

HOFFNUNGSTHAL: THE ARCHAEOLOGY AND
ARCHITECTURE OF THE FIRST MORAVIAN
MISSION TO THE LABRADOR INUIT, 1752

CENTRE FOR NEWFOUNDLAND STUDIES

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OF THE FIRST MORAVIAN MISSION TO THE LABRADOR INUIT,
1752

by

©Henry C. Cary

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Abstract

In 2001, full-scale archaeological investigations were carried out in Nisbet Harbour, Labrador, at *Hoffnungsthal*, the site of the first Moravian mission station to the Labrador Inuit. When completed, the excavations had revealed several architectural features of the mission house, and uncovered thousands of artefacts dating to the few weeks in the summer of 1752 when the missionaries built and occupied the site. This thesis gives a history of the 1752 expedition, describes the archaeological findings made in Nisbet Harbour, then reconstructs the mission house based on available archaeological and historical data. Finally, *Hoffnungsthal*'s form and design is discussed with reference to its historical, architectural, and cultural context.

Acknowledgments

Like any archaeological research endeavour, the Hoffnungsthal Archaeological Project involved the efforts of numerous individuals who contributed their time and expertise. I would like to thank those not only involved with the project, but those who made my life in St. John's, Makkovik, and Ontario while writing this thesis a rewarding and enjoyable experience.

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List of Abbreviations

The Moravian accounts of the 1752 expedition appearing in this thesis were rediscovered in the Moravian Church's Unity Archives, Herrnhut, Germany, by Dr. Hans Rollmann, and he graciously provided me with his English transcriptions of the texts. Because of their long catalogue numbers, I have shortened the references into the following abbreviations:

- BrD and BrD II *The Brethren's (Matthäus Kunz, Georg Wenzeslaus Golkowsky, Johann Christian Krumm and Christian Fredrich Post) 1752 diary, Parts I and II: "Unser Reise Diarium nach Nord America von 16ten May – 1752."* Manuscript, Unity Archives, Herrnhut.
- ED *Johann Christian Erhardt's diary: Johann Christian Erhardt, "Journal gehalten anbord ye Hope, A° 1752. Manuscript, Unity Archives, Herrnhut.*
- Goff *Goff's 1752 diary: "A Journal of an intended voyage...on ye Good Ship Hope...from London to ye Coast of Labrador..."* Manuscript, Moravian Archives, Muswell Hill; microfilm at the Centre for Newfoundland Studies, Memorial University of Newfoundland.
- Goff 1753 *Goff's 1753 diary: "Reise-Journal des englischen Capitäns Goff mit den Brüdern Erhardt und Kunz nach Labrador 1753." "Nachricht von der Südlichen Recognoscierungs-Reise vom 11ten July biss d. 28.July 1775. Manuscript, Unity Archives, Herrnhut.*
- Golkowsky *Golkowsky's 1752 report to Count Zinzendorf: "Georg W. Golkowsky to Count Zinzendorf, Newfoundland, 9 October 1752."* Manuscript, Unity Archives, Herrnhut.
- Haven *Jens Haven, Johann Ludwig Beck and Christian Lister's travel report of 1775: "Nachricht von der Südlichen Recognoscierungs-Reise vom 11ten July biss d. 28.July 1775." Manuscript, Unity Archives, Herrnhut.*
- Jeffries *Jeffries' 1753 diary: "Appendix: An Account of Part of the Coast and Inland Part of the Labrador: Being an Extract from a Journal of a Voyage made from Philadelphia in 1753," In Fuentes, Bartholomé de: *The great probability of a northwest passage deduced from observations on the letter of Admiral de Fonte...proving the authenticity of the Admiral's letter...with three explanatory maps by Thomas Jeffrys.* London: printed for Thomas Jeffery's at Charing Cross, 1768.*

Kunz

Kunz's 1752 report to Joseph Spangenberg: "Matthäus Kunz to Joseph Spangenberg, St. John's, October 1752" Missions-Deputation, II.2, No.3. Manuscript, Unity Archives, Herrnhut.

Post

Post's 1752 report to Nathaniel Seidel and Gottlieb Petzholt: "Christian Fredrich Post to Nathaniel Seidel and Gottlieb Petzholt, St. John's, October 1752" Missions-Deputation, II.2, No. 3. Manuscript, Unity Archives, Herrnhut.

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Chapter I

Introduction

1.1 Introduction

In May of 1752, the vessel *Hope* sailed out of the Thames and set a course for a then poorly understood section of the New World coastline known as “Labrador.” On board and in charge of the expedition was an enterprising Moravian mariner named Johann Christian Erhardt, who dreamt of establishing a colony and mission station among the Inuit people living on North America’s rugged northern coast. Accompanying Erhardt were four men handpicked to build and run the mission for its first year until the venture could be expanded (Rollmann 2002:5-6).

When the *Hope* reached the Strait of Belle Isle a month later, the order was given to turn north and make for the Inuit camps believed to be further up the coast. For several days the *Hope* navigated the fjords and islands of the area north of Hamilton Inlet before encountering a large Inuit camp in a small bay. Erhardt’s party landed and after a nervous initial encounter, they exchanged goods with the Inuit. His dream coming to fruition, Erhardt quickly decided that the mission must be established somewhere in the vicinity. In a nearby bay the *Hope*’s men dropped anchor and began searching the forested shoreline for a place to build the mission. Erhardt named the place “Nisbet Harbour,” in honour of the endeavour’s chief financier, Sir Claud Nisbet. The four missionaries and Erhardt explored the bay for five days

before selecting for their settlement a plain next to a small river. Over the course of a month, the missionaries constructed a single storey house and a small garden complex. In hoping God would look kindly on their efforts, they called the place “Hoffnungsthal,” or “Hopedale” (Rollmann 2002:7).

With the missionaries now settled, Erhardt took the *Hope* northward to contact Inuit groups on the coast. A few days later, the *Hope* returned to the mission with the terrifying news that Erhardt and six crewmen had disappeared following contact with the Inuit. The *Hope* was now undermanned to make the return voyage to Europe and the remaining crew begged the missionaries to help them sail back to Europe. With heavy hearts, the missionaries boarded up the mission house, leaving the supplies inside should Erhardt return. On the 20 September 1752, the *Hope* sailed out of Nisbet Harbour (Rollmann 2002:7). The Moravians were not to return to Labrador in force until 1771.

1.2 Background to Research

The story of the failed Labrador expedition and Erhardt’s martyrdom remained strong in Moravian memories for a long time after the *Hope* returned to England. However, as details of the adventure faded into legend, knowledge of precisely where Erhardt had established the Hoffnungsthal mission was gradually lost. Debate on the topic did not re-emerge until 1905, when Moravian scholar J.W. Davy (1905), after reading English translations of the 1752

correspondence, placed the mission site near the modern community of Hopedale (Figure 1). Without re-examining the original German documents, later scholars repeated this assumption. However, some doubt always remained. One scholar, despite arguing in favour of Hopedale as the first mission site, reflected that, “only archaeology can finally clear up the argument [over the location of Hoffnungsthal]” (Hiller 1967:228-230).

A breakthrough came in 1990 with the reunification of Germany. An important by-product of the Berlin Wall’s monumental collapse was that Western scholars could return to East German archives and museums to conduct research. Dr. Hans Rollmann (Religious Studies Department, Memorial University of Newfoundland), a specialist on the religious history of Newfoundland and Labrador, was quick to take advantage of the new freedoms. His first task was to access the Moravian archives in Herrnhut, Saxony, where he found the original German diaries of Erhardt and the four missionaries, as well as maps and accounts relating to the first expedition (Figure 2). These strongly suggested to him that Hoffnungsthal was not located in Hopedale (Rollmann 2001), but was instead near Makkovik, a community some 80 kilometres south of Hopedale (Figure 1).

Rollmann was treated to some unexpected results when he returned to teaching at Memorial and began including the Herrnhut findings in his lessons. One of his students, Pam Andersen, suggested he contact her father, Makkovik resident Mr. Ted Andersen, for more information on the mission’s location. This he did and was told by Ted that when he was a child in the

early 1940s, his grandfather would bring him to the ruins of an old building in a bay called "Nesbit Harbour" (clearly a corruption of Erhardt's "Nisbet Harbour," and this spelling will be used hereafter) and was told they were the remains of the first Moravian mission in Labrador.

Rollmann's inquiry renewed Ted's interest in the site and he revisited the place to salvage some brick fragments and artefacts he found on the surface. He sent these to Rollmann, who in turn forwarded them to Dr. James Tuck of Memorial's Archaeology Unit. Although Tuck knew the artefacts to be modern, he believed there was a good possibility the bricks dated to the eighteenth century. Now intrigued by the Nisbet Harbour ruins, Rollmann requested that a team from the Archaeology Unit examine the remains to see if the site's authenticity could be verified.

On 4 September 2000, Rollmann, Unit archaeologist Stephen Mills, and I travelled to Makkovik to examine the presumed mission remains. The next day, Ted took us to Nisbet Harbour and led us to a low mound a few metres from the beach (Figure 3). Some brick fragments were visible but trees and moss largely covered the site. As the mound was rectangular in shape, Steve Mills and I decided to place test pits around the perimeter to see if we could encounter any foundation walls. Ten test pits were excavated, eight of which yielded segments of a stone wall (Figure 4). In order to compare the building dimensions given in the Moravian diaries with those at the site, we measured the distance from cornerstone to cornerstone. Our measurements showed that the north-south axis was 22 feet, 8 inches (6.91 metres) while the east-west length was 16 feet, 8 inches (5.08 metres). This

conformed remarkably with the dimensions listed in missionary records that claimed the house was “22 foot long and 16 wide.” Also found were clay tobacco pipe fragments, a quantity of lead shot, window glass pieces, bricks and a wrought nail, all of which appeared to date to the mid-eighteenth century. There was now good evidence to conclude that the site in Nisbet Harbour was that of the Hoffnungsthal mission (Mills and Cary 2001, Mills and Cary 2000a, 2000b).

Plans were immediately made to return the following year and completely investigate the mission remains. In June 2001, I flew in to Makkovik to carry out a full-scale excavation of the Hoffnungsthal mission house. Helping me in this task were four young people hired from the community and over the subsequent nine weeks, the crew and I uncovered key structural elements of the house along with thousands of artefacts dating to the 1752 occupation. With these findings emerged a picture of the activities and concerns of just a handful of Moravian missionaries as they attempted to begin their first ministry in a new land. This thesis serves to discuss and interpret these excavated data and attempt to place them within the larger context of mid-eighteenth century Moravian missionary ventures around the world.

1.3 Research Objectives

Erhardt and his fellow Moravians left extensive documentation of their experience in Labrador. However, important aspects of the 1752 expedition were left unmentioned in the

records. Details such as what the mission complex looked like, how the house was constructed and its internal layout were all absent, as were descriptions of what materials the missionaries brought with them. As my primary interest was the vernacular architecture of Hoffnungsthal, I decided to limit my analysis to a descriptive study of the external and internal appearance, and thus construction, of the mission house alone. From this basic information, I could begin looking at why the missionaries built the house the way they did; from the selection of raw materials in the Labrador environment or those brought from Europe, to how these decisions were influenced by the Moravian mission experience elsewhere.

The latter comparison was designed to use the house form in Nisbet Harbour as a case study for learning more about the Moravians on a cognitive level. I knew before excavation began that the form of Hoffnungsthal would be partially dictated by the experiences gained from the Moravian missions established previously, particularly those in Greenland and the American colonies. It seemed unlikely that the missionaries charged with the Labrador venture would not use knowledge of the New World hard earned by their predecessors. However, as my analysis continued, differences between previous efforts and the Labrador situation emerged, ones that give an insight into how the Moravians mediated their prior experience with their new surroundings in Labrador.

Unfortunately, I found that comparisons between Hoffnungsthal and other Moravian missions could not be exhaustive, simply because few sites have seen archaeological investigation.

Excavations at sites such as Bethabara (South 1999) and Old Salem, North Carolina (Hartley 1987; Hammond 1989; Ferguson 1992; Thomas 1994; and Idol *et al.* 1996), Fairfield, Ontario (Jury 1945), Genadendal, South Africa (Clift 2000: personal communication), and recently in Hopedale, Labrador (Ferguson 2001: personal communication) (Figure 2) have been carried out, but with the exception of South (1999), Idol *et al.* (1996) and Hammond (1989), most scholars have focussed on the late eighteenth-century or nineteenth-century mission occupations, rather than when the stations began. In the South African case, though the mission was established in 1737, no evidence of the early inhabitation was identified (Clift 2000: personal communication).

This is not to say that because sites have not been examined by archaeologists that they cannot be compared with Hoffnungsthal, as ample historic records exist for many of the mission stations, and several have surviving architecture (Murtagh 1998 and Jordan 1984). The interpretation of the vernacular tradition and previous experience of the Hoffnungsthal missionaries can also go beyond simple archaeological and architectural comparison with contemporary *Moravian* sites. All Europeans attempting to establish themselves in the colonies in the seventeenth and eighteenth centuries adapted their traditional building techniques and material culture to their new surroundings and their examples can be used to shed light on the factors which culminated at Hoffnungsthal.

1.4 Physiography

Hoffnungsthal is located deep in Ford's Bight, the large bay immediately east of the community of Makkovik (Figure 1). The mission's location can be further pinpointed as being within the northwest boundary of what is marked on national topographic and hydrographical maps as "Nesbit Harbour" which, as mentioned above, is a derivation of "Nisbet Harbour."

Covering the entire southern shore of Ford's Bight, Nisbet Harbour is a large sand shoal that extends about 500 metres from the present shoreline (Figure 1). That Nisbet's is referred to as a harbour is deceptive. At high tide, the area gives the impression of being an ideal area anchorage with easy access to the shore (Figure 5). But at low tide the bay almost completely empties, exposing a large mudflat plain peppered with numerous large erratic boulders (Figure 6). Even at high tide, navigation within the harbour is extremely difficult and treacherous, and at other times vessels can be left high and dry hundreds of metres from the waterline. Why the missionaries chose this location to establish the mission is curious, as neighbouring Makkovik Harbour provides much easier access to the shore. However, Nisbet Harbour is well protected from the strong easterly winds that bring high waves to the Labrador coast. On several occasions during fieldwork at Hoffnungsthal, the water in Nisbet Harbour was calm while dangerously high waves were buffeting the mouth of Ford's Bight.

Nisbet Harbour also boasts a gently sloping shore that extends nearly 200 metres from the

high water mark (Figure 1). Beyond this, the topography rises steeply to form a high isthmus separating Ford's Bight from Makkovik Harbour. Sedge grasses (*Carex sp.*) and moss (*Spaghnum sp.*) grow on the beach and a few metres inland are stands of black spruce (*Picea mariana*) and balsam fir (*Abies balsamea*) characteristic of the mid-Labrador coast "rich forest" zone (Lamb 1982:23, 26). The odd larch tree (*Larix laricina*) is also present but these are more common on the shore opposite the mission. Regardless of species, most of the conifers in Ford's Bight are stunted, although some of the trees present today have grown to a considerable size. For instance, the trunk of one tree on the south side of the mission house was about 80 cm in diameter and 9 m high. Long, straight trees such as these would have made ideal building logs.

Emptying into Nisbet Harbour between 9 and 11 metres west of the mission house is a small river (Figure 7). Sediment transported by this river, combined with Labrador's postglacial isostatic rebound, may have created the plain on which the mission house stood (Rosen 1980:272). The missionaries called this stream "the little Elbe," after the famous river in Germany, and it probably served as their freshwater source (Haven, 20). More recent stream deposition likely produced the small lower terrace on the present-day beach line, about 40 metres south of the mission. It was here in the 1940s, just under 200 years after the mission was abandoned, that the McNeil family of Makkovik built a small winter house that they inhabited until the early 1960s (Charlie McNeil 2001: personal communication). The debris and remains of this house are still clearly visible (Figure 7).

1.5 Historical Background

1.5.1 The Moravian Church

Originating in Bohemia and Moravia in the mid-fifteenth century, the Moravian Church was one of the first Protestant churches to secede from Catholicism. Despite an era of popularity in the sixteenth century, the Moravian membership was nearly entirely decimated by the Thirty Years War. However, the Church's fate was saved in the 1720s when Saxon Count Nikolaus Ludwig von Zinzendorf welcomed German-speaking refugees to live on his estate in present-day Herrnhut, Germany (Figure 2). From this new spiritual and administrative centre, the Church again grew and became known as the "Renewed Unitas Fratrum." Under Zinzendorf's leadership, the Moravians began an extensive missionary program with its first station established in 1732 among black plantation slaves on the Danish West Indies colony of St. Thomas, followed the next year by a mission to the Inuit of Greenland (Hamilton 1901:5) (Figure 2). By 1750, the Moravians' had expanded their Caribbean ministry and forged on to establish missions elsewhere in the world, including Norway, Surinam, Africa's Guinea Coast, South Africa, Algeria, Sri Lanka, Romania, and numerous locations in North American (Hamilton 1901:15-19) (Figure 2). Burgeoning population levels in Herrnhut also prompted the Moravians to begin settlements in the British American colonies of Georgia, and later, Pennsylvania. These latter colonies grew to a considerable size and became important staging grounds for further mission work in the New World.

1.5.2 Background to the Labrador Venture

Successes in Greenland and America induced the Moravians, in 1751, to explore the possibilities for establishing a mission and colony in England's Canadian possessions. Zinzendorf had been approached by colonial officials to set up stations in Nova Scotia, and legal permission to carry out exploration and settlement of British colonies in the North Atlantic had been held by the Moravians since 1749 when the British government granted the Church status as an "ancient Protestant Episcopal Church" of the Empire (Rollmann 2002:6). The Moravians' eventual selection of Labrador for their next missionary endeavour was made for a number of reasons (Rollmann 2000: personal communication).

As an ecumenical church, the Moravians were searching for an area to maintain a spiritual monopoly. They rejected the Nova Scotia offer because, with other churches already established there, competition for aboriginal converts would be intense. Another reason for selecting a less populated region was the Moravians' intent to settle a contingent of 500 couples who wished to escape the crowding and religious persecution in Europe (Rollman 2000: personal communication). The Hudson's Bay Company's Ungava and Hudson's Bay factories were originally selected for this purpose, but Greenland missionary Matthäus Stach's proposals were flatly refused on the grounds that the Company did not want to jeopardize its northern trading operations by introducing potentially meddlesome religious men. This left only the Labrador Peninsula for the Moravian effort (Rollmann 2000: personal

communication).

Northern Labrador was not a total loss for Church planners. Other churches had not yet claimed the region and the Moravians had prior experience among the Greenland Inuit, the presumed kin of the Labrador Inuit. That the Labrador Inuit were reputed to be more dangerous to outsiders than their Greenland neighbours was not seen as a detriment to setting up a mission (Hamilton 1901:35). In fact, it accorded well with Zinzendorf's missionary zeal to convert, "those whom nobody else would dare to approach" (Prein 1998:332). Labrador's huge expanses were also seen as ideal for agricultural settlement. Strangely, the Moravians did not equate the climate of Labrador with Greenland, instead believing it had similar conditions as in Europe. Finally, an absence of HBC posts in the area meant that the Moravians could offset the venture's expenses by setting up trade partnerships with the Inuit (Rollmann 2000: personal communication).

The latter mixture of trade and religion was troubling to Zinzendorf and, unless the two objectives could be strictly separated, he expressed serious misgivings about the project. Despite this setback, the prospect of a Labrador mission had inspired a newly converted Johann Christian Erhardt. A sailor born in the north German port of Wismar, then owned by Sweden, Erhardt had been introduced to the Moravian faith in 1741 on a voyage to St. Eustatius (Figure 2) (Rollmann 2002:5). Erhardt then served on the Moravian supply vessels to Greenland and stayed there for a time in 1747 and 1749 (Rollmann 2002:5). This

experience sparked in Erhardt an interest in beginning a northern mission of his own, and a year after returning from his second Greenland visit, he wrote to the Bishop de Watteville about establishing a mission across the Davis Strait (Rollmann 2002: 5). Erhardt's chance came with the HBC's refusal to let Stach bring a ministry to their trading factories in the northern interior and Arctic. With Erhardt's urging, and the financial backing of Moravian London merchants John Grace, William Bell and Sir Claud Nisbet, the ship *Hope* was commissioned under the captaincy of a Mr. Madgson to take Erhardt, as a trade agent, and a party of missionaries to the Labrador coast (Hiller 1967:21, Rollmann 2002:6).

Four men were selected to establish the first mission, all of whom had seen prior Moravian service. Georg Wenzeslaus Golkowsky, a Polish tailor and cabinetmaker, had helped construct the European settlements (Jordan 1974:9), and Johann Christian Krumm and Mattäus Kunz had served in Livonia and Pennsylvania, respectively (Rollmann 2002:6). All three were also members of the Herrnhag Moravian community near Frankfurt, where Erhardt was residing after his conversion (Figure 2) (Rollmann 2002:5-6). Most experienced of the group was a thirty-two-year-old carpenter named Frederick Post. Intensely devoted but hot-headed, Post had served with some distinction at the missions in Bethlehem Pennsylvania, upper New York State, and Connecticut before joining the Labrador expedition (Figure 2) (Hamilton 1901:138, 143).

1.5.3 The 1752 Expedition

The long voyage from London in May 1752 was largely uneventful until 3 July, when one of the ship's crew died after a fall from the topmast (Rollmann 2002:7). This cast a sombre pallor over the endeavour, one only mitigated by the excitement of sighting land at the Cape Charles and Belle Isle region of southern Labrador on 11 July (Figure 8). Here the *Hope* turned north and on their way up the coast, the vessel stopped at two bays. Because of the limited navigational skill of the Moravian men, we do not know what area the party saw, but one inlet Erhardt called "Cod Bay" after the immeasurable number of cod fish they found there, while the other, obviously more appealing, he named "Fair Bay" (ED, 8/9).

