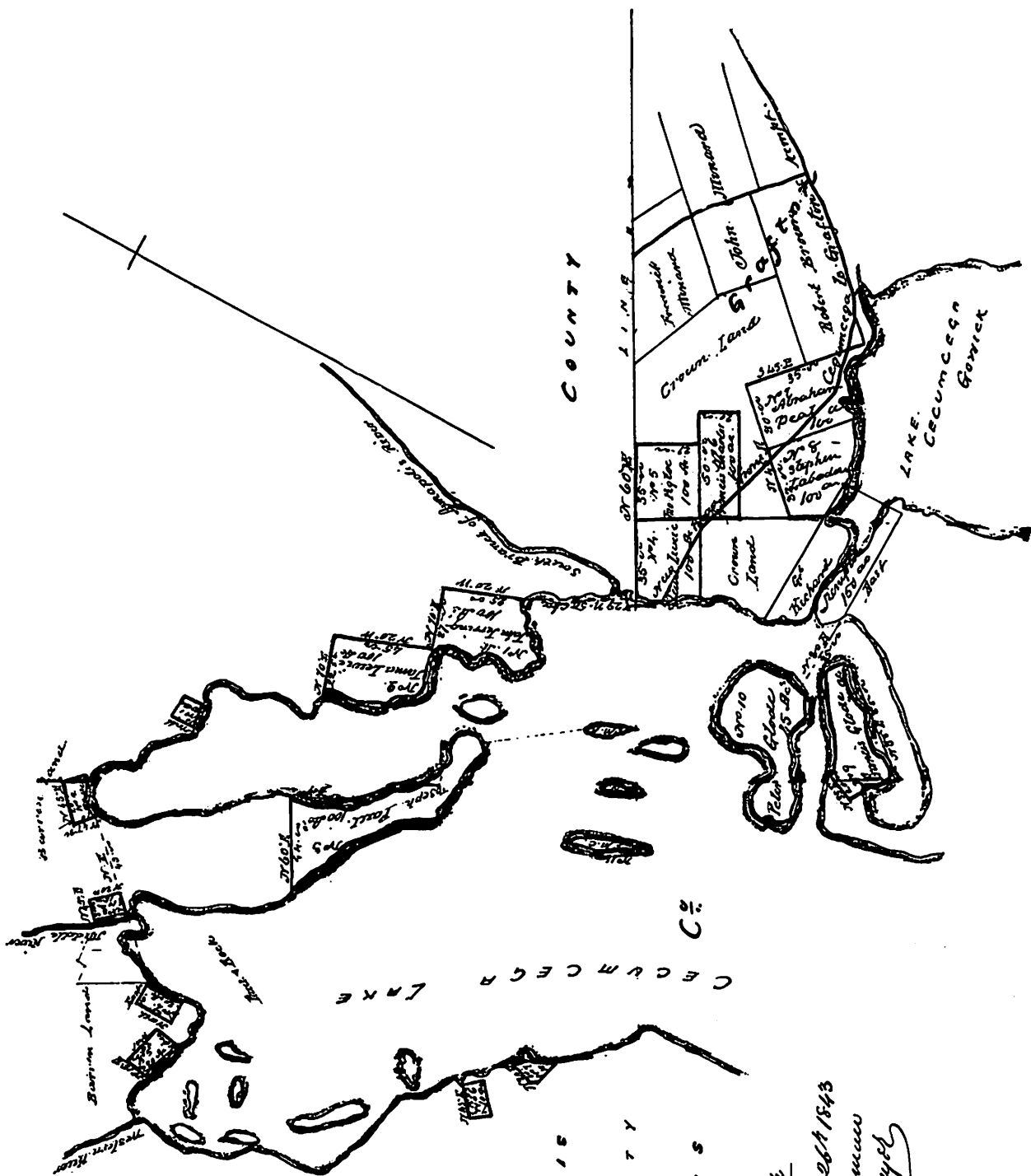
Nova Scotia. Legislative Assembly

- 1844 "Report on Indian Affairs for 1843," by Joseph Howe,
Commissionaire of Indian Affairs. Journals and Proceedings
of the Legislative Assembly, Appendix 50.
- 1863 report of Whitman Freeman on the Indians of Queen's County
in "Indian Affairs, 1862," by Samuel P. Fairbanks,
Commissionaire of Indian Affairs. Journals and Proceedings
of the Legislative Assembly, Appendix 16.
- Nova Scotia. Public Archives
- 1845 Letter from John Minard of Grafton to Mr. Doil. M.G. 15, Vol. 3.
n.d. Joseph Howe Indian Journal.
- Raddall, Thomas H.
- 1968 "The Lost Gold at Kejimkujik." in Footsteps on Old Floors, pp.
195-218. Doubleday & Company, Garden City, New York.



Figure 1

Survey of reserve lands around "Cecumcega" (Kejimkujik) Lake by
Whitman Freeman, 1843 (Nova Scotia. Department of Lands and Forests).



ANNAPOLIS
COUNTY
QUEENS

Scale: 10 chas to an Inch

Lower part Dec 26th 1843

(Ld) Whitman Mearns
Dep't. Survey &c

"Copy"
[Signature]

Figure 2

Location of Indian reserve lands around Kejimkujik Lake (Nova Scotia. Department of Lands and Forests 1954). The John Jeremy/Jim Charles cabin site is marked with a star. These reserves were granted to individual Micmacs for agricultural use. Individuals listed on the map, with cross reference to Howe's report (Nova Scotia. Public Archives, Joseph Howe Indian Journal n.d.:83) and Freeman's map (Nova Scotia. Department of Lands and Forests 1843) include:

<u>L&F (1954)</u>	<u>Howe (1842)</u>	<u>Freeman (1843)</u>
1. John Jeremy	John Jeremy	John Jerring
2. James Lewie	James Lewis	James Lewie
3. Joseph Peale	Joe Peter	Joseph Paul
4. Francis Muise	Francis Meuse	F. M.
5. Lewis Luxie	Lewis Alexis	Lewis Luxie
6. John Pigtoe	John Pictou	Jno. Pigtoe
7. Francis Charles	Francis Charles	Francis Charles
8. Stephen Labrador	not mentioned	Stephen Labador
9. Abraham Peale	Abraham Peter	Abraham Peal
10. Peter Glode	Peter Glode	Peter Glode
11. Francis Glode	not mentioned	Francis Glode