On 29 July, the expedition reached yet another bay when the crew sighted a camp of about one hundred Inuit (ED, 12). Erhardt and a few men quickly rowed out to attempt contact and a brief trade in whalebone and sealskins ensued. Although fleeting, the encounter between the two groups was sustained enough to convince Erhardt that he had finally reached an ideal place to establish a mission.

After three more days of exploration, the *Hope* sailed into Nisbet Harbour and anchored while Erhardt and the Brethren landed. The men found a large freshwater pond and climbed a promontory, which Erhardt named John's Mountain in honour of himself (ED, 15, 19/20). These landmarks are likely today's Kill-a-Man Pond and Monkey Hill (Figure 1) (Rollmann

2001: personal communication).

After dismissing two potential sites, the missionaries and Erhardt elected to establish the mission station next to a small river they had named the "Little Elbe" (Haven, 20). During this time, the *Hope* was visited by a series of Inuit groups, with whom the missionaries exchanged goods, but no contact is recorded after the 5 August (ED, 14-17). By 9 August, the men had erected a temporary shelter to live in while the mission was under construction, and the same day ceremoniously laid the first foundation stone for the mission house. The Brethren called the place "Hoffnungsthal, or Hopedale since, "we built very much on hope and we were not yet certain what the saviour would make of it," (quoted in Rollmann 2002:15).

Over the next twenty-four days, the men set to work building the mission house. The stone foundation was completed by 12 August, and the roof was finished and covered by the 21st (ED, 19/20; BrD 20v). A day later the doors and windows were set in place (BrD, 20v). Construction of the chimney began on 29 August and by 3 September the house was largely complete (ED, 25/26; BrD II, 17). In addition to the tremendous amount of energy involved with building the house, the Brethren also busied themselves by planting a vegetable garden of peas, radishes, red cabbage, turnips, winter corn, salad, and beans (Rollmann 2002:7).

Pleased that the house was nearing completion, Erhardt decided it was time to draw the Inuit into trade instead of waiting for their arrival at the mission. On 4 September, Erhardt

unloaded enough supplies to sustain the missionaries for a year, including eight muskets and two cannon (ED 26/27). With a farewell cannon salute from Golkowsky, Krumm, Kunz and Post left behind at the mission, the *Hope* sailed out of Nisbet Harbour.

The *Hope* went due north for several days before turning south. While sailing back through the coastal archipelago, the ship encountered a group of Inuit near a small island. Based on a 1775 sketch map by later Labrador missionary Jens Haven, Rollmann (2002:7) believes this meeting spot is on Manneriktok, or Anton's, Island in the Bay of Islands, about 30 kilometres north of Nisbet Harbour (Figures 1 and 9). The Inuit beckoned the men ashore and as the remaining crew looked on, Erhardt, Magdson, the ship's clerk Hamilton, and four other crewmen followed the Inuit to the far side of the island. They were never seen alive again. For a full day First Mate Goff, who had been left in command of the *Hope*, waited with growing anxiety for Erhardt and the others to return. With bad weather coming on, and unwilling to risk his fate at the hands of the Inuit for any longer, Goff gave the command to weigh anchor and make for Hoffnungsthal (Rollmann 2002:7).

Once back in the relative safety of Nisbet Harbour, the missionaries attempted several returns to where Erhardt was last seen, each time being driven back by high winds. The deteriorating weather made it clear to the remaining ship's crew that their survival relied on immediately returning to Europe. However, Erhardt and his companions' disappearance left the *Hope's* crew dangerously under strength for a transatlantic voyage and the only way the return trip

would have any measure of success was if the missionaries helped to sail the vessel (Rollmann 2002:7). Thoroughly disappointed, Golkowsky, Krumm, Kunz and Post began making preparations to leave. As they packed up, they entertained the thought that Erhardt and his men —if they were still alive— might be able to retrace their way back to Hoffnungsthal. With this hope, the four Brethren left all the supplies in the house before they sealed up the doors and windows. The door key was hidden in a tree and a note written in German stating where it could be found was posted on the door (Goff, 11). On 20 September 1752, the missionaries boarded the *Hope* and the vessel sailed out of Nisbet Harbour bound for St. John's, Newfoundland.

On arriving, the Brethren reported the details of their adventure and their operations in Nisbet Harbour to local magistrates and sent this information to Moravian officials (Rollmann 2001: personal communication). The *Hope* remained in St. John's for the better part of a month before leaving for Ireland on the 21 October. After a brief stop in Waterford, the missionaries eventually reached Westminster, where they were met on 28 November 1752 by Zinzendorf and the English congregation (Figure 8) (Rollmann 2001: personal communication).

1.5.4 The 1753 Rescue Expedition

In the summer of 1753, the Moravians launched another expedition, this time to find out what had happened to Erhardt and his crew. A Captain Bell was placed in command and Goff was

again named first mate. Reaching Nisbet Harbour in July, the would-be rescuers were met with a disturbing spectacle. The mission house that had taken the missionaries so long to build was “tore all to pieces” and the surrounding bush was burnt to the ground”; the provisions left inside, such as tobacco, shot, “hail” and clothing, were scattered about the site (Goff 1753). No evidence to explain the carnage could be found, but Goff made good on the situation by salvaging as much usable material as remained, including butter, beer, salt pork, musket balls and building material. Coincidentally, an American vessel, the *Philadelphia*, skippered by a Captain Jeffries, also called at Nisbet Harbour around the same time. Jeffries, unaware of the missionary expedition, recorded a brief description of the house remains.

Bell and Goff then began retracing the northern route taken in 1752. Going ashore near what is believed to be Anton’s Island, where Erhardt and his men were last seen, Bell and Goff made a grisly discovery. The body of the clerk Hamilton, his skull fractured, was lying on the beach surrounded by numerous mutilated and unidentifiable human remains. Wishing to save all the souls of the missing men by performing a Christian ceremony, the search party gathered the remains into a single wooden coffin and marked the grave by covering it with stones (archaeological investigations of Anton’s Island were made in 2000 and 2001 but the results were inconclusive – Mills and Cary 2001). The purpose of their search now sadly complete, Bell and Goff returned to England to relate their findings (Rollmann 2000: personal communication).

1.5.5 Subsequent Visits to Nisbet Harbour

Erhardt's untimely demise and the mission's failure put an end to any immediate Church sanctioned expeditions to Labrador. For some, however, the story of the 1752 expedition was a call to arms. One of those inspired by the events of 1752 was Danish carpenter Jens Haven, who saw it as his destiny to build a successful ministry among the Labrador Inuit (Hiller 1971:841). By entering a scheme with the British colonial government to prevent Inuit groups from disrupting the southern Labrador seasonal fishery, Haven successfully set up a mission station in modern day Nain in 1771.

After only a short time in Labrador, Haven began hearing the Inuit version of events regarding Erhardt's death and what had happened to the Nisbet Harbour mission. When Haven was taken to Hamilton's grave in 1775, an old Inuit woman related to him that Erhardt and his crew were lured from the *Hope* by an Inuit group from the Kaipokak area (Figure 1). Probably mistaken for French traders, who were in a state of on-and-off warfare with the Inuit, the men were dispatched and their bodies left to scavengers (Rollmann 2002:7). As for the mission house, the oral reports in Nain told that in the winter of 1752/53 an Inuit family broke into the house. Tragedy struck when the gunpowder kegs left in the house were accidentally ignited, instantly killing two Inuit men, whose names were recorded as Aksektok and Umangnek (Rollmann 2002: 15).

By the end of the nineteenth century, the Moravian presence in Labrador had intensified to the point that seven missions were in operation from Ramah Bay to Makkovik (Figure 1). The Brethren at these stations kept alive the memory of the 1752 expedition and Nisbet Harbour was visited occasionally by missionaries travelling up the coast. One of these was Makkovik pastor Hermann Jannasch who visited the site in 1903 and erected a cairn memorializing its founding (Figure 10) (Rollmann 2000: personal communication). Only two years later prominent Moravian scholars such as J.W. Davy were to misidentify the location of Erhardt's mission, but the people of Makkovik retained the Nisbet Harbour mission site in their collective memory. Although the ruins were minimally impacted by the founder of Makkovik, Norwegian Torsten Andersen —reputed to have taken bricks from the site to build a bake oven in the town— and by a local family who had a summer cabin near the house ruins, the story of the 1752 mission house —now 250 years old— was passed down through oral tradition to Ted Andersen (Andersen 2001: personal communication, MacNeil 2001: personal communication).

Chapter II

Archaeology at Hoffnungsthal, 2001

2.1 Introduction

Full-scale excavation of Hoffnungsthal began on 26 June 2001 and continued until 20 August. Permission to carry out the work was granted by the Provincial Archaeology Office, Government of Newfoundland and Labrador, under permit number 01.01.01. Dr. James Tuck sponsored the permit while I directed the excavations and analyzed the remains. Five young people from Makkovik (Eric Andersen, Roberta Baikie, Amalia Fox, Lena Onalik, and later Bernie Andersen) were hired to assist me excavate and record the site (Figure 11).

2.2 Methodology

Because the mission's foundation had been demarcated during the 2000 survey, no further test pits were required and I could immediately superimpose a grid over the foundations, with an 80 cm to 2 m allowance around the remains to locate additional features, if any survived (Figure 12). To expose large sections of the house simultaneously, I selected an open area strategy using a grid of 2 × 2 m squares. At the southern end of the site, I deemed it unnecessary to open entire 2 m squares and instead established rectangular 2 × 1.5 m units.

This produced a 76 square metre excavation area measuring 9.5 m north/south by 8 m east/west. Each 2 × 2 m square, or 2 × 1.5 m rectangles in the south, was assigned a “Unit” number, starting at “1” in the north-west corner and ending at “20” in the south-east corner of the excavation area (Figure 12). A grid 0.0 point was established 7 m north and 1 m west of the excavation area and the unit coordinates were mapped by their distance south and east of the 0.0 point (Figure 12).

All trees and brush were removed prior to laying the grid, except for two large trees at the south end of the site that were simply too large to remove with the equipment at my disposal.

However, as these trees were not inside the foundations, their removal was unnecessary. Heavy stone rubble and tree stumps in the middle of the site made it impossible to hammer in grid stakes, so stakes were placed only around the excavation boundary. This meant the grid line string had to be stretched in some cases over 9.5 m, but to overcome any measurement inaccuracy, the lines were constantly checked to ensure they were in the correct position. An elevation benchmark was established at 62 cm above ground surface on the trunk of one of the large trees left standing in southern portion of the excavation area (Figure 13). Although not an ideal choice for a permanent datum, given the likelihood of it shifting over time, if not be entirely removed, the lack of an alternative high point in the vicinity meant the tree benchmark was the only recourse.

To keep stratigraphic control, I delineated two one-metre-wide baulks running through the

centre of the house on a north-south and east-west axis (Figure 12). I had hoped to establish a 50 cm wide baulk, but the loose rubble covering the site negated establishing a narrow baulk. The resulting quadrants were cleared simultaneously until the excavators reached the house floor. At this point, north, south, east and west profiles were drawn and the baulks removed (Figures 14 and 15). The profile datum points were maintained so that layers or features encountered after the baulks were removed could still be added to the profile drawings.

All soil was excavated stratigraphically by trowel except when modern sod or sterile fill levels were being removed, in which case shovels were used. All soil was sieved through a 5 mm screen.

Layers and features encountered during the excavation were described and mapped using the “lot” system, as commonly used by Parks Canada Archaeology, Military Sites (Last 2001: personal communication). The “lot” system is essentially the same as the “event” method used by Dr. Tuck at the Ferryland Site (Tuck 1996) and the “context” designation favoured by the Museum of London (1994: Section 1.2). It differs only in name. A “lot” can refer to the following: a layer of natural strata; an occupation level; a fill; an interface; an artefact or cluster of artefacts; an intrusion; a feature; a sample; or any other element the excavator wishes to identify. Each “lot” is given a number so that it can be individually described and mapped. Designation of a lot number is made on the basis of its *discovery*, not its placement

in the stratigraphic sequence. For example, a "Lot 20" can overlie a "Lot 15" if "Lot 15" was discovered earlier in a part of the site where it was not covered by "Lot 20." Situations like this often arise when excavation is carried out in four separate quadrants, like at Hoffnungsthal, where baulks obscure the relationship between layers in one quadrant and those in another.

I modified the lot system in some circumstances to suit specific requirements. For example, when artefacts began appearing in greater numbers inside the house foundations even though there was a uniform soil matrix both outside and inside the walls, I decided to create the substrata "Lot 2B" to separate the sand with high artefact frequencies inside the house from similarly identical sand on the exterior. I did the same for Lot 17A-E, to ensure that it was clear that all the floor joists were part of the same event but could still be individually described. As an experiment, the modified system was a failure because it made numbering needlessly complicated. I later dispensed with the modification and assigned a new lot number for each new stratum uncovered.

Written descriptions of each lot were made on record forms developed by Joseph Last of Parks Canada. Every lot was then mapped in plan view to 1:50 cm scale. Significant lots were further referenced in a 1:20 cm site plan map and most were captured in the 1:20 cm stratigraphic profiles (Figures 14, 15 and 16). All lots were subsequently organized into a Harris Matrix diagram, explained below.

The position of each find or artefact cluster was plotted and inventoried in relation to the unit and lot in which it was found. This was done by measuring the artefact's distance from the two closest unit boundaries. For example, if an artefact was found close to the unit's northeast corner, its distance from the north wall and east wall was recorded. Later, artefact locations were entered into the master grid based on its distance from the 0.0 m point (eg. 8.43 m S and 2.44 W) (Figure 12). Often so many artefacts were found in a given area that it became unfeasible to measure individual items. To overcome this, artefacts within 25 cm of each other were bagged together and the centre point of each cluster recorded. I continued to plot significant finds, such as complete clay smoking pipes, individually.

Historical consultation during the project was provided by Dr. Rollmann, while Dr. Derek Wilton (Department of Earth Sciences, Memorial University of Newfoundland) provided a field identification of the Hoffnungsthal building stones.

Laboratory conservation and artefact processing was carried out at the Archaeology Unit facilities in Queen's College, Memorial University. Students Regeena Psathas, Penny King, and Lena Onalik cleaned and catalogued the material while Catherine Mathias conserved the metal, wood, and bone remains. Maggy Piranian, Department of Earth Sciences, did thin section analysis of brick and mortar samples and Jim McKay of the Public Works and Government Services Canada, Ontario Service Centre, digitized the 1:20 cm base plan on to

AutoCAD. I carried out all other post-excavation analysis and CAD (Computer Aided Design) and GIS (Geographic Information Systems) mapping.

2.3 Excavation Results

The first stage of post-excavation analysis was to organize the layers and features uncovered at Hoffnungsthal into a chronological sequence. To show this graphically, I constructed a Harris Matrix diagram using the computer program ArchEd (Figure 17) (Harris 1979). The primary goal of the matrix is to illustrate the position of a lot in relation to the stratigraphic *sequence*. Once a lot is determined to be deposited before one, and after another, in the sequence, all other relationships, such as whether it is in physical contact with later or earlier lots, are deemed superfluous (Harris 1979:96).

Contemporaneous deposits are shown on the matrix by placing two or more lots next to each other. For example, Figure 17 shows Lots 26, 3, 10, 23, 24 and 25 on the same horizontal plane, denoting my belief that these lots were deposited at roughly the same time. Sometimes, lot numbers are assigned to two apparently separate layers that are later found to be two glimpses of the same deposit. This was the case with Lots 2B and 28. Lot 2B was found inside the south foundation walls, while Lot 28 was identified inside the hearth under a burn layer (Lot 30). Initially, I could find no relationship between the two strata, but further excavation revealed the lots to be part of the same fill episode. To reflect this interpretation in

the matrix, I have shown Lot 2B as equal (“=”) to Lot 28.

Another rationale for creating the Harris matrix was to divide the stratigraphic sequence into phases correlating with the historical and oral understanding of the site (Figure 17). From the 46 lots identified at Hoffnungsthal, I was able to recognize five phases of development:

- I. Natural soil development pre-1752;
- II. August-September, 1752 construction phase
- III. 1752/3 occupation phase
- IV. Destruction, degeneration and natural soil development from 1753 to the mid-twentieth century; and
- V. Natural soil development and occupation activities from the mid-twentieth century to present.

Each phase is described below.

2.3.1 Phase I: Natural Soil Development Pre-1752

In an attempt to preserve the mid-eighteenth-century landscape, only four areas of the site were excavated to pre-1752 natural soil levels (Units 1-4, 6-8, 11, and 20). Most of what is known of the sequence came from excavation of a 56 × 60 cm test shaft on the northeast corner of the foundation, in Unit 4 (Figures 16 and 18). The bottom layer (Lot 40) was highly compacted “C” Horizon sand and the house foundation (Lot 3) rested upon this compacted

stratum at 75 cm below surface. Above this were two “B” Horizon levels (Lots 38-39), each between 12-15 cm thick, subsequently covered by loosely compacted grey sand (Lot 32) that was probably the surface layer when the missionaries landed in Nisbet Harbour (Figure 18). This grey layer resembled sand found directly under sod elsewhere in the harbour and was probably wind and water deposited. An identical stratum (Lot 32) was found in a 56 × 54 cm test pit in Unit 11 (Figure 16). Although the entire site was not excavated to the natural levels, similarities between the grey sand in the Unit 11 test shaft and that in the Unit 4 shaft prompted me to assign the same number (Lot 32) to both. Grey sand (Lot 34) was also inside the north foundation walls and it too is likely part of Lot 32. However, the presence of black organic material in the sand of Lot 34 led me to assign a different number. Regardless, I have made them contemporaneous in the matrix as I believe they were deposited around the same time. The organic content in Lot 34 may be the remains of vegetation burnt when the missionaries were clearing the area for the mission house. No artefacts were found in the natural soil layers.

2.3.2 Phase II: Construction phase, August-September 1752

Phase 2 includes 20 lots (Lots 2B, 3, 17A-E, 19, 22-29, 31, 33, 35, 36), all believed to date to the Hoffnungsthal mission complex construction between August 9 and September 13, 1752. Eleven of these are features (Lots 3, 17A-E, 19, 23, 24, 25, and 26) while the remainder, with the exception of a cut (Lot 36), are fill levels (Lots 2B, 22, 27-29, 31, 33 and 35). For clarity,

I will discuss individually the features, cuts and strata in order of their deposition.

2.3.2.1 Foundation Pit Cut (Lot 36)

After clearing vegetation at the site, the missionaries' first action was to dig a rectangular pit for the house foundation. Evidence of this cut (Lot 36) was found in the Unit 4 test shaft, and it is believed to continue around the foundation's perimeter (Figure 18). The cut was through natural strata between 6-12 cm from the foundation exterior. As the foundation was constructed, the space between the walls and the cut interface was back-filled with hard-packed, olive-green clay (Lot 35), probably acting to bond the foundation stones.

The absence of a corresponding cut inside the foundations suggests that a pit was dug to lay the foundation walls, rather than a simple builders' trench. However, this excavation did not appear to have involved completely removing the original beach sand (Lots 32 and 34).

2.3.2.3 House Foundations (Lot 3)

The house foundations were rectangular in shape and measured 6.96 m (22 feet 8 inches) north/south and averaged 5.13 m (16 feet 8 inches) east/west. The walls' width ranged from 24-60 cm and was constructed of large, flat stones between 20 × 20 cm to 60 × 40 cm in size (Figures 16, 19-23, and 27). These large stones formed the basis of the wall, with smaller

stones (about 6 × 3 cm) filling gaps in the construction. Dr. Wilton (2001: personal communication) identified the foundation stones as locally acquired Upper Aillik felsic rocks, of which more will be discussed in the next chapter. Between the stones was highly compacted, olive-grey clay.

The masonry technique is best described as rough-faced, random coursed. Most of the exterior and interior faces were unfinished and both large and small stones were used. However, to give the illusion of a finished wall from the outside, flat-faced stones were selected for the top course. For stability, larger stones were used for the bottom course and these extend into the house further than the top stones, creating a small interior shelf. Curiously, the number of wall courses varied from one end of the structure to the other. The Unit 4 test shaft revealed that three courses were built for the northern wall sections, which overall stood approximately 60 cm high (Figure 23). Test Pit 2 (Figure 4), dug during the 2000 excavations, showed that only two thin courses, combined measuring about 30 cm high, were laid for the south wall. Possible reasons for this variation will be presented in the next chapter.

2.3.2.3 Central Fireplace/ Hearth (Lot 19)

Approximately 2.60 m north of the south gable wall, and 3.30 m south from the north wall, was a large “C”-shaped stone wall (Lot 19)(Figures 14, 16, 19-22, and 24-27). The north

wall ran east/west, in line with the stone footings (Lot 23) and measured 1.96 m long by 40 cm wide. Extending perpendicular from each end of the wall were stone cheek walls. The west cheek was 80 cm long and 34 cm wide, while the east was 86 cm in length and 50 cm wide. The resulting opening was 1.50 m wide and 65-70 cm deep.

Four random courses of the fireplace remained standing to a height of 50-60 cm, and the use of flat stone edges gave the construction a finished exterior appearance. The first course was placed on the beach sand layer (Lot 32) and the stones used for this course were much larger than subsequent ones, forming a step extending into the hearth interior about 5-10 cm (Figure 26). The hearth floor, instead of being finished in flagstone, was filled with sand (Lot 28) over the bottom two courses (Figure 26).

Large Upper Aillik blocks, averaging 30×25 cm to as large as 60×40 cm, were used for most of the construction. Smaller stones filled the gaps, but unlike the foundation and stone footings, some small brick fragments were also used as fillers. Bonding the stones was the same compacted, olive-grey clay seen on other stone elements at Hoffnungsthal. On the fireplace, this clay was applied over the stones up to 2-3 cm thick.

2.3.2.4 Stone Footings (Lot 23)

Connecting the fireplace to the east and west foundation walls —essentially bisecting the

house— were two stone footings (Lot 23) (Figures 14, 16, 19-22, and 27). The eastern footing was 1.60 m long while the western one was 1.10 m in length. Both ranged in width from 25-45 cm and were one course high. Their proximal termini overlapped the foundation walls (Figure 16). As in the foundation and fireplace, large, Upper Aillik felsic stones formed the footing with smaller ones filling the gaps. Highly compacted, olive-grey clay bonded the stones.

2.3.2.5 Wood Joists (Lots 17A-E)

Running east/west across the house interior were linear organic stains believed to be wood floor joists (Figures 16 and 27). Each stain was assigned a letter under Lot 17 so that it could be individually described but still subsumed under the same event. The first joist (Lot 17A) was discovered between 25-35 cm south of, and parallel to, the north gable wall. It stretched 4.25 m from the west foundation wall to the east wall (Lot 3), was about 10 cm thick, and ranged in width from 18-20 cm. 2.20-2.30 m south of this joist, was the second joist (Lot 17B). It was thicker than the first by up to 8 cm, but was roughly the same width. Because the foundation walls are narrower in this section of the house, the second joist was slightly longer than the first and measured 4.45 m long.

Two joists (Lots 17C and 17D) were uncovered south of the stone footings (Lot 23) in the south-central portion of the house. These joined the foundation walls to the central fireplace

(Lot 19). The length of the western joist (Lot 17C) was 90 cm, while the eastern joist (Lot 17D) was 125 cm and both were between 12-16 cm wide and 5 cm thick.

The southern-most joist (Lot 17E) was found 20-40 cm north of the south gable wall. It ranged in width from 10-18 cm, was 5 cm thick, and 4.40 m long.

The wood joists were nearly equidistant from each other, having a centre of just over 2 m (about 6.5 feet). The first joist (Lot 17A) was 2.45 m north of the second (Lot 17B) while the two short joists (Lots 17C and D) in the middle of the house were 2 m north of the most southern one (Lot 17E).

2.3.2.6 Stone Steps (Lot 24)

In the southwest exterior portion of the foundation wall were four stone steps (Lot 24) (Figures 16, 20, 21 and 28). All of these were 90 cm wide and combined to stretch 1 m west from the house wall (Lot 3). Large, flat Upper Aillik slabs (up to 72 × 30 cm) formed the first three steps, but the fourth step closest to the foundation was made of smaller stones averaging 20 cm by 20 cm. Small rocks filled gaps in the construction, and all were mortared with olive-grey clay.

The steps were narrow and gradual in slope, each step being no more than 10 - 14 cm high and

averaging 20 cm deep. An exception was the third highest step, which was about 30 cm deep.

2.3.2.7 Stone Ramp (Lot 25)

South of the stone steps and rising at a 20° angle to the southwest cornerstone was a 90 × 90 cm stone ramp (Lot 25) made of large, irregular-shaped Upper Aillik felsic rock (Figures 16, 20, 21, and 28). Unlike the other stone features at Hoffnungsthal, angular stones, instead of flat ones, were used, giving the ramp a “jigsaw puzzle” appearance. Also dissimilar to the other stone features was the lack of clay used to mortar the ramp. Rather, the ramp stones were set directly into the underlying sand (Lot 22).

2.3.2.8 Brick Feature (Lot 26)

A small brick feature was uncovered inside the northeast corner of the house interior, 85 cm west of the east foundation wall and 1.10 m south of the north wall (Figures 16 and 29). It was constructed of six, 20 × 10 cm red bricks pressed upright into sand (Lot 29) and arranged in a 27 × 24 cm oval configuration. The feature’s inside dimensions were 10 × 10 cm wide and 20 cm deep. No mortar was found, so support for the construction seems to have come from the sand fill (Lot 29) around the feature. Loosely-compacted brown sand (Lot 27) was removed from inside the feature, but no clues were found in the matrix to indicate what purpose this brick arrangement served. In the next chapter, I will present several hypotheses

to explain this unusual feature.

2.3.2.9 Interior Fills (Lots 2B, 27, 28, 29, 31, 33)

2.3.2.9.1 Interior Fills – South Portion

The first of numerous fill strata uncovered inside the foundations was a brown, loosely compacted sand layer (Lot 2B) limited to only the southern portion of the house (Figures 14 and 16). At first it was difficult to distinguish any differences between this layer and sand (Lot 2) found outside the house. My initial speculation was that the brown sand of Lot 2 and 2B had accumulated naturally over the foundations in the years since the site was abandoned, but before the chimney collapse (Lot 9). However, higher artefact frequencies inside the foundations prompted me to separate the sand inside the house (Lot 2B) from that found outside (Lot 2).

The sand of Lot 2B surrounded the fireplace (Lot 19), stone footings (Lot 23) and four of the wood joists (Lots 17B-E). Strangely, it did not cover the entire house interior, but extended between 85 cm to 1 m north from the stone footings and fireplace wall (Figure 16). In Units 7 and 8, the sand formed a 2 m × 70 cm salient extending 1.40 m north from the east stone footing. The entire northern boundary was covered by another sand fill (Lot 31) (Figures 14 and 16).

Lot 2B had a number of characteristics to suggest it is a sub-floor fill. While high numbers of artefacts were recovered in this stratum, these were only within the top 4-5 cm. Wood fragments were also present in these upper elevations, including one large, 32 × 20 cm piece in the north-central section of Unit 15. Although charred, this fragment had a grain running perpendicular to the wood joists (Lot 17), and is probably the remains of wood flooring.

Brown sand (Lot 28) found when a portion of the hearth was excavated was later found to be a continuation of sand (Lot 2B) from the interior floor. Inside the hearth, Lot 2B/Lot 28 was 24 cm thick and covered the fireplace's bottom two courses.

2.3.2.9.2 Interior Fills – North Portion

Excavations up to 57 cm below surface in the northern portion of the house revealed that more fill layers were deposited here than in the south (Figures 14-16). Three strata (Lots 29, 31, and 33) were identified, all believed to have been deposited during the construction period. The first (Lot 33) was a narrow 5-30 cm wide bank of brown sand covering the natural stratum (Lot 34) and laid against the east foundation wall (Lot 3). Above Lot 33 and encompassing most of the northern interior was a brown sand with small rounded stones (Lot 29). The layer was thickest, up to 42 cm, where it was banked against the foundation walls on the north, west and east. To the south, this level became thinner, down to 5 cm, and formed a

basin filled with sand and clay inclusions (Lot 31). This latter fill was a mixture of pink sand and greenish grey clay, with large angular stones averaging 30 × 20 cm in size suspended in the matrix (Figures 15, 16, 22, and 27). It was 5-10 cm thick over Lot 29 near the east wall, but in the basin on the west it was up to 35 cm deep. The stones only occurred in a 1.15 × 2.50 m band running east from the west foundation wall (Lot 3). Although undulating, the top elevation of Lot 31 was roughly level with the top of the foundations. It was the last fill deposit of the construction phase as it covered all other north and south interior sand fills (Lots 2B and 29).

2.3.2.10 Exterior Fills (Lots 22 and 35)

Two 1752 fill layers were discovered outside the house (Figures 14-16). The first (Lot 35) was discovered in the Unit 4 test shaft and was a compacted, and friable, olive-grey clay used to backfill the foundation pit cut (Lot 36). It was the same colour and composition as that bonding the foundation walls, fireplace, stone footings, and steps and probably also helped to bond the foundations' exterior.

Covering the foundation pit cut (Lot 36) around the foundation, and gradually sloping from the walls, was loosely compacted brown sand (Lot 22). This sand directly capped the natural stratum (Lot 32), suggesting that the former was landscaping fill used to cover foundation's exterior face. Lot 22 was also laid against the north side of the stone steps.

Large quantities of artefacts were found in the upper elevations of Lot 22, but none on the natural stratum (Lot 32)/ fill (Lot 22) interface. This could mean that the sand fill was deposited in one instant early in the house construction, before artefacts could accumulate on the natural stratum around the mission.

2.3.3 Phase III: Occupation Phase (1752/3)

Only one stratum (Lot 30) dates to when the mission was occupied. It was found within the hearth and extended 34-93 cm south from the fireplace opening, covering 1.10 m of the interior fill (Lot 2B) (Figures 14 and 16). The layer was quite thin (2-7 cm) and composed of black hard-packed sand with some small angular stones. Most of the objects found in the deposit were burnt, and included numerous pieces of calcined bone and coal. Because the burn layer was within the hearth and over only a limited area of the interior fill (Lot 2B), it is more likely related to the mission's occupation in 1752 than its destruction by fire in the winter of 1752/53.

2.3.4 Phase IV: Destruction, degeneration and natural soil development, 1753 to c. mid-twentieth century

Six strata (Lots 2, 9, 10, 18, 20, and 21) relate to the destruction and degeneration of the

house since its abandonment in September 1752. These layers are also believed to have formed prior to the mid-20th Century, although their development likely extended into this period.

Although the house is known to have been destroyed sometime between September 1752 and July 1753, no extensive deposit can be attributed to this event. The only stratum that may be related to the destruction is a 3-7 cm thick brick, charcoal and clay layer (Lot 20) found within the hearth boundaries. Preserved in this deposit was a 55 × 14 cm rectangular stain of a wood plank orientated east/west (Figures 14 and 30). Driven into the plank's south side were six wrought nails ranging in length from 5-9.5 cm. Because many of the artefacts show no signs of being burnt, Lot 20 may not have formed during the destruction at all, rather, it may have been deposited after the fire had subsided and the building slowly collapsed.

Above Lot 20 and covering about half the entire excavation area was a thick stone and brick debris layer (Lot 9) originating from the fireplace collapse (Figures 14 and 31). The stratum was deepest (46 cm) in the area surrounding the fireplace and thinned to 1 cm at its outer boundaries. Like the stone found elsewhere, the rocks of this layer were flat and angular Upper Aillik felsic, some of which were very large, up to 108 × 33 cm. Complete and small fragments of red and pale-brown bricks were found in abundance. Thirty-four complete bricks recovered, and these ranged in size from 22 × 9 × 5.5 cm to 23.5 × 10.5 × 8 cm (Figure 33). The compacted olive-grey clay matrix was similar to the soil found bonding the stone

construction elsewhere. Few artefacts were found, but those recovered were primarily building hardware such as wrought nails.

Although I attributed the rock and brick debris (Lot 9) to a single event in the site's history, presence of thin sand lenses in the clay suggests the layer was not formed in one instance (Figure 14). The chimney collapse was likely a gradual process, one where a number of stones and brick would fall at once, to be followed by a period of stasis when wind-blown sand was deposited before another collapse occurred. However, these sand lenses were far too isolated and ephemeral to warrant their own lot distinctions and Lot 9 must be seen as a development over time.

Outside the house were two sandy clay layers (Lots 2 and 21) that accumulated naturally after the site's abandonment (Figures 14, 15 and 32). Although soil development in Labrador is notoriously slow, these layers reached a combined thickness from 10-34 cm. This is probably the result of humus accumulation from the large trees that took root over the house. Lot 21 was found below Lot 2 and contained numerous metal artefacts lead musket balls and birdshot. A 175 × 90 cm concentration of these items was found in the east excavation wall of Units 8 and 12.

Lot 2 covered the area around the chimney collapse (Lot 9) and in several places obscured the foundation walls, particularly in the northwest corner. Like Lot 21, Lot 2 contained high

numbers of historic artefacts, but these artefacts were mostly at the Lot 2/Lot 22 interface, suggesting Lot 2 is post-destruction natural soil development. The presence of artefacts in Lot 2 and 21 does not mean they are historic occupation layers as it is not unusual for material to “float” upwards in northern Labrador’s constant freeze/thaw cycle (Figure 34) (Wilton 2001: personal communication).

Within the north-east portion of the house interior was a localized stratum of light brown sand (Lot 10) that overall was very thin (about 1 cm), although in places was 10 cm thick (Figures 15 and 32). A complete absence of artefacts suggests the sand was laid down after 1752/53, but its highly irregular boundaries could mean it was deposited around surviving interior features. Unfortunately, no features were found on these boundaries to support this interpretation. The undulating top elevation is typical of wind-blown sediment.

A rock pile (Lot 18) 2.8 m long extending 91 cm east from the west excavation wall was uncovered in Units 5 and 9 (Figures 15 and 32). The stones were Upper Aillik felsic and ranged in size from 15 × 9 cm to 51 × 15 cm and were generally irregular in shape. The matrix was loosely compacted brown sand similar to the historic landscaping fill (Lot 22) beneath. I originally believed this layer to be a temporary pile made by the missionaries to store stone while they built the house, but a more likely explanation is that it is part of the cairn erected by Hermann Jannasch and his party (Figure 10). An examination of the Jannasch photograph shows that the cairn was not erected on the mound of the chimney collapse, rather

on a flat area much like that on the river-side of the mission.

2.3.5 Phase V: Natural soil development and occupation activities, c. mid-twentieth century to 2001

Six layers (Lots 1, 4, 6, 11, 13, and 15) and six cuts (Lots 5, 7, 8, 12, 14, and 16) were formed during the most recent soil development and human activity at Hoffnungsthal. Uncovered below the sod (Lot 1) in the southern portion of the site were five small pits (Lots 5, 7, 12, 14, and 16) dug during the McNeil family occupation during the 1950s (Figure 32). Charlie McNeil, a one-time resident of Nisbet Harbour, provided an explanation for these pits by reporting that the mission site was occasionally used to store seal blubber. In the fall, the McNeils would place blubber in small pits, then cover them to preserve the fat through the winter. When spring arrived, the blubber was dug up and fed to the dogs (McNeil 2001: personal communication.). The first two circular depressions found (Lots 4-7) were apparently used solely as “blubber pits” as few modern artefacts were recovered from the fill. The remaining three pits (Lots 11-16), while originally blubber pits, later served as disposal areas for broken glass. In one of the holes (Lot 13), enough modern bottle and window glass was removed to fill a beef bucket. All the pits were shallow (from 6-21 cm deep) and ranged from 35 cm to 1.40 m in diameter. Because the holes cut into the chimney collapse (Lot 9), little damage was inflicted on the historic remains beneath. Only one of the pit cuts (Lot 14) penetrated the floor fill (Lot 2B) and obliterated a 20 cm section of a historic floor joist stain

(Lot 17E).

The most recent event at Hoffnungsthal was located in centre of the excavation area, and was where Ted Andersen had in 2000 dug a 2 m by 45 cm test pit (Lot 8) to obtain brick samples for Dr. Rollmann (Figure 32). This pit only extended 23 cm into the chimney collapse (Lot 9).

Covering the entire site was a 1-24 cm layer of recent moss and sand (Lot 1). This lot included numerous tree and brush stumps, all of which were removed during the excavation. Some historic artefacts were unearthed in the sod, but the majority were modern bottle and window glass, metal, and plastic fragments, probably from the McNeill occupation during the 1940s and 50s.

2.4 Summary of Excavation Results

Full-scale excavation of the house ruins in Nisbet Harbour proved beyond a doubt it was the original Hoffnungsthal mission site. From the foundations matching the dimensions listed in the Brethren's diaries, to the 13 512 artefacts dating to the mid-eighteenth century, the evidence was overwhelming. Additionally, and fortunately, the passage of time had been kind to Hoffnungsthal. Despite the damage wrought by the explosion and subsequent fire, and later human occupation in the area, key structural elements of the mission survived, even such perishable remains as the wooden floor joists. This combination of architectural features and

artefacts left tangible clues to the original appearance of the mission house and, by extension, an insight into the men who constructed it. In the next two chapters, I will use the excavated data in concert with the historical accounts, to reconstruct Hoffnungsthal and discuss what the architecture can tell us about the first expedition and its members.

Chapter III

The Architecture of Hoffnungsthal

3.1 Introduction

Before we can interpret why the Brethren built Hoffnungsthal in the manner they did, and what influenced them to do so, a necessary first step is to recreate what the mission house looked like when it was completed. For this, the historical documents are an excellent starting point as they provide both written descriptions and graphic representations for the design elements, some of which have not survived in the archaeological record. Conversely, the archaeological data collected in 2001 contribute details unmentioned in the documents. However, even after combining these two sources, gaps in our understanding of the house still remain and filling these requires looking beyond Nisbet Harbour into the wider architectural context.

While some details of the Hoffnungsthal's construction may have come from individual decisions, the mission house was not built without precedent; rather, its form must have occurred previously in the Old and New World. When the site was completely uncovered, a fundamental similarity was noted between the little structure in Nisbet Harbour, and those built predominately in central Europe and America from at least the medieval period until well

into the nineteenth century. This similarity was the internal plan, known variously as the *flurküchenhaus*, *einhaus*, Rhenish, or Continental plan, which involves three rooms, a *Küche* (hearth room), *Stube* (living room) and *Kammer* (bedroom), arranged around a large off-centre fireplace (Bergengren 1994:49). Identifying Hoffnungsthal's house type opens the door to a whole range of architectural characteristics, and can be further used to interpret the historic and archaeological data.

In recreating Hoffnungsthal, I have decided to describe the structure as if it were still standing, that is, by first approaching it from the outside, then entering through the door to the interior.

Obviously, these two spaces are not exclusive categories as each element in the construction is interrelated and some features seen from the exterior, such as the windows, would also be visible from inside. Examining the house as an extant structure is also an antithesis to how it was constructed, but looking at the final product is often the only way to convey adequately how the pieces were put together. Of course some recreated elements are purely speculative, but given the relative wealth of architectural comparisons, I have selected what I believe to be the most probable situation based on the available information. Before beginning my reconstruction, however, it is important to look at Hoffnungsthal when it was last a dwelling—in the Brethren diaries and those of subsequent visitors to Nisbet Harbour.

3.2 Historical Documentation

Considering Hoffnungsthal's antiquity, scale and geographical isolation, the documentary record is surprisingly rich. In the eighteenth century alone, there are six separate and detailed accounts of the mission house and its construction. Although these contemporary descriptions, like all historical documents, should be evaluated critically, there is little reason to suspect the authors inflated their observations. The tone of the missionaries' diaries, in particular, gives the impression of a passive record of events free of self-aggrandizement or propaganda motives. Accounts of the mission site after 1752 are equally detached, in part because of the recorders' cursory knowledge of the expedition's events, which prevented them from making interpretations beyond what they observed at the site. The limited embellishment in the historic documents was supported by the archaeological evidence, which revealed no elements of the site that substantially diverged from the written record.

Most of what is known about building the mission house and its final appearance comes from the daily log Erhardt (ED) kept between 4 August and 5 September, 1752, and the diary entries of the Brethren Krumm, Post, Kunz and Golkowsky (BrD and BrD II) during the same period and until 19 September. Erhardt took no part in the building effort, preferring to leave the missionaries to the task while he explored the surrounding area.

Despite the obvious cooperation entailed in building a house, labour among the missionaries

was divided depending on each man's skill. Post was the most experienced of the group, having already worked to establish missions in the American colonies. Although a carpenter by trade, he also supervised the wood, stone and brick construction. Golkowsky and Kunz, a cabinetmaker and carpenter, respectively, were primarily involved with the woodworking, with Golkowsky specializing in the framing around the doors and windows. The only unskilled man was Krumm, who made himself useful by cooking and providing an extra hand when required (Rollmann 2001: personal communication).

Construction began on 8 August, when Captain Madgson and some of his crew landed to help the missionaries clear an area for the foundation (ED, 18/19). This was four days after the mission site was selected and by then the Brethren had erected temporary accommodations and brought ashore a quantity of wood and building stones. On 9 August, the Brethren write: "we laid the foundation stone for our house at 9 o' clock in the evening," and that they, "sang a few verses and Brother Kunz prayed intently about it." The house they named "Hoffnungsthal since we built very much on hope and we were not certain what the Saviour would make out of it" (BrD, 20r). By the 12 August, Erhardt reported that the house foundation was complete and that the walls were "blocked up 2 beams [high] all around [and] door posts erected" (ED, 19/20). The wood used for the walls must have been substantial, as the missionaries asked the *Hope's* sailors to aid in hauling it to the site (ED, 19/20). Although they had helped initially, the crew now claimed they were only required to bring the missionaries to Labrador and beyond that held no responsibility to establish the mission itself.

Despite this setback, in the next two days the missionaries had the walls “blocked up to 8 feet” and had begun on the roof trusses (BrD, 20v). The roof was finished on the 21 August and covered using “Juniper rinds” (BrD, 20v) in a manner Erhardt believed typical in Newfoundland (ED, 23/24). The next day, the missionaries began to “glue up” the house and set the door and “window casings and window frames and doors” in place (BrD, 20v). On 29 August, construction of the chimney began. While this was being done, the floor of the living quarters was completed to the point that on 3 September, nearly a month after they had started, the Brethren could state, “The house was now mostly finished. It is from cut wood, blocked, 22 feet long and 16 feet wide, has a roomy living room [*geraeumliche Wohnstube*], a kitchen [*Küche*], a storage room [*Vorraths Kamer*], also upstairs a loft [*Boden*]” (BrD II, 17).

Although Erhardt and the *Hope* left on the 5 September, the missionaries remained in their temporary hut until the 8th September (BrD, 22r). Over the next six days, small elements of the building were completed, such as the firebox wall, windows, and exterior finish (BrD, 22r). For the latter, Krumm states that “Post whitened the house outside, and I fitted the door for the house and the windows and painted them red” (BrD, 22r). Mention of the architecture obviously ceases when news arrived of Erhardt’s disappearance, except for a passing note about the men leaving the keys to the house in a tree (Goff, 11).