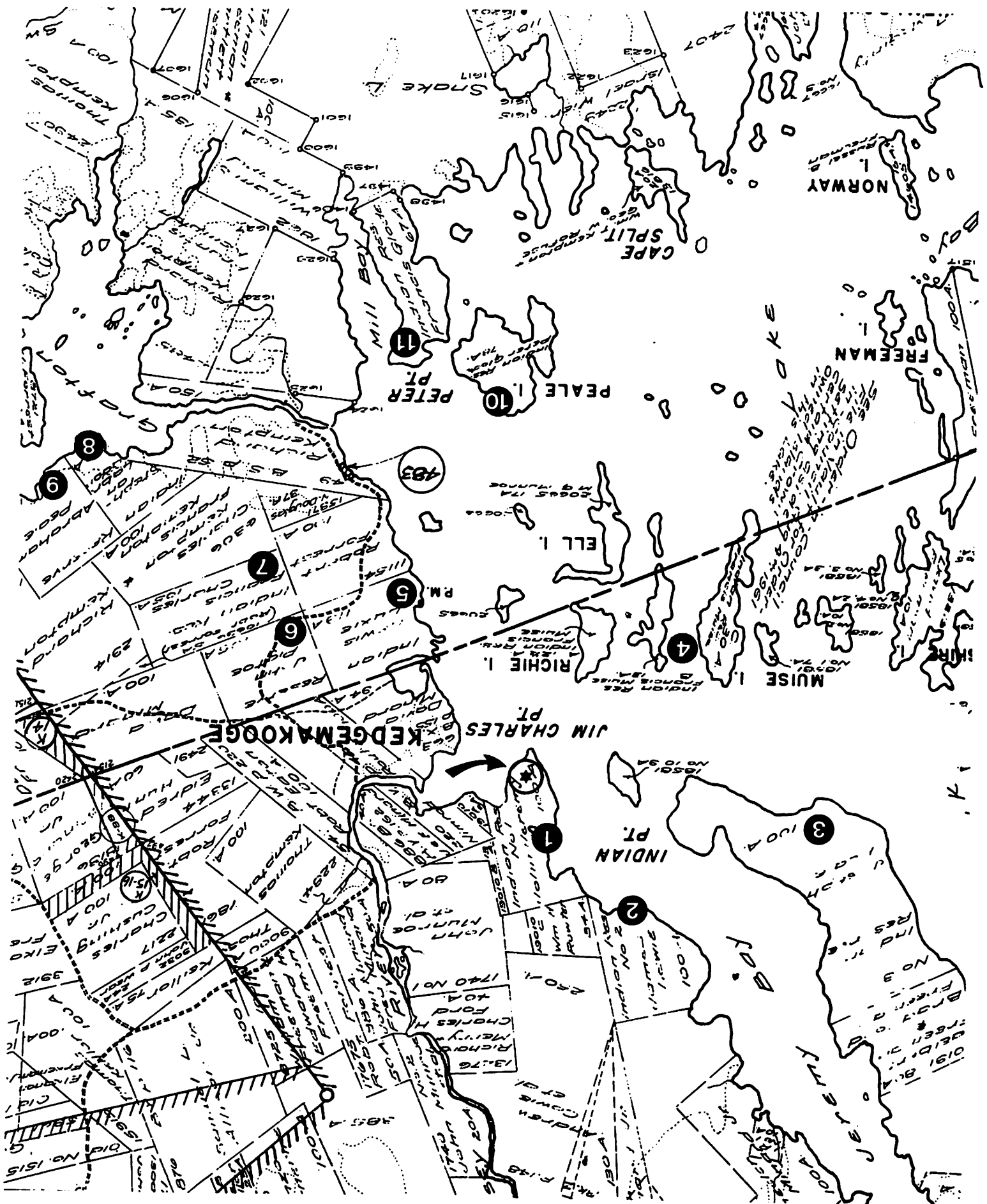


Figure 3

Pencil sketch of Jim Charles' cabin, 1869, facing south (collection of Kejimikujik National Park, Canadian Parks Service, Atlantic Region).