When the Brethren arrived in St. John’s, Post, Golkowsky, and Kunz each made separate reports to Moravian officials stating the house was “22 feet long and 16 wide” (Post, Golkowsky, Kunz). Post added that it was 9 feet tall, “covered in tree rinds” and “built in the

manner as on the Kyll,” a reference believed to refer to a river in the west of Germany or America (Figure 2) (Post).

After the missionaries returned to Europe, maps of the expedition were produced by two different Moravian cartographers. Each included renditions of the completed mission house, likely based on the survivors’ accounts, although there are significant differences between the two (Figures 35-37). Both show a large central chimney, but different orientation of the windows and doorways. Figure 36 shows what appears to be either clapboarding or horizontal log construction and indicates a set of stairs leading to the doorway. The doorway is on the façade as is one long rectangular, multi-paned window. On the gable end is one rectangular window on the ground floor and a gable window for the top level. Shingles are drawn on the roof. The other depiction (Figure 37) has three windows and a door on the gable end and three small windows on the façade. The façade appears smooth and either shows either a plastered half-timbered or frame design, or is horizontal log covered by whitewash. The roof details are not as clear as Figure 35 but there seems to be boards or beams running down the roof.

This was the last glimpse of the completed house for, by the time the next visitors arrived, the house was in ruins. Details of the surviving structural elements are included in Goff’s account of 21 July 1753, when he returned to Nisbet Harbour, and a report written by Jeffries of the *Philadelphia* on 15-16 August, 1753.

Goff largely describes the provisions strewn about the site but does mention that the “ye Chimney Broke of one end stove in & Both sides...all down within about 4 feet of ye ground” (Goff 1753). Goff’s party then begin to “over howl ye ruins to Save all that was worth anything...&...hawled out ye Timber for firing” (Goff 1753). This exercise does not appear to have impacted the structure to any great degree as, the following month, Jeffries reported that he found “the Ruins of a Timber House...of Logs joined together, part standing, with a Chimney of Brick and Stone entire. The House consisted of three Rooms...” (Jeffries, 134). His description of a complete chimney is puzzling given Goff’s previous assessment.

Little disturbance occurred over the next few years, for when Jens Haven visited the site in 1775 he reports, “The middle wall of the house was still standing and in the middle something of the chimney, which was once built with local stones and a few bricks and clay.” In the absence of facts about the mission construction, Haven then speculated on the floor plan and why certain elements survived:

On each side a door, perhaps the one room was designed for provisions and the other their sleeping place and in the other half they probably lived. Since the chimney stood on the footing of the middle wall, the powder was not able to tear it down, because there was a fire, since two Inuit blew up...with the house, which burned down the bush behind the house. We thus saw nothing else of the house but its foundation wall.” (Haven).

Providing a visual representation of Haven's descriptions, albeit poorly rendered, is a sketch by fellow missionary J.L. Beck (Figure 38). He shows four upright framing posts on either side of what is presumably the chimney collapse, and these posts are braced by two horizontal beams with a large cross-beam across the top of the ruins.

In the next hundred years, any upstanding elements of the house were finally obliterated. Only a mound of stones was discovered by Hermann Jannasch in 1903, similar to what was encountered in 2000 (Figures 3 and 10).

These historical descriptions are extremely valuable for interpreting the architecture of Hoffnungsthal. However, in most cases the level of detail falls short of providing a complete picture of the house, and some accounts are contradictory. To resolve some of these problems, we turn to the archaeological data and architectural examples from around the world.

3.3 Arriving at Hoffnungsthal, 1752

3.3.1 The Foundation

A visitor's first glimpse of Hoffnungsthal from Nisbet Harbour in September 1752 would probably have been similar to those presented in the two 1753 depictions (Figures 36 and 37).

Varying window and door placement aside, the general width and length proportions match the remains found archaeologically. The Brethren describe the house as “22 feet by 16 feet” and in actuality the foundations are only 8 inches (20.3 cm) longer and wider. Although a small discrepancy, the difference in measurement could relate to use of an ancient measurement system. Standardized measures were not adopted in Britain and the Continent until the 1790s and many systems were being used concurrently throughout the eighteenth century (Morriss 2000:122). For example, the *Viennese Fuss* (foot), measured 12.444 modern American inches (31.608 cm) while the *Rhinefuss* equalled 12.357 American inches, or 31.387 cm. In Bavaria, one *fuss* was only 29 cm in length. The *Viennese Fuss* is closest to the Hoffnungsthal dimensions, producing an exact match for the north/south measure and only a 2 inch (5 cm) difference for the east/west measure, which varies by as much as 6.7 inches (17 cm) to begin with. This system may have been used at other Moravian sites as well; for example, South (1999:21) reports that some dimensions of the early buildings at Bethabara were slightly larger than mentioned in the historic records. Why the 22 × 16 feet dimensions were selected is unknown, but it does not use the Golden Mean used by some builders (Lay 1982:19). A clue may be the material used to construct the walls, described below.

Before the missionaries even began laying the walls, a great deal of energy was expended preparing the area, one that required the, “the old captain, his son, the carpenter, and Heinrich” to help “the brethren to dig the foundation for their house” (ED, 18/19). The archaeology showed this preparation was not just digging a builder’s trench, but involved

removing up to 14.3 cubic metres (505 cubic feet) of soil within the structure's footprint and laying up the wall against the 30-48 cm (1-1.5 feet) vertical cut (Lot 36) through natural strata.

The varying depth of this vertical cut poses a number of questions. While relatively deep (48 cm or 1.5 feet) in the northern section, the foundation pit was less than 30 cm (1 foot) deep in the south, and the number of wall courses reduced from three large courses to two small ones. This difference was first noted during the 2000 testing, and Steve Mills and I originally postulated that the taller northern walls indicated a sub-floor cellar (Mills and Cary 2001:107). Numerous cellars were excavated at Bethabara (South 1999) and they seem to be common in Moravian houses generally. But the 2001 excavations revealed that a cellar was not built at Hoffnungsthal; clay and sand (Lots 29 and 31) found inside the northern walls was level with the top of the foundation wall and were both intentional fills rather than natural sediment that had fallen into a collapsed cellar. One reason for the difference in foundation depth and number of courses from north to south may be that the terrace where Hoffnungsthal now rests was originally not flat enough for the missionaries' liking, and had to be corrected by digging deeper and using more foundation courses. However, this is unsatisfactory for explaining why the difference from north to south was so great, considering that different elevations can be rectified by keeping the foundation cut on a level plane, not by digging deeper and then building taller. A more likely explanation is that there were concerns about soil stability in the building's north end. The northern portion of the house is closer to the Little Elbe and its

proximity may have caused the natural soil around the north to be less consolidated than that of the south. By digging to the “C” Horizon (Lot 40) hard pan clay, it was ensured the north wall would not slump over time.

Digging the foundation pit would have been an onerous task, although a relatively easy one compared to those yet to be completed. Before work on the foundations could begin, the stones for the purpose had to be brought to the site. The Brethren do not mention stones or wood for the mission house being brought with the *Hope*, but for a number of reasons it was believed these materials also originated from Europe (Rollmann 2000: personal communication). First, there are references to “building stones” (ED, 18/19), “quarried stones” (ED, 25/26) and “raw stones” (BrD II, 17) being brought to the construction site by long boat. Other materials, for instance boards “brought from England” (BrD, 15), were used to build the temporary hut the men lived in while the house was being constructed. Based on the documents alone, and the presence of other imported building materials such as bricks and window glass, the most logical explanation is that the stones were loaded onto the boats from the ship’s hold.

Dr. Wilton’s (2001: personal communication) geological analysis of Hoffnungsthal’s building stones told a different story. All of the rocks used were of a 1.8 billion year old, silica-rich felsic volcanic rock called the Upper Aillik Group. Rocks of this unit are ubiquitous in the region, being named from the type area around Cape Aillik, just a few kilometres north of

Makkovik. However, there are no outcrops of Upper Aillik Group rocks at the mission site itself, and the diaries clearly indicate the stones were brought to Hoffnungsthal. Considering the effort required to move so many stones to the building site, it is likely the rocks were procured somewhere in the vicinity. Dr. Wilton believes that a likely quarry spot was directly across the bay from the mission station in a place where there is a large outcropping of Upper Aillik Group lithologies (Figures 1 and 39). One characteristic of Upper Aillik Group rocks is that the stones have two mutually perpendicular fracture sets, along which the rock will break on straight and predictable lines, thus making it an ideal building stone (Wilton 2002: personal communication). When Dr. Wilton and I visited the outcrop, there were a number of boulders lying around similar in size and shape to those used in the house construction. If the Brethren had visited this area, they would not even have had to cut the stones, as squared rocks could merely be picked up off the beach. The area that Wilton speculates was the quarry site also appears to match a description by Erhardt of a distinctive “Red Rock” formation on the shores of Nisbet Harbour (ED, 24). Chemical weathering of other rock outcrops in the same area as the Upper Aillik Group lithologies has given them a light yellow or orange colour, one that is distinctive in Nisbet Harbour. While these coloured outcrops did not produce the stones used for Hoffnungsthal, their hue matches Erhardt’s descriptions. The Brethren could have used these distinctive coloured boulders as a marker to relocate their quarry site (Wilton 2002: personal communication). Unfortunately, no evidence was found of human activity in the area.

As the crow flies, the “Red Rocks” is less than two kilometres southeast from the mission and still within the protected confines of Nisbet Harbour (Figure 1). But this obscures the fact that the distance between the two sites is marred by shallow mud flats and erratic boulders (Figure 6). Even if a circuitous route into deeper water were taken, the heavily laden boats would still have to navigate the boulders and have to be manhandled, at least partially, through the mud to get close to shore at the mission. Having helped push an empty open fibreglass boat out to deeper water near Hoffnungsthal I can appreciate the effort the missionaries expended to get materials to the site. Strangely, the Brethren make no mention of this tremendous effort, despite that it probably outweighed building the foundation itself.

Once the stones were assembled, the missionaries could begin constructing the house, although they first had to address some inherent structural instability problems involved with using irregularly shaped stone, instead of square blocks. One way they did this, as mentioned above, was lay the stones against the face of the foundation pit cut. Their second technique was to make liberal use of a bonding agent between, and on the exterior, of the stones. The Unit 4 test shaft revealed that olive-grey clay was applied up to 12 cm thick to the foundation exterior and the stones in the interior were pointed with clay. This clay was probably acquired from the beach in Nisbet Harbour, easily accessed at low tide. Although the Brethren do not refer specifically to accessing clay for the foundation, when the house was “glued up” they state, “For this we found good clay on the water side [shore]” (BrD, 20v). Less compact sand, clay and stone fill (Lots 2B, 27, 28, 29, 31, 33) thrown inside the foundations further

braced the walls from the interior.

Another technique to stabilize the foundations was to use large stones for the footing course and smaller stones for the top of the wall, providing a larger footprint to centre thrust forces from the superstructure walls above (Gordon 1978:173-184). The wide footing courses may have served for more than just support for the walls. With the bottom course slightly larger than the top course, an interior shelf was created on the façade walls that could be used to brace the joists where they meet the foundation walls (Figure 40). A shelf construction such as this was found on other *flurküchen* houses, such as the one described by Glassie (1968:33).

Some of the stones used for the top course may have been selected for aesthetic reasons. With the exception of the northwest cornerstone, all the top course stones had a square exterior face, giving the top part of the wall a neat, finished appearance. They also placed stones next to each other that had “mirror” edges, just like two pieces of a jigsaw puzzle, and when a perfect fit could not always be created, smaller stones of about 3 × 6 cm were placed in the gaps. This careful stone selection was also seen in other features, such as the steps, ramp, and fireplace. However, the large rounded beach rock used for the northwest cornerstone proves that concerns about what the foundation looked like were secondary to structural integrity.

Despite all the work involved with building the foundation, very little would have been visible

when approaching Hoffnungsthal. Banked against the foundation walls and around the steps and ramp was the sand fill (Lot 22) that gently sloped to the surrounding country. This exterior fill likely had a dual purpose —partly aesthetic and partly practical. By laying sand around the foundation, the rough stones of the wall, although shaped on the top course, would be covered and once again give the house walls a “finished” façade. From a more practical perspective, the sand filled gaps in the stone construction and, with the help of the clay mortar, prevented draft and moisture from entering the building. Once again, the Brethren do not record depositing sand or landscaping around the foundation, despite the amount of labour it required.

3.3.2 The Walls

Atop the stone foundations were, of course, the structure’s walls, although for this element virtually all archaeological evidence has disappeared, and we are left with only the historic records and contemporaneous examples. The first question to be addressed concerns the walls’ height. When Post makes his report in St. John’s, he states that Hoffnungsthal was “9 feet high *inside*” (emphasis mine) (Post), and supporting evidence comes from an entry in the Brethren diary stating that on 14 August, the house was “blocked up 8 foot” (BrD, 20v). If assumed to be to the top of the ceiling, this measure would appear quite high for a house of the period, especially for those concerned with retaining heat. However, other Moravian houses were built to this height, such as the 1755 “Single Brothers” house in Bethabara that

was recorded as having two 9 foot high stories (South 1999:21). Post's description could also refer to the distance from the ground to the apex of the gable, although this would produce quite short walls if a common pitch roof were selected. The walls would have to be at least 5 feet high for the doorway, leaving only 4 feet for the gable and creating an absurdly small interior space. Post, then, does not appear to have included the loft space in his description, perhaps because the loft space height is defined by the width of the building and the roof pitch; he is in fact referring to the main floor wall height as 9 feet, or 9 feet 3 inches (2.83 m) using the *Viennese Fuss*.

As for the fabric of the walls we are once again left with only an interpretation of the written accounts and depictions. From the sketches, the evidence is ambiguous and could variously be interpreted as horizontal log, clapboarding or plastered half-timbering. Of all these techniques, the written accounts and contemporary examples point to the use of squared horizontal logs as the most likely wall material. When Erhardt describes the building progress on the 12 August, he claims the “foundation of the house finished and *blocked up* [aufgeblokd] two beams all around [and] door posts erected” (ED, 19/20, emphasis mine). Two days later the missionaries report that the “House *blocked up* [geblokt] 8 foot” (BrD, 20v, emphasis mine). On the 22 August, Golkowsky remarks that the Brethren began to “*glue up* [verkloeben] our house. For this we found good clay on the water side [shore]” (BrD, 20v, emphasis mine). Finally, when Jeffries and the *Snow* reach Nisbet Harbour on 15 August 1753, they discover, “the Ruins of a Timber House...of *Logs joined together*” (Jeffries

134, emphasis mine). Phrases such as “*Logs joined together*,” “*glue up*” and “*blocked up*” strongly suggest a horizontal log technique where squared logs are placed one above the other and are joined at the corners by notching (Rollmann 2000: personal communication). Building in horizontal log is referred to as *Blockbau* in German and the common method for sealing a horizontal log structure is to chink, or glue, it with a combination of clay, stones, poles or shingles (Kniffen and Glassie 1986:173).

Log construction was the also the technique of choice for Moravian builders, particularly for the “first houses” in a community, until a larger frame structure could be established. It seems that all the first houses in Bethabara were built in log, as were the first structures in the Georgia colony and in Bethlehem, Pennsylvania (South 1999:12; Jordan 1985:125, 1974:2). Log was often the intended construction medium before Moravian missionaries had even set foot in a new land. Matthew Stach, Christian Stach, and Christian David, the first Moravian men attempting to bring the Gospel to Greenland in 1733, had planned on building a log house once they landed but finding the area devoid of trees they instead built a, “hut of stones and sod, after the fashion of the natives” (Hamilton 1900:58). Combined with this was the general popularity of log construction in continental Europe and among those of European and English-Irish decent throughout the North America during the eighteenth and nineteenth centuries (Jordan 1985 and Lay 1982:18).

The prevalence of log construction in the Moravian architectural tradition even leads to some

suggestions about the type of corner notching technique used at Hoffnungsthal. The corner notch on a given log structure is an excellent indication of the builder's ethnicity, and numerous studies have looked at the types and range of different cornering designs (Kniffen and Glassie 1986: 165-177; Jordan 1984:110). There is disagreement, however, over which technique typifies Germanic and Moravian construction. Kniffen and Glassie (1986:173) claim that the most common Pennsylvania German technique, which they believe originated from Bohemia, Moravia and Silesia, is V-notching, where the end of the log is cut on either the top or bottom side, forming a "V" (Figure 41). Conversely, Jordan's (1984: 110, 115) comparative work in Europe shows that Moravian builders in Europe and North America, including those who constructed the famous *Gemeinhaus* at the Bethlehem colony, favoured above all other types the full dovetail technique, which involves splaying both the top and bottom sections of the joint and is the most labour intensive joining method (Figure 41) (Jordan 1985:19). Moravian builders generally maintained a high level of skill for their creations and scorned "inferior" cornering techniques such as "V" notching (Jordan 1984:115). Given the craftsmanship exhibited in Hoffnungsthal's surviving construction, full dovetailing is the most likely technique used by the missionaries on this structure too.

The logs used for the house construction, like the foundation stones, do not appear to have been acquired, or even hewn, at the mission site. On the 9 August, 1752, Erhardt remarks that he "asked our people that they should take the cut and processed trees to the place where the house is to stand" (ED, 18/19) and four days later, he again asks the *Hope*'s crew to "help

them [the Brethren] to transport the cut trees to the construction site” (ED, 19/20). This suggests the trees around the house were not to the missionaries’ liking, possibly because they were not large enough, and the missionaries were forced to look elsewhere. A possible locale for the Brethren to acquire this wood is on the opposite bank of Ford’s Bight near the Upper Aillik Group outcrop. Large stands of forest are present here today and it is quite possible that the missionaries were logging at the same place they were acquiring stones for the construction. Once again, getting these logs across the bay to the mission site would not have been an enviable task.

If logs were indeed used to construct Hoffnungsthal’s walls, we have a better indication of why the 22 × 16 foot dimensions were selected. The maximum wall length for a log house was about 30 feet (9.14 m), after which the logs became too heavy to manoeuvre and the tapering became excessive (Lay 1982:15). The stunted conifers of northern Labrador may have produced the opposite effect, forcing the Brethren to reduce the size of the house from their original intentions.

Despite the speculation about what the walls were made of, we at least know their colour.

On the 13 September, Post “whitened the house outside” (BrD, 22r), which probably refers to applying a mixed lime/water wash —two barrels of “quicklime” were brought ashore early in the construction (ED, 18/19)— over the walls, producing a dull white finish. This whitewash technique was very common on Pennsylvania houses of the period

and, as we shall see, part of a larger colour scheme for the exterior.

3.3.3 The Roof and Chimney

Like the walls, no trace of the roof or how it was constructed remains in the archaeological record. Fortunately, for this structural element the missionaries left detailed descriptions of what materials and techniques they used. Between 14 and 18 August, Erhardt and the missionaries state that they “advanced to the roof truss” (ED, 20/21), “laid the beams and put in place the rafters for the roof” (BrD, 20v) and for the next three days continued the roof work (BrD, 20v and ED, 21/22). By the 20 August, Erhardt could report that, “Half of the roof already covered with Wacholder or Juniper Rind as the English call it, which they peeled from the trees.” (ED, 22/23) and the next day the Brethren finished the roof that was “covered with tree rind” (BrD, 20v). Their new roof received its first test on the 23 August, after which Erhardt proudly claimed, “The roof, which the Brethren have of the house, is covered with Juniper rinds. It has not leaked this morning during hard rain.” He goes on to describe the roofing material by comparison: “In Newfoundland most houses are supposed to be covered with this.” (ED, 23/24).

The term “juniper” probably refers to the larch species (*Larix laricina*). In Makkovik today, larch is called “juniper” (Ted Andersen 2001: personal communication) and the same terminology may also have been used by the missionaries. Although distribution of larch in

Nisbet Harbour is sparse compared to spruce and fir, the species may have been more prevalent during the mid-eighteenth century. The Brethren and Erhardt could be referring to spruce or fir as “juniper,” but this is unlikely given their training as carpenters, and because on the first day the *Hope* sailed into Nisbet Harbour, Erhardt states that the “mountainous land” around them was “covered with young spruce fir and juniper trees,” a clear differentiation between “juniper” and what he calls “spruce fir” (ED, 23). As is the case with the foundation stones and logs for the walls, material for the roof construction may have been acquired from somewhere else in Nisbet Harbour than the mission site. Probably not coincidentally, larch is found today in greater numbers on the opposite side of the harbour, in the area surrounding the “Red Rocks” where Hoffnungsthal’s stones are believed to have originated. It is quite possible that the rinds were cut when the logs used for the walls were being felled.

A correlate for the construction method comes from some eighteenth-century Newfoundland houses, where broad strips of bark were stripped from the trees, laid flat over butt sheathing on the rafters, and hammered down partially overlapping in a manner approximating shingle roof construction (Figure 42) (Pocius 2002: personal communication). One of the 1753 sketches seems to show this technique (Figure 36), while the other seems to show poles running up the roof (Figure 37). The latter might too be an accurate view of the roof, as poles could be placed over the juniper shingles to keep them from lifting and blowing away in high winds. Stones and logs may have also been used to brace the shingles, as was common practice in Europe (Pocius 2002: personal communication).

Determining the shape and pitch of the roof is of course purely guesswork and the roof may have taken several different forms. Kick roofs —where the roof pitch is lowered at the eaves— were common to many German houses and seen in some early Moravian structures, as were pent roofs over the doorway (Figures 43 and 44) (Chappell 1986:34). Whether these characteristics were favoured instead of a simple pitch roof would have been purely based on the missionaries' taste, as both kick and simple pitch are seen in the Old World. Both 1753 depictions of Hoffnungsthal appear to show simple pitch roofs, but Larson (2004: personal communication) believes that a portion of a kick roof may be represented in Beck's 1775 sketch (Figure 38). The top horizontal member shown spanning the building's width is probably a ceiling joist, and its bevelled ends indicates that the joist extended beyond the structure's walls to form a cornice. While a rafter end could be attached to the cornice, a more typical Moravian technique was to place the rafter directly over the walls, where it can provide better load transfer. However, this causes rainwater to run down the walls, so to solve the problem a false rafter —or kick— is added that runs from the joist end to a distance up the rafter, thereby “kicking” out the roof angle and shedding water to a drip-line well away from the walls (Figure 45) (Larson 2004: personal communication).

Emerging roughly through the centre of the roof was the chimney, and what could be seen of it from the outside would have been mortared brick. While it is unknown how much of the chimney was in brick, we can assume from the number of bricks found during the

excavations— in comparison to the amount of stone—that this construction began at the ceiling level. Even this may have required more than the thirty-two bricks recovered, although the collection may be only a fraction of the original number if Torsten Andersen took bricks from the site (Figure 33). Typical of eighteenth-century bricks, the examples unearthed at Hoffnungsthal do not have a frog, nor are they uniform in size, ranging from $21 \times 9 \times 5.5$ cm to $23 \times 10.5 \times 8$ cm, with an average of $22 \times 10 \times 7$ cm. The colour, too, is variable from a reddish brown to a very pale brown. The bricks were obviously not manufactured on site and would have been one of the few architectural materials imported on the *Hope*. Present methods do not allow us to source the bricks precisely, but they were likely purchased in England, probably London, when the expedition was being outfitted.

3.3.5 Wall and Roof Openings

Despite three references in the missionaries' records (22 Aug BrD, 20v; 11/12 Sept BrD, 22r; and 13 Sept BrD, 22r) to making window frames and fitting the glass, there is no indication of where these windows were placed. Windows are depicted on both 1753 Hoffnungsthal sketches, but each shows them in much different locations. Thankfully, the archaeological findings provided some clues to this dilemma. During the excavations, a number of apparently undisturbed window glass concentrations were found around the house, leading me to believe that the position of these deposits corresponded with where fenestration was situated on the extant Hoffnungsthal. To test this, the find spot of each piece was plotted and mapped using

the computer program Surfer© (Figure 46). As the resulting map shows, several discrete concentrations emerged around the foundations.

On the south gable end there are two glass deposits extending from the house interior to outside the foundation walls. This suggests two windows were present here, as shown in one of the 1753 depictions (Figure 37), rather than the single opening depicted in the other (Figure 36). Concentrations near the northeast and southeastern cornerstones indicate two windows on the eastern façade, and two large deposits near each other on the north gable end suggest that either two separate windows were on this wall, or one large one was placed close to the northeast cornerstone. Both situations are possible, although I believe the former more likely given the evidence. Placement of the windows on each wall may not have been symmetrical, as Hoffnungsthal predated Georgian attempts at architectural balance (Chappell 1986:31, Glassie 1986:406-407).

More puzzling concentrations were found inside and outside the house adjacent to the stone footings. Obviously, windows were not placed here, as they would have been bisected by the interior partitions and doorways resting on the stone footings (discussed below). Additionally, an identical pattern of glass deposition was uncovered on both sides of the house. To account for these concentrations, Dr. Gerald Pocius (2001: personal communication) suggests the house may have had simple shed dormers (Figure 47). Windows of this sort are common on Moravian and German structures of the period, in both the Old

and New Worlds (Lay 1982: 17, Kirschner 1997:51, and Murtagh 1998) and destruction to a dormer window is the only logical interpretation for the glass deposition pattern found at Hoffnungsthal (Pocius 2001: personal communication). Fenestration may have also been located on the gable ends of the second storey, but isolating this in the archaeological record is difficult. Additionally, the presence of two discrete deposits on either gable end seems to contradict this hypothesis.

As to the size of the windows, the number of panes per window, and how these panes were arranged, it is impossible to say and the depictions give little direction in this regard. The windows in Figure 36 are long and contain numerous panes, while those depicted in Figure 37 do not show panes but the window frames are small and square. Smaller windows are probably more reasonable for Hoffnungsthal given that glass was an expensive commodity and the work involved to put together even a medium sized window was quite intensive. Contemporary houses usually had four to six panes (Lay 1982:16) and the amount of glass recovered, over 3000 pieces, suggests that Hoffnungsthal's windows possessed the latter.

All the window glass collected at the site was light blue or light green in colour, common shades during the mid-eighteenth century, as a method to remove the colour contaminating sodium silicate had yet to be devised (Hodges 1976:55) (Figure 48). Glass during the period was also expensive to produce and consequently quite thin. The pieces found at Hoffnungsthal were no more than 1-2 mm in thickness and their fragility meant that many

panes may never have survived the voyage from Europe. The panes, which were probably square, were arranged in the window frames using lead comes, or channels, and numerous pieces of this coming were uncovered at the mission (Figure 48). Often comes were stamped with the date of manufacture stamped inside the channel but no date could be found in the sample opened (Mathias 2002: personal communication).

Despite the lack of information regarding the window placement and appearance, we at least know the colour of the frames. Brother Krumm's reference to painting the windows red was correlated with the find of a small piece of wood that had been coloured using a red lead based paint and numerous pieces of window glass and lead coming were uncovered also exhibiting red paint streaks where they had been set into the frames (Figures 48 and 49) (Mathias 2002: personal communication). Red windowsills and trim were a common feature of Germanic houses of the period, specifically those in Pennsylvania (Pocius 2001: personal communication and Glassie 1968:35).

Unlike the window openings, pinpointing the doorway was easy once the archaeological investigations were completed, although the door location was less clear from the historic descriptions. The missionary accounts give no indication for where the door, or doors, was located and the depictions either have one on the waterside façade (Figure 36) or on the south gable end (Figure 37). After excavations revealed the stone steps, however, at least one doorway could be associated with this feature. The door itself was probably only as wide as

the steps (about 90 cm or 3 feet), although it is possible that Hoffnungsthal had a double door to also incorporate the ramp way and make it easier to get heavy barrels, supply boxes, and possibly the cannons into the house. In either case, the doorway's threshold —if Hoffnungsthal did have log walls— would be provided by the bottom-most log of the wall because completely removing a section of this member for a doorway undermines the lateral connections a log building requires for structural strength (Figure 40) (Larson 2004: personal communication). Inclusion of this feature has corresponding implications for the floor height (see discussion under 'The *Küche*' below). As for the door's height, it was probably not much taller than 5 feet, not because of the stature of the occupants, but because a smaller door height would better keep heat inside the structure.

Construction of the door itself may have been simply vertical boards braced by cross-members, or could have been an elaborate diagonally battened type common in Germany (Lay 1982:16). Passing notes in the historic record also provide some details about the door construction. We know that Brother Krumm had painted it red and that it had a locking mechanism because when the men abandon the house they left a note on the door for Erhardt saying that they have hidden the key to the building in a tree (Goff, 11). That it required a key suggests that it was not a simple wooden lock; rather that it had iron tumblers. A high frequency of window glass pieces on the stone steps (Figure 46) suggest that the door may have also had a window, or transom, above it, although this is uncommon for contemporaneous Moravian homes and the glass in this area more likely originated from

windows in the vicinity, especially those from the west dormer window.

The stone steps indicate the most obvious placement for a door, but were there any others leading to the outside? Moravian houses often had two doors in the *Küche* area directly opposite each other (Larson 2002: personal communication), but apart from the sketch in Figure 36 showing the door on the water side, which is probably an attempt on the artist's part to show the house had a doorway, there is no evidence to suggest this was the case at Hoffnungsthal. The written record is also silent on the presence of a second door. There is a reference to the "window casings, window frames and doors [plural]" (BrD, 20v) being set in place, although this likely includes the interior doorways noted later by Haven (Haven). When the final touches were being put on the house on the 13 September, Krumm mentions that "fitted the door [singular] for the house" (BrD, 22r) and with the windows, painted it red. A great deal of effort was expended on the known doorway, that is the steps and ramp, and nowhere else on the foundation was there this amount of preparation. However, when the artefact finds were counted for each unit, some of the highest numbers were around the steps (the known doorway), and associated with the northeast portion of the foundation wall, where 78.9% of the total collection was excavated (Figure 50). This is an unlikely place for a second door in the *flurküchen* plan, with openings to the exterior in this part of the house almost invariably being a later modification (Chappell 1986:30), and the high quantity of items in this area instead suggest a breach in the wall, possibly caused by the explosion in this part of the house, or where the majority of artefacts were deposited prior to the structure's demise (see

Wohnstube and *Vorraths Kamer* discussion below).

3.4 Inside Hoffnungsthal

3.4.1 The *Küche*

Once through the red painted door on the southwest side, a visitor would enter into a large 4.30 m by 2.40 m (10.32 square metres, or 14' by 7'9" and 111 square feet) space associated with the central hearth opening. Under the *flurküchenhaus* design, this room would be known as the *Küche*. Although commonly translated as “kitchen,” it is more accurately defined as “hearth room” in the absence of information that the room served in the same capacity as we think of kitchens today (Weaver 1986:254).

From a combination of historical and archaeological information, we know that the *Küche* floor would have been covered in wood. On the 22 August, Golkowsky writes that “Br. Kuntz chopped the wood in the absence of boards for the floor” (BrD, 20v), and later Erhardt states that the Brethren had again, “chopped wood for the floor of their house” (ED, 25/26). Evidence of this wood flooring was found southeast of the hearth opening which, although badly decomposed, had a grain running north/south, perpendicular to the east/west running joists (see Interior Fills-South Portion above). In the *Küche* these joists had a 1.95 m (6 feet 4 inches) centre for 2.4 m (7 feet 9 inches) long boards, although only for those on the west and

eastern extents, either side of the hearth. In German-American log houses, both split logs — called “puncheons” — and sawn boards were common for flooring (Lay 1982:16), although the dual references to “chopping” wood for the floor suggests a puncheon design for Hoffnungsthal. The use of puncheons also provided a means to raise the floor elevations to the height necessary for it to be level with the threshold (Figure 40). The joists themselves were probably also puncheons, as evidenced by the rounded bottom elevation of the organic stains, and that the trees’ original taper is present in the longer joists (Lots 17A, B, and E — Figures 14 and 16). As mentioned above, support for these joists came from the foundation shelving, but the sand fill (Lot 2) deposited inside the foundation walls on this side of the house — which additionally served to allow any moisture to drain and prevent pooling and rot around the joists and boards — provided additional bracing to the joists in the mid-portion of the floor (Figure 40).

Around the hearth is a curious gap in the floor that does not appear to have been filled with wood, flagstone or brick. Certainly, no part of the *Küche* was covered in flagstone floor or brick subsequently robbed during Goff’s, Haven’s or Torsten Andersen’s visits because a burn stratum (Lot 30) lay undisturbed directly over the interior sand fill (Figure 16). The rectangular shape of the burn layer suggests flooring around the hearth, but not within it. Several hypotheses can be presented to explain this situation. The first, and most likely, scenario is that the hearth floor was never completed. On the 9th September, six days before the *Hope* returned with the fateful news of Erhardt’s disappearance, the Brethren report that

they “quarried stones for [their] kitchen for plastering (or paving) and prepared the floor” (BrD, 22r). Apart from finishing their “firewall” in the next three days (BrD, 22r), there is no further mention of the hearth or kitchen floor in the time leading up to the missionaries’ evacuation.

A second explanation is linked with the type of fuel used by the Brethren. While the men probably intended to primarily burn wood for heat and cooking, they also brought a quantity of “hard coal” (ED, 23/24), some of which was found during the excavations, with a large concentration excavated from the hearth itself. Coal burns much hotter than wood, and a coal fire can heat a flagstone floor to temperatures that within a short time will crack and shatter the rocks. Many blacksmith shops, such as the late eighteenth-century example excavated at Fort St. Joseph, Ontario, have sand-filled forges as even charcoal fires, when bellow-driven, burn far too hot for a metal or stone forge bed (Light and Unglik 1987:6, 127). For the same reasons, the Brethren may have wanted to avoid continually removing the broken stone from the hearth floor —particularly if they were using it as a makeshift forge, and Goff’s discovery of iron bars at the site in 1753 suggests they were doing some ironwork— and instead filled the base with sand, making cleaning debris and ash easier and safer. The hearth interior could merely be shovelled out and a new layer of sand laid. This sand fill extended into the house floor to ensure any errant sparks would not ignite the wood flooring.

A final interpretation comes from hearth examples in Pennsylvania and south German houses.

Since the sixteenth century, fire regulations enacted in Germany encouraged the use of raised platform hearths that had the added advantage of preventing the cook from having to bend over the hearth floor (Weaver 1986:256). In Pennsylvania, the platform was usually dropped in favour of the simpler hearth floor, but the practice did survive in some households (Weaver 1986:256). An early nineteenth-century print of this hearth type shows what looks to be a brick hearth floor beneath the raised hearth, but at Hoffnungsthal this could have been left as sand (Figure 51). This arrangement would leave little in the archaeological record were it one of the features later dismantled by Goff in 1753, and the burn layer would still form beneath it. However, because Goff makes no specific mention of such a hearth, it is unlikely such a feature was present.

Lack of a solid hearth construction poses some problems for determining how the area around it was floored. On either side of the fireplace, support for the floor —let us assume it was made using puncheons— was provided by two joists (Lots 17C-E). But only one member (Lot 17E) braced those puncheons directly south of the hearth, and even this support was in the puncheons' mid-point, which meant there was nothing to prevent the split logs from snapping or see-sawing when weight was applied to their ends at the hearth boundary. To prevent the unpleasant situation of being propelled into the fireplace when the floor in front of the hearth gave way, the missionaries must have braced the puncheons here in some way. Larson (2004: personal communication) suggests this could be achieved by inserting a small joist member under the puncheon ends in this part of the floor, and for such a piece he

forwards the wood fragment punctured with numerous spikes that was uncovered in the fireplace fill (Lot 20) (Figure 30). Certainly, the nailing pattern of this wood fragment could indicate that it once served as a brace and anchoring joist for the floor puncheons south of the hearth, but it is strange that the member was not left in place to rot like the other floor joists (Lots 17A-E).

The fireplace construction inside the *Küche* was of stone although, as mentioned above, the chimney was made in brick. To direct the substantial thrust of the stone chimney, larger rocks formed the bottom course and these projected into hearth interior to form a small step increasing the surface area of the fireplace base, and making it less likely to sink into the natural beach sand below (Figure 26). Support for the fireplace construction was also provided by sand fill (Lot 28) covering the bottom two courses. Those stones not covered by the sand were also hidden from view. The thick covering of olive-grey clay peeled from the fireplace walls, which I initially interpreted as mortar washed down from the now collapsed courses above, was fairly uniform in thickness and I now believe it was intentionally plastered over the stones. Thus, like the foundation walls covered by sand, the fireplace clay was used to obscure the fireplace's rough stone construction and give it a smooth exterior façade, a common practice in German-American houses (Chappell 1986:32). Also prevalent was simply whitewashing the interior walls of the *Küche*, and the absence of plaster samples found in this part of the house, unlike the northern section (see below), indicates Hoffnungsthal conformed to this pattern (Chappell 1986:32).

Only ephemeral evidence exists to suggest this part of the house served as a place to prepare food. Apart from calcined bone found in the burn layer (Lot 30), the only other items related to food preparation were three small coarse earthenware ceramic fragments unearthed just outside the foundations south of this part of the house (Unit 17), and a fork handle discovered north of the stone steps (Unit 9) (Figures 12, 52-53). The pottery appears to have originated from storage jars, although no correlate of their form has been found. Cooking utensils would have had obvious value to the first Inuit visitors, and would have been carried away shortly after the abandonment. Much the same artefacts found elsewhere on the site, such as musket balls and shot, tobacco pipe fragments, and wrought nails, of which more will be said later, were also uncovered in the *Küche*, indicating that it either served as storage space for the supplies left behind in September 1752, or that there was considerable movement of materials when the house exploded or during the subsequent salvage operations.

3.4.2 The Loft or *Boden*

Although on 8 September, 1752, the Brethren, “Laid the floor under the roof and retired our beds there...” (BrD, 22r), and two days later, “Took [their] bread to the loft,” (BrD, 22r), no archaeological evidence of an entrance to an upper storey was found, nor is there any further information in the historical accounts about whether stairs were built or if the loft was accessed simply by ladder. We can only presume that the entry to this space was in a corner

of the *Küche*; in the traditional *flurküchen* design, the stairway was in the corner adjacent to the doorway (Chappell 1986:30), but the presence of the ramp feature, and the possibility there was a wider doorway associated with it, may mean that the stairs were situated in the opposite corner, in the southeast. From there they would probably rise parallel to the roof pitch to ensure adequate head clearance.

Mention of a loft and its function does, however, give a few clues to the upper storey construction. Sleeping quarters for four men and storage space would be more easily achieved if an open truss arrangement were built, as it would free up valuable interior space. Hoffnungsthal's lightweight bark roofing material and only 16 feet 8 inch span may have only required a simple truss system involving one collar beam halfway up the rafters (Figure 45) (Larson 2004: personal communication), although queen post trusses are a common feature of east German and Slavic building traditions (Jordan 1985:139). Additionally, Chappell (1986:32, 34) believes that a simple rafter design is a sign of an Anglicization of Germanic building traditions, and notes that complex rafter arrangements, usually involving three vertical posts supporting horizontal purlins, were favoured in early non-integrated settlements, such as the Moravian community at Winston-Salem, even for small structures (Figure 54). Light to the loft area would be provided by the dormer windows.

3.4.3 The *Wohnstube* and *Vorraths Kamer*

Either side the fireplace were the stone footings dividing the house nearly in half. The footings were not as solid as the foundation, as only one to 1.5 courses were constructed using thinner stones, and they were clearly built after the foundation since they overlap the walls on their east and west terminus. Door sills would have rested on these footings if we are to believe Haven's description of doors on either side of the "chimney" (Haven). His erroneous theory that the chimney survived because it was on a stone footing—in fact, the fireplace is far more substantially built than the footings—makes this all the more obvious. Haven's account of the doorways appears to correlate with Beck's 1775 sketch (Figure 38), which shows two vertical posts either side of the circles Beck drew to represent the fireplace stones that are connected by a horizontal beam about half way up, with what might be a ceiling joist running across the top. If these beams are the remains of the "middle wall" Haven talks about, the vertical posts and lower horizontal beams are the door frames and lintel beams, respectively. The wooden doors in these frames were probably simple plank types that, as discussed above, were probably left unpainted.

Because we know the location of the *Küche*, behind each door was either the "*geraeumliche Wohnstube*" ("roomy living room") or "*Vorraths Kamer*" ("storeroom") (BrD II, 17) that divided the 4.30 × 3.30 m (14.19 square metres, 14 feet by 10 feet 8 inches and 152.4 square feet) section north of the fireplace and stone footings. This part of the house would have had

wood flooring and the puncheons had to be a maximum length of 3.30 m (10 feet 8 inches), 70 cm (2 feet 3 inches) shorter than the south. Unfortunately, no evidence of a partition was uncovered, so the best indication for where the partition separating the two rooms was located comes from the window glass evidence for the northern part of the house. As I have explained above, the two large concentrations on the north gable probably indicate two separate windows on the north wall, and it is reasonable to assume that a partition ran between these two windows (Figure 46). Coincidentally, this division also corresponds roughly with the eastern boundary of the stone rubble in the north interior fill (Lot 31). The construction of this partition is unknown, but following a common German design, it could have been of vertical boards joined either by tongue-and-groove or battens (Chappell 1986:32). However, it is equally possible the interior walls were made of vertical logs. Regardless of what method was used, the recovery of small pieces of light-brown hardened mud, with a wood impression, from inside the northern part of the house suggests the partition wall was plastered.

Determining the partition location, however, does little to indicate which room was behind which door. But some clues do remain from the archaeological and comparative data to create a scenario for where each room was placed. Beginning with the east room, we can assume —because it had two windows instead of one— that it was better lit, a characteristic more suited to a “living room” than a storage area. The traditional *flurküchen* pattern in Germany usually involved placing a well-lit living room on the “sunny or road side of the

house” (Weaver 1986:258), and at Hoffnungsthal the eastern side serves both these criteria by facing the rising morning sun, and overlooking the entrance to Nisbet Harbour. Conversely the bedroom space, or *Kammer*, is more private, usually being the least accessible and naturally lit only by a small window, or sometimes none at all (Figure 55). At Hoffnungsthal, the bedroom space was transformed into a storage room, the *Vorraths Kamer*, and it makes more sense to have only one window situated in this place, as is the case with the western side of the house. The stone fill also hints at room function. Only on the west portion of the interior, the fill would have provided excellent bracing for the floorboards —support required if heavy supplies were placed on this side of the house.

Thus, according to the evidence presented so far, the west room would be for storage and the eastern space was a “roomy living room.” However, other archaeological findings at Hoffnungsthal seem to indicate the opposite. As mentioned above, the northeast part of the building had much higher artefact concentrations than anywhere else in the excavated area. The most common finds in this area were tobacco pipe fragments, with 1600 pipe and bowl pieces found around the northeast corner, 79% of all the pipes recovered, with many of the bowls in excellent condition (Figure 56). Curiously, none of the tobacco pipes showed signs of use, indicating that a box of pipes had been broken apart in this part of the house. Other evidence linking the purpose of the northeast room as a storage room was the presence of numerous wine and case bottle fragments (50% of n=42) and high quantities of lead musket balls and bird shot (just under 45% of n=5800) (Figure 57). Such a large number of items in

this part of the house, compared with almost a complete absence of objects on the other side, makes little sense for a “living room.” However, the evidence is contradictory. In the *Küche* area, or just outside, was another area with high artefact concentrations—including those not typically kept in a kitchen space such as lead musket balls and shot (21% of n=5800). Clearly then, not all the supplies had been left in a designated “store room,” rather had been moved into all spaces of the house when it was abandoned.