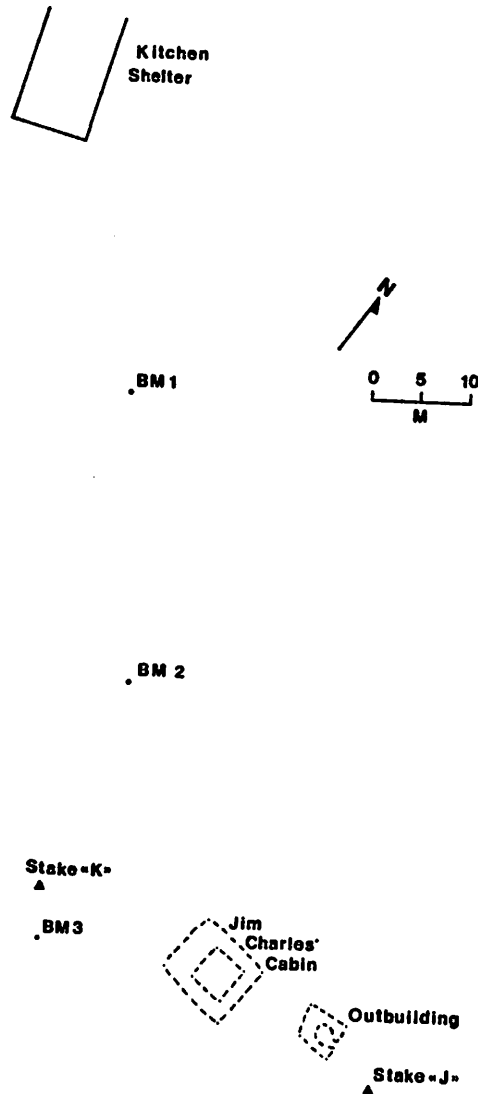


Figure 4

John Jeremy/Jim Charles cabin site, 9B29: Location of features relative to the kitchen shelter in Jim Charles Campground. BM 1, 2 and 3 are temporary bench marks used in the survey. Stakes "J" and "K" are part of the survey for proposed campground improvements.

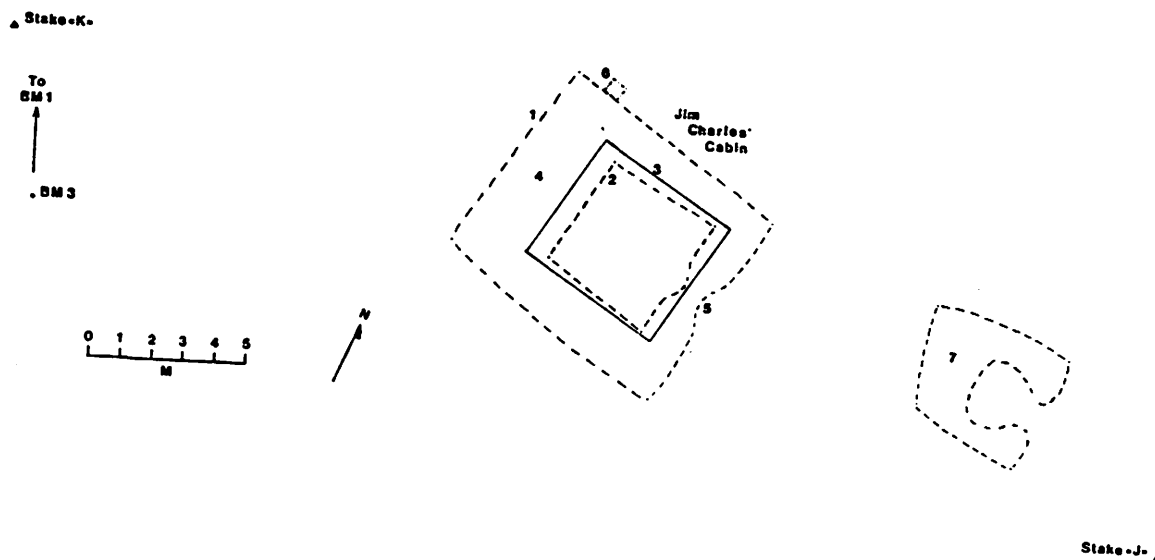


Figure 5

John Jeremy/Jim Charles cabin site, 9B29:

1. outer edge of grass-covered ridge around cabin.
2. edge of shallow depression, perhaps corresponding to the cellar reportedly built below the cabin.
3. hypothetical outline of cabin using dimensions specified by Joseph Howe, 1842.
4. possible location of chimney; area of granite and slate rocks.
5. slight depression in east wall; possible entrance.
6. 9B29A1: 50-cm² test unit.
7. mound and depression of small outbuilding.

Figure 6

View from campground kitchen shelter to cabin site, located behind the large cedars. Facing southeast.

Figure 7

Peter Hope, Chief Part Interpreter, examines the cabin site. Sumacs grow in the shallow depression within the stone foundation. Facing northwest.



Figure 8

Judy MacIntyre excavating test unit 9B29A, at the northwest corner of the cabin. Facing north-northwest.

Figure 9

Possible well in wet alder and briar thicket. Facing south.