Another feature of the northeast room was the brick feature inside the foundations. Nothing in the stratigraphy or soil matrix hinted at its purpose, but it must have encased an element, probably an upright post that rose through the flooring. Mills (2001: personal communication) originally suggested this post could have braced the loft opening or a set of stairs to the loft, but compared to other *flurküchen* this is a highly unusual place to have a loft entrance. An alternative explanation is that it was part of a post-and-beam framework, like those seen in fortification casemates, to stack barrels on their side and prevent them rolling onto the floor. Still another suggestion is that it once supported a scaffolding post during Hoffnungsthal’s construction (Larson 2004: personal communication). However, each of these are purely speculative.

Had a stove been found in the firebox wall, the question of room function would have been a foregone conclusion. A near universal feature of European and American *flurküchen* houses was the presence of a brick, iron, or polished clay stove in the *Stube* room; a feature of such

significance that if, “No stove, no *Stube*; no *Stube*, no home” (Richard Weiss quoted in Weaver 1986:257-258). Unfortunately, neither the archaeological or historical data indicate a stove was built at Hoffnungsthal.

3.5 Other Architectural Elements

Apart from the brick, the only other moveable architectural remains were the collection of wrought nails uncovered during the excavations. Of the 164 nails recovered, 56 were complete and ranged in size from 3 cm long brads to spikes 11 cm in length. Although modest, the quantity of nails and spikes recovered was surprising because, if Hoffnungsthal was a log house, I suspected most of the joinery, even the trusses, to have been accomplished with tree nails. The presence of so many nails in such a variety of sizes suggests extensive and relatively complex interior framing and detail work. But more interesting was where these nails were found. When the location of each find was plotted, only two concentrations emerged and they did not correspond to where the majority of other items were found (Figure 58). While there is a small deposit near the northeast corner of the house, by far the largest number was in the southern part of the house, around the fireplace. Obviously, this was not the only place where nails were used but, perhaps not coincidentally, the fireplace was also the area covered by the heavy stone debris, believed to date to shortly after the site’s destruction (Lot 9). A possible explanation for why the nails were only recovered here was because those elsewhere on the site were systematically scavenged in the years following Hoffnungsthal’s

destruction. Goff and the rescue party were one group to do this; the Inuit were probably another as iron was a valuable commodity on the Labrador coast until the second wave of Moravian settlement, and was a primary reason for Inuit to visit European whaling stations, even those as far south as Red Bay (Jordan and Kaplan 1980:41, Tuck 1987). High quantities of wrought nails have also been found at contemporaneous Inuit sites in the Makkovik area (Loring and Rosenmeier 1999). Whoever was collecting iron from the site was obviously not interested in mining the chimney collapse rubble, and the nails and spikes in the southern part of the house were left undisturbed.

Other implements were also taken from Hoffnungsthal. Because it takes a myriad of tools to build a log house —upwards of 75 different types (Roberts 1986)— I fully expected that one of the trowels for the stone and brickwork, or the adzes, axes, saws, and chisels for wood shaping, would have been left behind. There are tantalizing clues that some were as Goff (1753) mentions in 1753 that they came across, “some Bars of Iron But no Edge tools [,] found ye joiners Planes to the Left But ye Irons taken out.” That the “Irons” were removed suggests the plane blades had been taken by Inuit from surrounding communities, who found better use for them as cutting tools than woodworking implements. It is curious that the “Bars of Iron” were not also salvaged by the Inuit, but this could be because smaller iron pieces, like nails, could be more easily fashioned into implements over the low intensity heat of an Inuit campfire. Perhaps the only tool related to Hoffnungsthal’s construction to be left at the site was a solid lead cylinder, 5 cm long by 2 cm in diameter, found within the chimney

collapse. Running through its centre appeared to be iron wire bent into a small iron loop at one end and blunted at the other. I originally believed it to be an incomplete fishing jigger but I now think it to be a lead plumb line. Plumb lines are mentioned to have been brought from the *Hope* on the 8 August (ED 18/19), and this artefact could have been used to ensure the walls and other upright construction of Hoffnungsthal were vertical.

3.6 Conclusions: Hoffnungsthal Reconstructed

When it was standing in 1752, Hoffnungsthal was a small whitewashed log house orientated north/south and measuring 22 feet 8 inches long by 16 feet 8 inches wide (Figure 59). To the top of the wall, but not including the roof, it was about 9 feet high. Banked around the base of the house was sand that covered the stone foundation and gently sloped away from the walls. The logs used for the walls were squared and horizontally laid, the gaps between each log chinked with clay, and the corners carefully joined with full dovetails. On the south gable end were two rectangular windows, while on east side two windows overlooking the rocky shore of Nisbet Harbour pierced the façade. A further two windows were located on the north gable wall, and simple shed dormer windows emerged through the bark shingled roof, close to the brick central chimney. All the windows were composed of light green panes, maybe six apiece, held in place with lead caming, and set in red-painted frames.

On the southwest side of the house were a small stone ramp and set of steps leading up to a

red painted door. This opened into a well-lit room, the *Küche*, which was dominated on the left hand side by a large stone fireplace, parged in clay. The *Küche* was floored with split logs, except for inside the hearth which was only sand covered by a thin layer of ash, coal and the leftover animal bones from a humble meal cooked in the house. Some supplies, maybe a barrel of musket balls and shot, were placed against the whitewashed walls, along with the Brethren's cooking utensils and storage jars. In a corner of the room, opposite the hearth, was an entrance to the loft, where the Brethren had made their beds among the roof trusses.

On either side of the fireplace were battened wooden doors leading to the northern part of the house, their frames resting on stone footings. The door on the east side entered into a long room that ran perpendicular to the *Küche* space, and was separated from the western space by a wood partition covered in plaster. It too had a wood floor, but near the corner an upright post rose through the floor to the ceiling. This post helped to keep a number of barrels in place, but a good many boxes also filled the room—in them were all the Brethren's necessities: biscuit, pork, salt fish, bottles filled with wine and other liquids, gun powder, muskets, two small cannon, ammunition, and a quantity of clay tobacco pipes.

The room entered through the other door was less cluttered, sparse even; perhaps a table and some chairs over a floor rug, and against the wall a bookshelf with some well leafed Bibles, hymnals and other religious texts. The room was darker than the storeroom, having only one window, but was large enough for the four men to gather in prayer and worship.

Unfortunately for them, this was to happen only a few times before they turned the lock on the front door for the last time, and walked out to the *Hope's* longboats waiting for them on the beach.

This depiction of Hoffnungsthal may include inaccuracies, but it is one much clearer now that the archaeological, historical and comparative evidence have been combined. We still do not know the whole story, but we have enough to start looking at how the Brethren decided on the architectural form of Hoffnungsthal and what it says about their experience before and during their time in Labrador.

Chapter IV

Hoffnungsthal as Vernacular Architecture

4.1 Introduction

In the preceding chapter, I have taken the stones, bricks, nails, glass and other fragmentary remains left in Nisbet Harbour and used them to recreate what Hoffnungsthal may have looked like in the summer of 1752. I have determined it to be a three room, log *flurküchenhaus*, similar to thousands of others built in the Old and New World during the eighteenth century. But to leave Hoffnungsthal at this point leaves much unaddressed, for, “a building style is neither an accident nor an arbitrary thing, but a natural growth answering to the conditions of life... a setting for the lives of men and women, and as one of their chief forms of self-expression” (Wooley 1933:59). In other words, houses realize culture (Glassie 2000:17). Hoffnungsthal too realizes the ideas of the Brethren, and if we are to understand why the mission appeared as it did, we must look at the influences from which it came, both the wider architectural tradition, and the personal histories of the missionaries themselves.

4.2 Origins and Antecedents

Although the *flurküchenhaus* was a popular architectural style in both Continental Europe and

the United States, it is the latter region where the most scholarly interest on the type has occurred, largely in an attempt to find the origins of a dwelling that was to become synonymous with the American pioneer experience. The primary thrust of this research was to search the Old World cultural regions for contemporaneous examples, hopefully identifying the ethnic background of the builders who brought the form to the New World, and determine how they were influenced by other vernacular traditions once they arrived. Inherent problems with the analysis were instantly realized. To begin with, finding exact European antecedents was difficult, as small, peasant houses made in a perishable medium such as wood have not survived the warfare Europe has experienced in the past 250 years, nor were they curated like the grandiose houses of the upper classes (Lay 1982:36). The relative expediency of the log house also makes its heritage difficult to track. Commonly, houses built entirely of log served as a “starter home” until such time that a larger house could be constructed. Some of the factors precluding the construction of large permanent log houses, namely the trunk taper and excessive weight, have been described previously, but additional problems include the structural difficulty involved with attaching rooms and additions, unless it is an upper story (Kniffen 1986:13), and that forests in Europe by the mid-eighteenth century were seriously depleted, prompting the adoption of composite designs such as the half-timbered *fachwerk* house (Pocius 2002: personal communication).

Another major detriment to finding architectural antecedents was the array of continental nationalities who built log houses in a similar fashion (Jordan 1985). The log houses found in

North America have been variously attributed to east German, Czech (Kniffen and Glassie 1986:159-181), southwest German, Swiss (Lay 1982:19), Swedish, Fenno-Scandian, and Alemannic (north-central) German traditions (Jordan 1984:102 and 1985:146). However, others have noted that the log architecture in central and northern Europe, and consequently the New World, also shares characteristics with structures in the Baltics, France, northern Italy, the Balkans and Turkey (Weaver 1986:248). This should come as no surprise, given the fluid migration of people, with loose affiliations to nationality, throughout Europe in the preceding millennia. Weaver (1986:253-254) has even gone so far as to suggest that the Latin roots of the terms *Küche*, *Stube*, and *Kammer* indicate an architectural origin for the *flurküchenhaus* in the distant Roman past, predating the cultural divisions of eighteenth-century Europe.

Significant “architectural acculturation” also occurred in North America in the years following the log cabin’s first appearance about 1680, with Irish, Scottish, and English settlers adopting the form from their Continental neighbours (Lay 1982:36). Transmission of ideas was probably even more pronounced in New World institutions, like the Moravians, who were an assembly of nationalities united under a common faith. It was not unusual for Moravian building projects to include men from diverse backgrounds. When the *Junger-Haus* was being constructed in the colony of Nazareth in 1754, men “from six different nations: English, French, Germans, Danes, Bohemians and one from Guinea,” helped in the construction (quoted in Jordan 1974:9). A similar situation occurred at Hoffnungsthal. The two men most

involved with the construction were Post, a German and Golkowsky, a Pole. The design for Hoffnungsthal may have originated with Post, who had considerable experience in Moravian American missions, but Golkowsky also possessed a degree of architectural expertise that was later to make him a premier designer in the Moravian colony of Bethlehem, Pennsylvania (Jordan 1974:9). However, it is equally likely neither Post nor Golkowsky had a say in the plan, as the form may have already been designed by an architect under Zinzendorf's employ in England. For most Moravian projects, it was the common practice for a master builder to draft the general plan and leave the details to the artificers (Jordan 1974:8). Conversely, the final appearance may have been collaboration between Post and Golkowsky, as building design in Moravian communities was often debated extensively and some of the architectural elements decided by "Lot"; that is, determining an answer based on the favourable roll of a dice or the chance selection of a slip of paper or straw (Jordan 1974:4).

The idea that a house such as Hoffnungsthal could be the result of a formal building plan was raised in Weaver's (1986) study of *flurküchen* houses in Pennsylvania. The *flurküchenhaus*—regardless of the medium in which it was built— was so prevalent that the plan bore a "rubber stamp quality" in Pennsylvania German settlements (Bergengren 1994:49 and Weaver 1986:250). Weaver (1986:250-251) has questioned such a widespread adoption of identical features to be a folk tradition; rather, they may have been adopted from late seventeenth-century architectural manuals detailing how to build three and four room dwellings. However, under this logic, any prolific architectural type, such as the English Georgian "I" house would

also be the product of a formal building plan, instead of a vernacular one. Whether Hoffnungsthal's *flurküchen* design was formal or not is difficult to prove, in part because of the basic similarities between vernacular and formal design, and because a general survey of an architecture group often masks the diversity noticed when each house is subjected to closer study (Hubka 1986:431).

But Hoffnungsthal must have been familiar enough to the Brethren that it warranted little elaboration in their, or Erhardt's, diaries. For Post, to say the house in Nisbet Harbour was built like houses on the "Kyll," was all that was needed for his readers to visualize the structure fully. This contrasts with the new and unusual elements at Nisbet Harbour, which are described in detail; possibly in an attempt to alleviate their torment at the construction site, the Brethren described three different mosquito species (ED, 17), and Erhardt provided detailed geographical information about Kill-a-Man Pond, John's Mountain and the Red Rocks during his explorations (ED 15, 19-20). But for the house they spent a month building, laboriously dragging material across the mud, and all the while attacked by flies, they left only general descriptions. Those elements they do mention, such as the use of "Juniper Rind," suggests that it was not a usual part of the missionaries' building repertoire.

What we do know about Hoffnungsthal, whether its form was German, Polish, or American, formal or vernacular, is that its appearance was at least partially dictated by the Labrador environment. Whatever their intentions before they began constructing the house, the

Brethren were inherently limited by the materials available to them. Environmental situations elsewhere had forced missionaries to modify their plans. In Greenland, it was the intention to build a log mission house, but when it was realized no logs were to be had, the missionaries built in stone and sod. A similar situation occurred in the Cape of South Africa, where the missionary in charge there adopted a local wattle-and-daub construction for the first mission house (Clift 2001: personal communication). The abundance of suitable logs and building stones in Nisbet Harbour allowed the Brethren to construct a structure known to them from Europe and America.

They still, however, like their compatriots in South Africa and Greenland, showed an innovative eye for raw materials in an environment that for them was completely alien, and a willingness to incorporate these local materials into their design. The Brethren had brought some materials with them, such as bricks and window glass, but they clearly came to Labrador under the impression that the necessary materials for building a permanent house could be easily acquired. Thankfully for them, they were correct. For their foundation, the Brethren found an ideal stone source, not only for its accessibility —albeit across the mudflats— but also for its physical properties of predictable fracturing and strength. The same goes for the kinds of wood for the walls and framing, and bark for the roof covering. Had they landed further up the coast, or not sailed deep into the bay, they would have only encountered stunted conifers, but in Nisbet Harbour they found logs of an adequate length and with thick bark with which to cover their roof. In this “Juniper” roof, there is also an inkling the

Brethren were adopting foreign building techniques, although it is unlikely that this covering was wholly adopted from examples they had seen in Newfoundland, especially since their experience on the island was limited. A more likely scenario is that the Brethren built a roof in their own tradition, one that reminded Erhardt, himself an experienced mariner who had probably sailed to Newfoundland before, of the type he had seen on the colony. The comparison may also have originated from one of the *Hope*'s English crew and been related to Erhardt. Thus, the Brethren's bark roof, instead of representing an assimilation of English New World architectural elements as would understandably be believed at first glance, is rather merely a realization that other cultures were using construction techniques similar to their own. However, it is one more example of the missionaries' use of raw materials to suit their needs.

4.3 Hoffnungsthal as Symbol

Now that we have looked at the cultural and natural factors involved with Hoffnungsthal's creation, we can examine what the house meant to the Moravians once it was constructed. In addition to its trade and settlement objectives, the 1752 venture was an architectural experiment—one to test whether a house could be built and lived in for a period of time in Labrador. The hard earned results were that a mission house could be constructed by relying on the environment, but that this entailed a fair amount of difficulty. This lesson was taken by those following the first expedition, notably Haven in 1782, who dispensed with the idea of

using local materials to build the Hopedale mission house; rather, he found it more prudent to bring with him a mission structure constructed in Nain, where the necessary resources were available (Rollmann 2003: personal communication).

By Haven's time, the goal was to establish permanent mission complexes, unlike Hoffnungsthal which was supposed to act as a temporary shelter until it could be replaced by something more substantial (Rollmann 2001: personal communication). Therefore, had Erhardt's mission succeeded, we may have found little evidence of Nisbet Harbour's "first house." The Moravians were pragmatic. At Moravian colonies, instead of being revered as the initial establishment of the Church, the first structures were quickly dismantled and salvageable building materials carted away when the usefulness of the house was deemed over. This seems to have occurred at Hopedale, where no remnants of the late eighteenth-century mission buildings remain standing (Rollmann 2001: personal communication), and excavations at Bethebara, North Carolina, uncovered only robbed foundation trenches of the 1754 "Sleeping Hall," or *Geimenhäus* (Russell and Woodall 1998). Hoffnungsthal's failure meant that its foundations were not destroyed by construction of later structures, nor were its materials used elsewhere.

Although Hoffnugnsthal may have eventually been seen as expedient and not worth maintaining, when the final touches were being added, the house was making a statement. Like the Inuit before them, the Brethren manipulated the Labrador environment to suit their

aesthetic and cultural ideals. They built a foundation and fireplace from stones on the beach, the walls in Labrador wood, and covered the roof in “Juniper” shingles they stripped from surrounding trees. The Brethren then took these elements of the natural world, to paraphrase Henry Glassie (2000:32-34), and transformed them into the cultural realm by whitewashing the walls, plastering the fireplace, and painting the window frames and door, and landscaping the surrounding earth. The resulting house was no longer a product of Nisbet Harbour, but a creation of Post, Golkowsky, Krumm and Kunz.

This creation was a first for the Moravians in Labrador, and until it could be replaced, was imbued with spiritual significance. With Brother Kunz’ intense prayer and the cornerstone ceremony, Hoffnungsthal at once became the base, a foothold, for all future Moravian operations in Labrador, symbolic proof that they had gone where “nobody else would dare to approach.” The house continued to be seen in this way after the Brethren had sailed home. Despite its destruction, the mission had become a martyr, just like Erhardt, to inspire future missionaries to bring the Gospel to Labrador. When these missionaries did arrive, the ruins became a sacred place, an important historic landmark for those missionaries travelling the coast, and a symbol of the sacrifices made by the pioneering Brethren before them. It was the physical remains that Haven revered, as did many after him including Hermann Jannasch. Haven also memorialized the first mission’s symbolic importance by naming his new station, Hopedale, in honour of the original Hoffnungsthal (Rollmann 2001).

Even after this latest number of missionaries had gone, Hoffnungsthal retained its significance.

The oral history passed down by Makkovik's residents about the site, and the recent celebrations on the 250 anniversary of the expedition, show that the tangible remains of the first mission house, "Hoffnungsthal," remains a powerful symbol in the Inuit and Moravian heritage of Labrador.

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Appendix A:
Figures

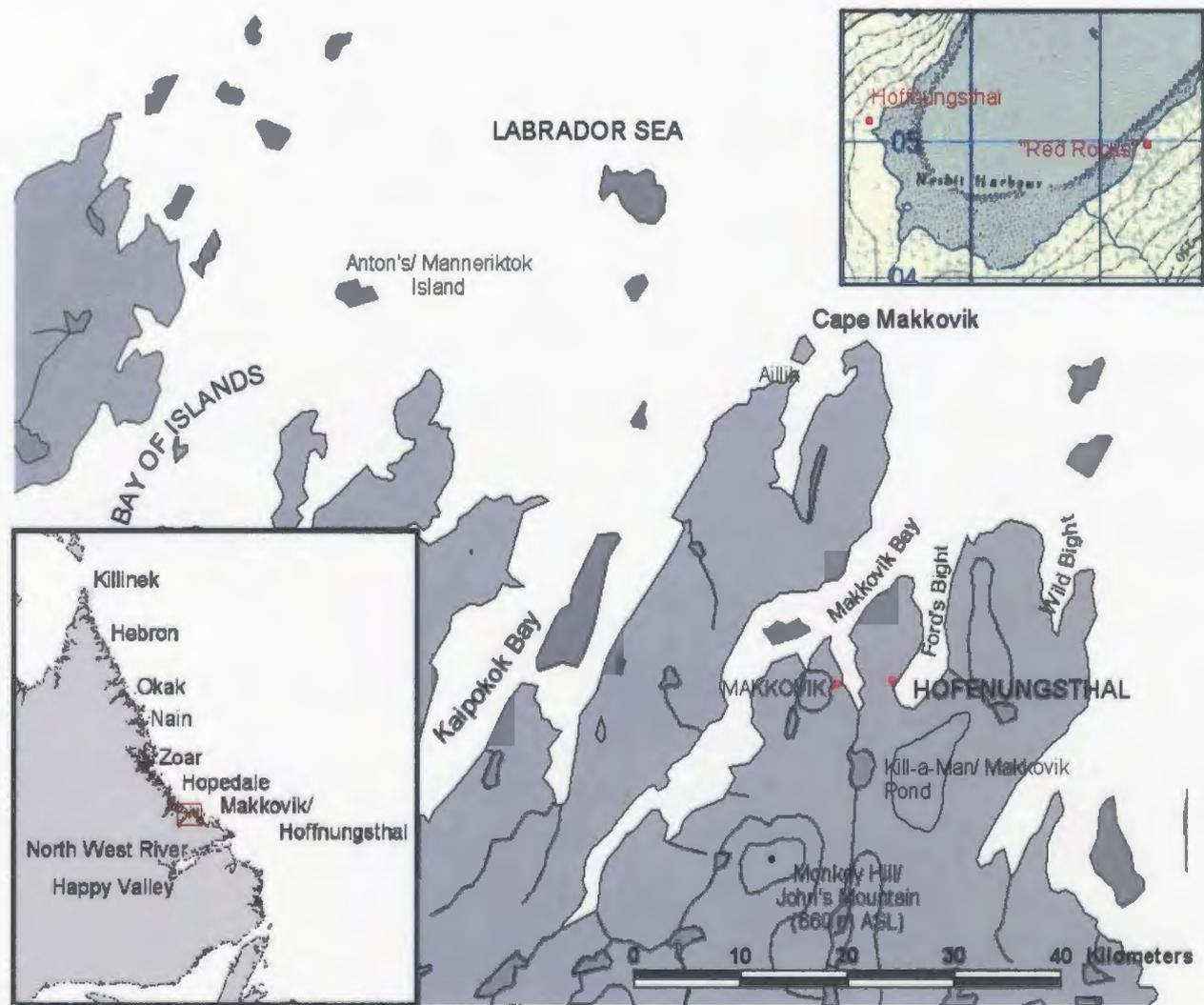


Figure 1: Map of Makkovik and surroundings showing locations mentioned in the text. Bottom left inset: Map of Labrador showing Moravian mission locations, 1752 to present. Top right inset: Topographic map detail of Nisbet Harbour showing the location of Hoffnugsthal and the “Red Rocks” identified by Dr. Wilton in 2001. North is orientated to the top of the page.

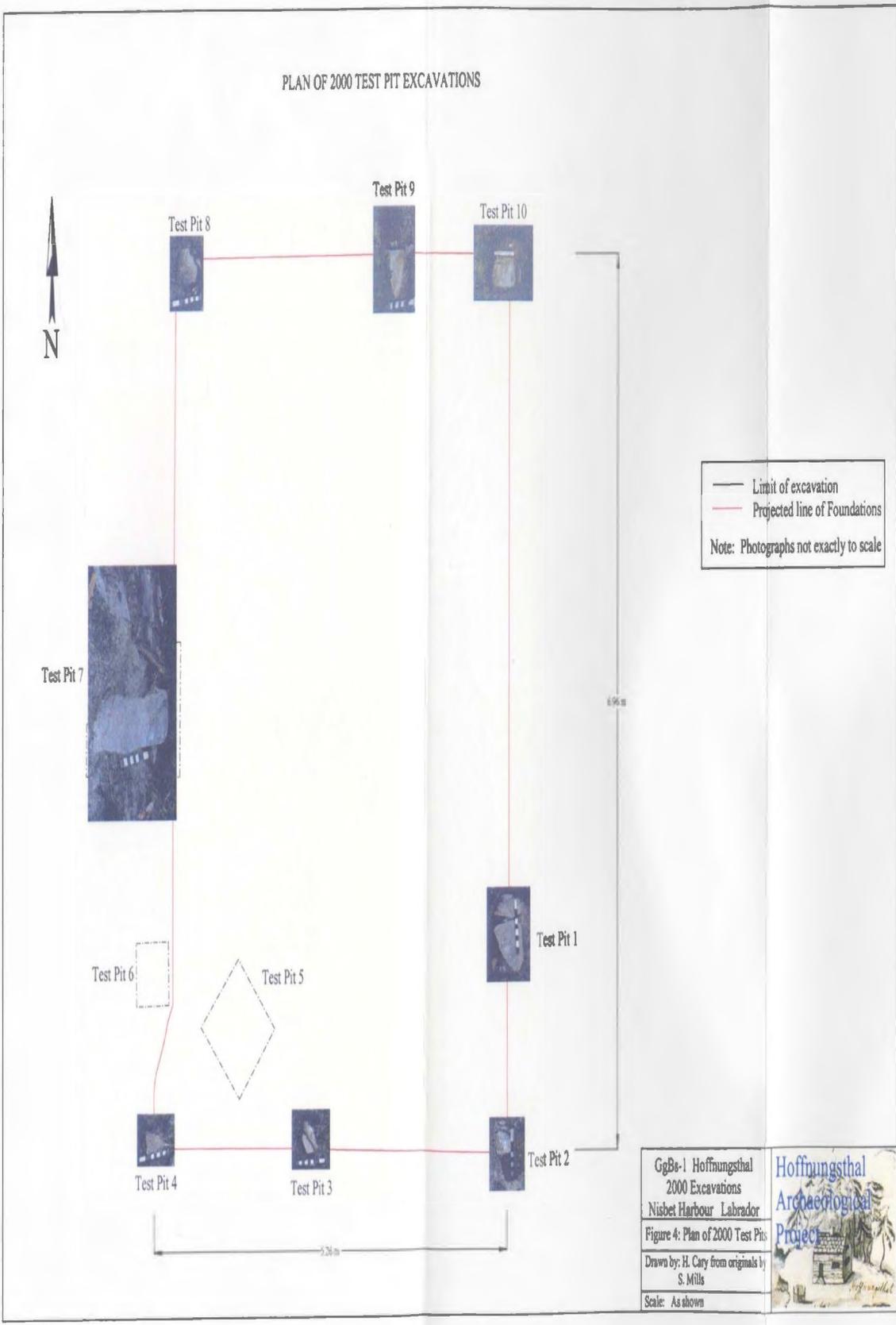


Figure 2: Moravian mission locations mentioned in the text. Inset: Map of Germany showing locations mentioned in the text.



Figure 3: Ruins of the Hoffnungsthal mission as discovered in 2000, facing southeast. The northwest cornerstone is in the foreground, between the log and stump. Randy Edmunds (middle) and Steve Mills (extreme right) are standing near the building's southwest corner while the author (extreme left) is standing near the southeast cornerstone (Photo by G. Price).

PLAN OF 2000 TEST PIT EXCAVATIONS



GgBs-1 Hoffnungsthal 2000 Excavations Nisbet Harbour Labrador	
Figure 4: Plan of 2000 Test Pits	
Drawn by: H. Cary from originals by S. Mills	
Scale: As shown	



Figure 5: Nisbet Harbour at high tide. The McNeil winter cabin is in the foreground (Photo by H. Cary)



Figure 6: Nisbet Harbour at low tide from roughly the same location. Note the large, erratic boulders (Photo by H. Cary).



Figure 7: Nisbet Harbour and the Hoffnungsthal mission from the air, facing south (Photo by H. Cary)

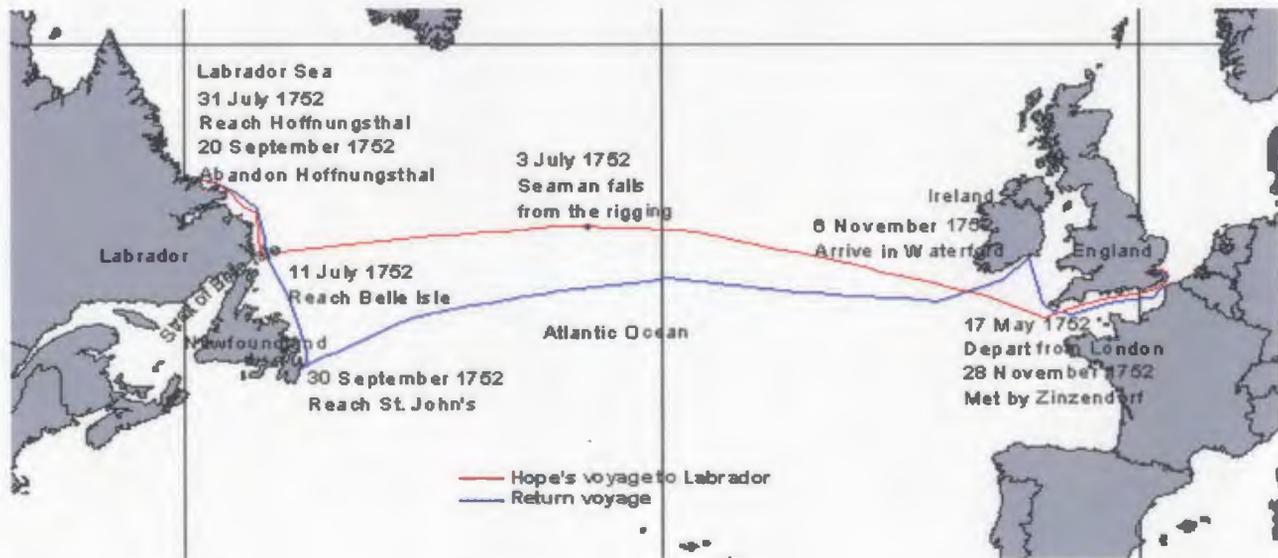


Figure 8: Map of the *Hope's* route in 1752.

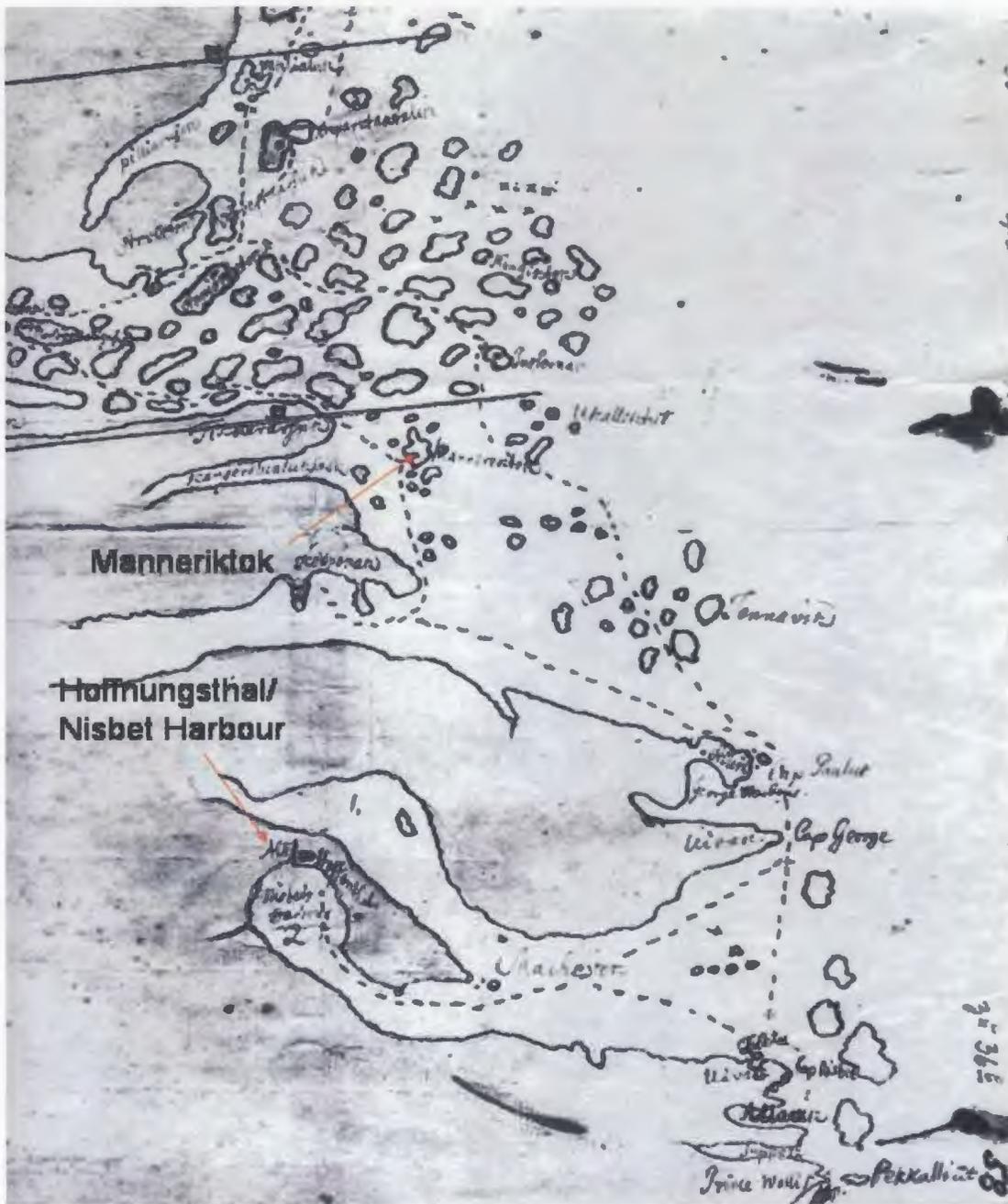


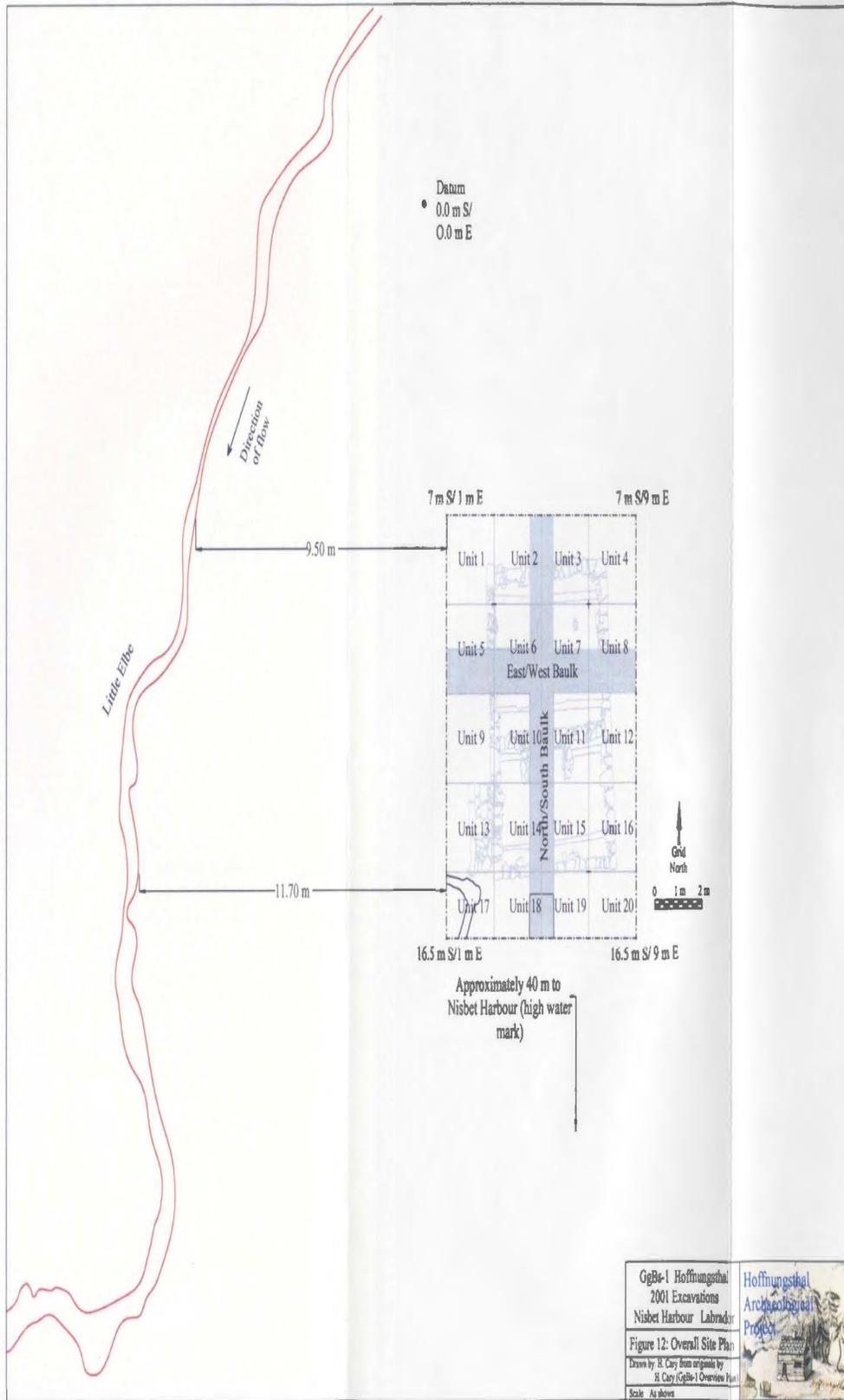
Figure 9: 1775 sketch of Jens Haven's route north when he rediscovered the remnants of the Nisbet Harbour mission. See Figure 1 for a comparison with modern geographic features (Courtesy H. Rollmann and Unity Archives).



Figure 10: Missionary Hermann Jannasch (centre) with the Kunik and Jannasch families at Hoffnungsthal in 1903. Note the cairn they have erected in the foreground. The numerals “1752 1903” on the stone slab are reputed to have been written with butter (Photo courtesy H. Rollmann from Niels Jannasch).



Figure 11: The 2001 excavation crew at Hoffnungsthal. From left: Lena Onalik, Amalia Fox, Eric Andersen and the author. Not present are Roberta Baikie and Bernie Andersen (Photo by G. Price).



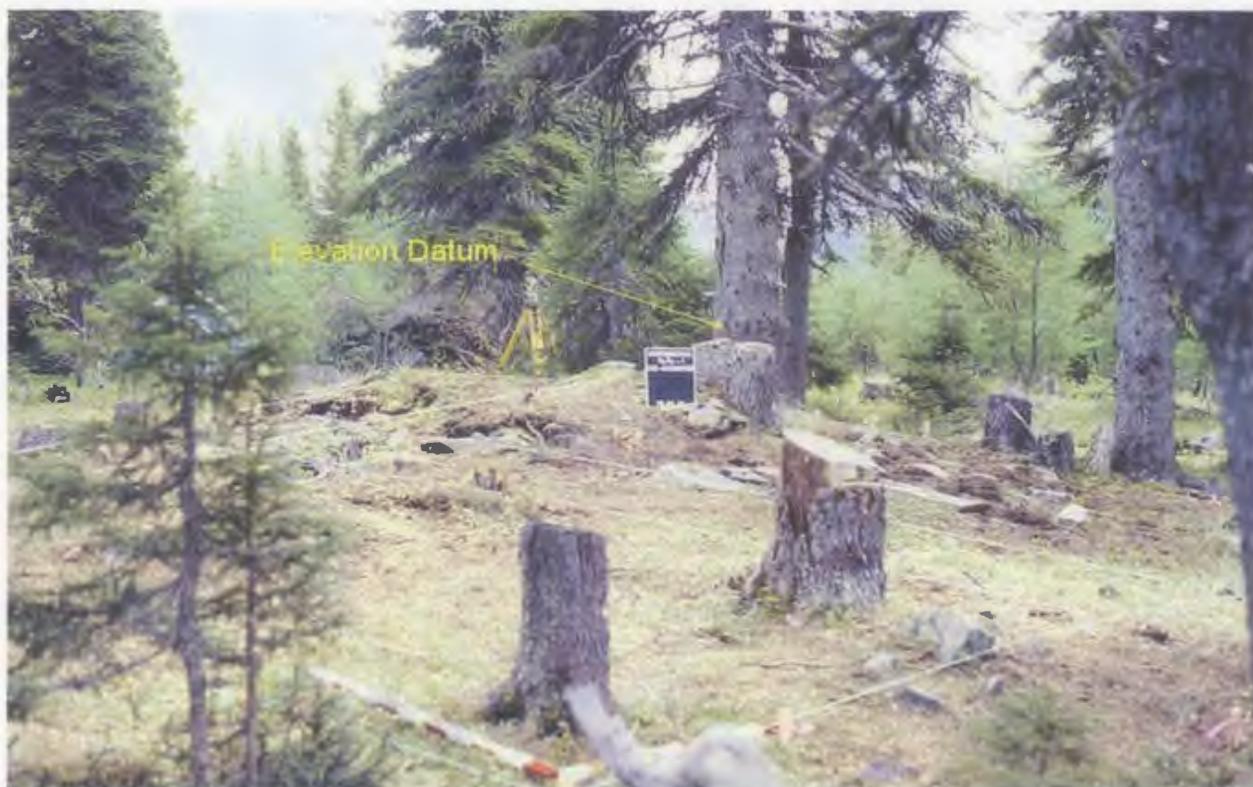
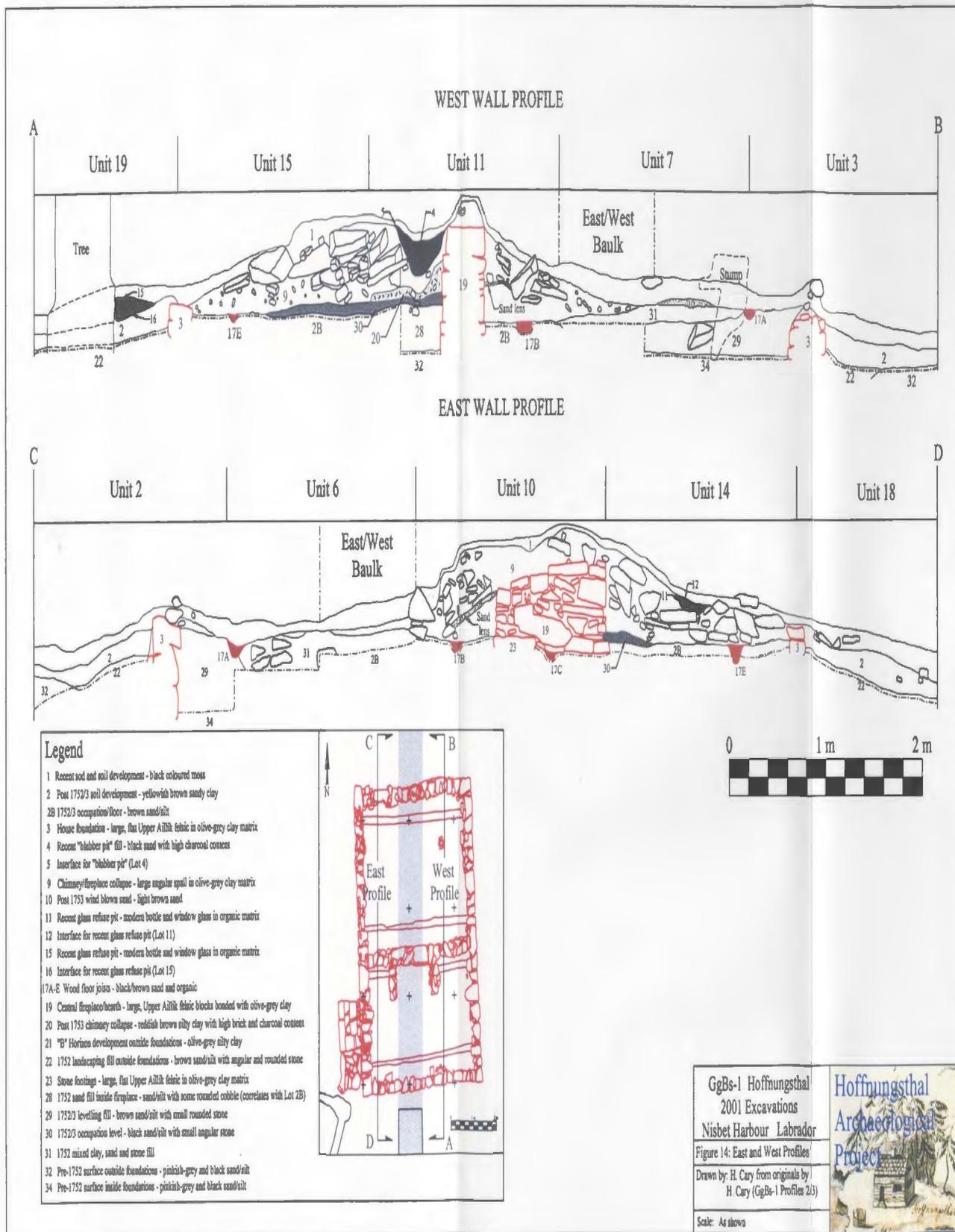
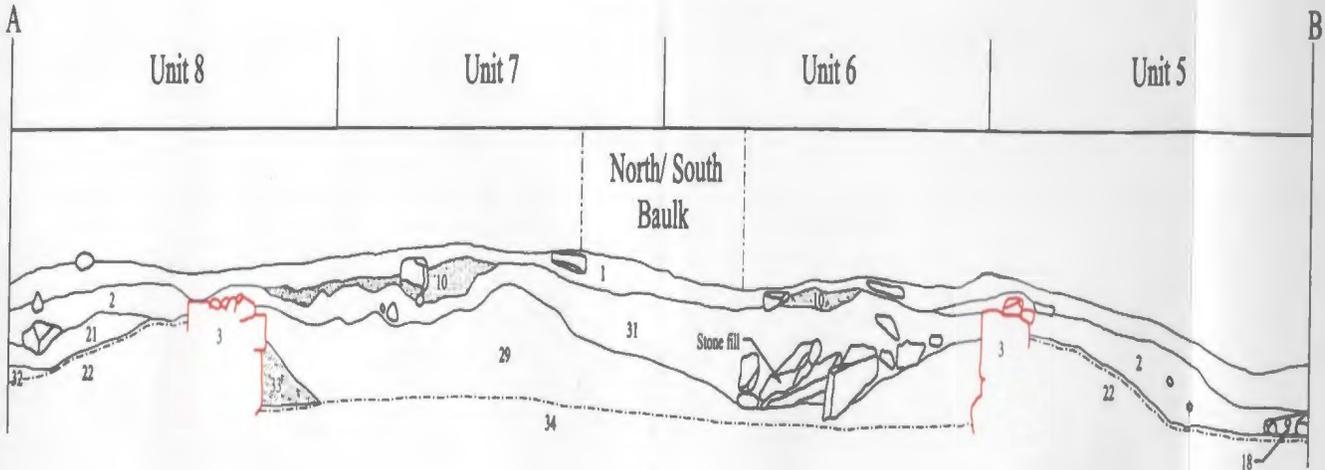


Figure 13: Overview of the Hoffnungsthal mission site in 2001 after the brush and trees were cleared and the excavation grid established, facing southeast. The elevation datum was established in the most southerly tree (Photo by H. Cary).

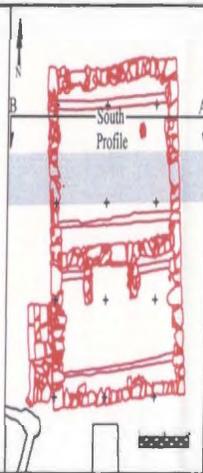


SOUTH WALL PROFILE

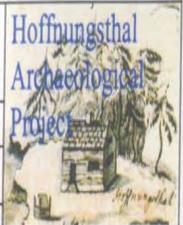


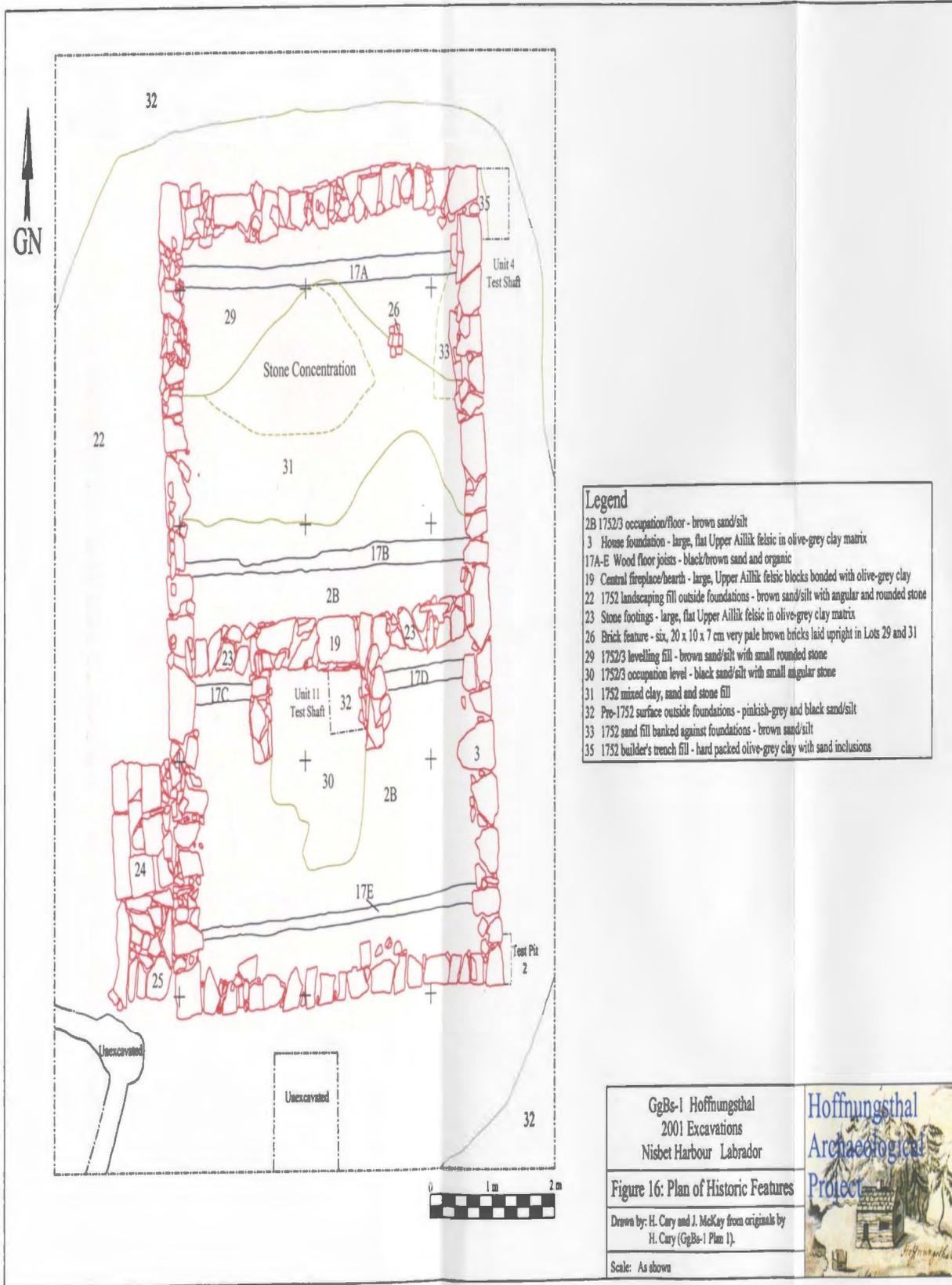
Legend

- 1 Recent sod and soil development - black coloured moss
- 2 Post 1752/3 soil development - yellowish brown sandy clay
- 2B 1752/3 occupation/floor - brown sand/silt
- 3 House foundation - large, flat Upper Aillik felsic in olive-grey clay matrix
- 10 Post 1753 wind blown sand - light brown sand
- 18 Rock pile (c. 1903?) - large, angular Upper Aillik felsic in brown sand/silt matrix
- 21 "B" Horizon development outside foundations - olive-grey silty clay
- 22 1752 landscaping fill outside foundations - brown sand/silt with some angular and rounded stone
- 29 1752/3 levelling fill - brown sand/silt with small rounded stone
- 31 1752 mixed clay, sand and stone fill
- 32 Pre-1752 surface outside foundations - pinkish-grey and black sand/silt
- 33 1752 sand fill banked against foundations - brown sand/silt
- 34 Pre-1752 surface inside foundations - pinkish-grey and black sand/silt



GgBs-1 Hoffnungsthal
2001 Excavations
Nisbet Harbour Labrador
Figure 15: South Wall Profile
Drawn by: H. Cary from originals by
H. Cary (GgBs-1 Profile 1)
Scale: As shown





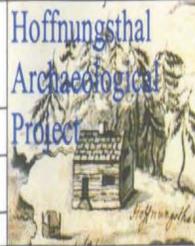
- Legend**
- 2B 1752/3 occupation/floor - brown sand/silt
 - 3 House foundation - large, flat Upper Aillik felsic in olive-grey clay matrix
 - 17A-E Wood floor joists - black/brown sand and organic
 - 19 Central fireplace/hearth - large, Upper Aillik felsic blocks bonded with olive-grey clay
 - 22 1752 landscaping fill outside foundations - brown sand/silt with angular and rounded stone
 - 23 Stone footings - large, flat Upper Aillik felsic in olive-grey clay matrix
 - 26 Brick feature - six, 20 x 10 x 7 cm very pale brown bricks laid upright in Lots 29 and 31
 - 29 1752/3 levelling fill - brown sand/silt with small rounded stone
 - 30 1752/3 occupation level - black sand/silt with small angular stone
 - 31 1752 mixed clay, sand and stone fill
 - 32 Pre-1752 surface outside foundations - pinkish-grey and black sand/silt
 - 33 1752 sand fill banked against foundations - brown sand/silt
 - 35 1752 builder's trench fill - hard packed olive-grey clay with sand inclusions

GgBs-1 Hoffnungsthal
 2001 Excavations
 Nisbet Harbour Labrador

Figure 16: Plan of Historic Features

Drawn by: H. Cary and J. McKay from originals by
 H. Cary (GgBs-1 Plan 1).

Scale: As shown



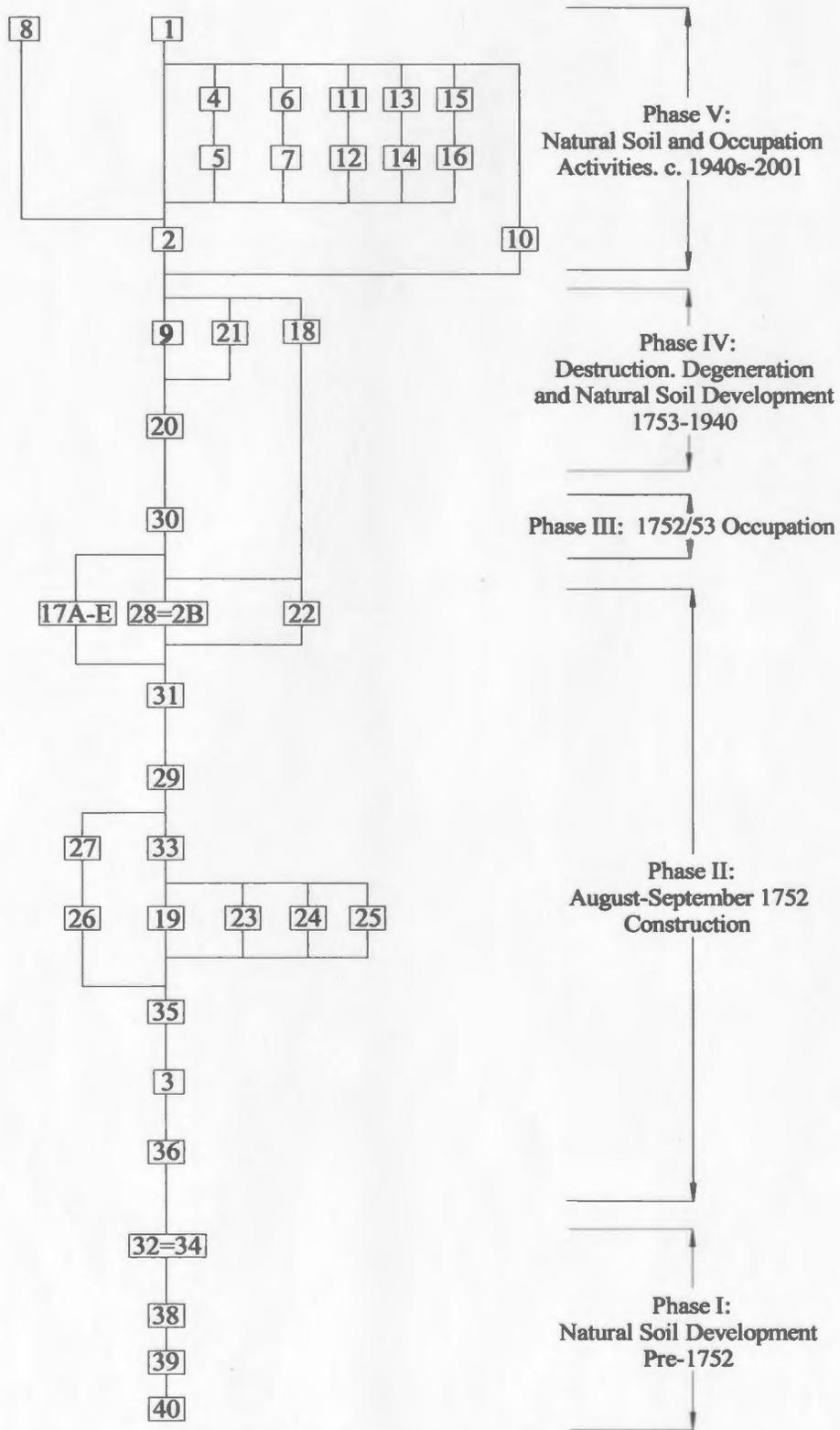


Figure 17: Harris Matrix and phasing of deposits and features uncovered at Hoffnungsthal in 2001. Because of a clerical error, Lot 37 was not assigned to a stratigraphic unit.



Figure 18: The natural soil sequence uncovered in the Unit 4 test shaft, facing south. The cut for the foundation pit (designated Lot 36) was clearly evident where it was filled by Lot 35 (Photo by H. Cary).



Figure 19: The house foundations facing northwest (Photo by H. Cary).



Figure 20: Facing northeast (Photo by H. Cary)



Figure 21: Facing east (Photo by H. Cary).



Figure 22: Facing southwest (Photo by H. Cary).

Figure 23: Profile of the foundation wall as revealed in the Unit 4 test shaft, facing west (Photo by H. Cary).



Figure 24: The stone fireplace interior, facing north (Photo by H. Cary).



Figure 25: The stone fireplace firebox wall, facing south (Photo by H. Cary).



Figure 26: Unit 11 test shaft inside the fireplace hearth, facing the north firebox wall (Photo by H. Cary).



Figure 27: The house remains facing west (Photo by H. Cary).



Figure 28: The stone steps (Lot 24) and ramp (Lot 25) (Photo by H. Cary)



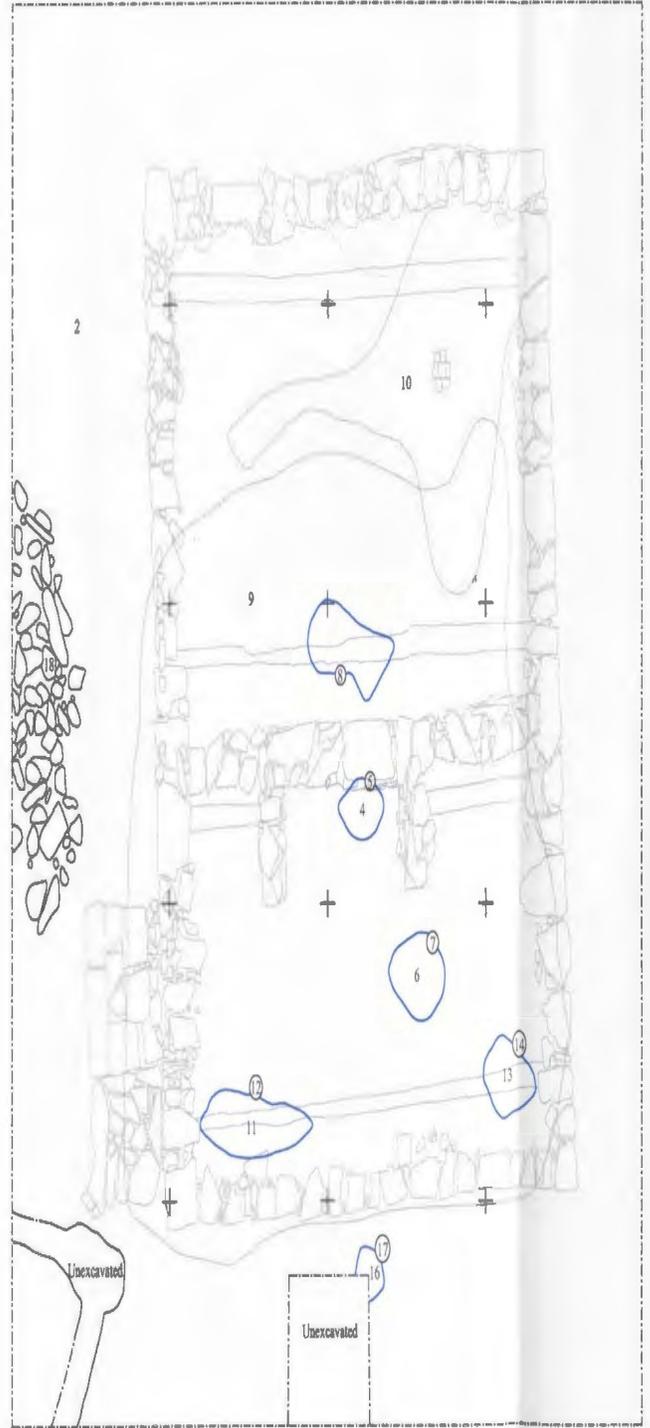
Figure 29: The brick feature in Unit 7 (Photo by H. Cary).



Figure 30: Organic stain of a plank (outlined with white string) inside the fireplace fill (Lot 20) that had been punctured with nails, facing east (Photo by H. Cary).



Figure 31: The chimney collapse and debris level (Lot 9) prior to excavation, facing south (Photo by H. Cary).



Legend

- 2 Post 1752/3 soil development - yellowish brown sandy clay
- 4 Recent "blubber pit" fill - black sand with high charcoal content
- 5 Interface for "blubber pit" (Lot 4)
- 8 Interface from Andersen prospecting in 2000
- 9 Chimney collapse - large angular spill in olive-grey clay matrix
- 10 Post 1753 wind blown sand - light brown sand
- 11 Recent glass refuse pit - modern bottle and window glass in organic matrix
- 12 Interface for recent glass refuse pit (Lot 11)
- 13 Recent glass refuse pit - modern bottle and window glass in organic matrix
- 14 Interface for recent glass refuse pit (Lot 13)
- 15 Recent glass refuse pit - modern bottle and window glass in organic matrix
- 16 Interface for recent glass refuse pit (Lot 15)
- 18 Rock pile possibly originating from Jamasch visit, 1903 - Large, angular Upper Aillik stones

GgBe-1 Hoffnungsthal
 2001 Excavations
 Nisbet Harbour Labrador

Figure 32: Plan of Post 1752 Features

Drawn by: H. Cary and J. McKay from originals by
 H. Cary (GgBe-1 Plan 1).

Scale: As shown

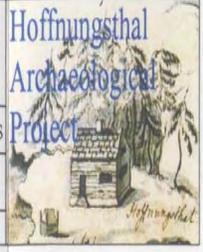




Figure 33: Whole and partial brick fragments excavated from the collapse debris (Lot 9) (Photo by H. Cary).



Figure 34: Clay tobacco pipe fragments appearing in the natural stratum (Lot 2) immediately below the sod overburden (Lot 1), facing north (Photo by H. Cary).



Figure 35: Map of “New Britain or call Labrador” dated to 1752 and 1753, showing the location of Hoffnungsthal and a rendering of the mission house (Courtesy H. Rollmann and Unity Archives).



Figure 36: Detail from the “New Britain” map (Figure 36) of the mission house and temporary dwelling. The “Little Elbe” is shown behind the house (Courtesy H. Rollmann and Unity Archives).



Figure 37: Detail from another 1753 map showing the mission house and temporary dwelling. Note the location of the “Little Elbe” (Courtesy H. Rollmann and Unity Archives).

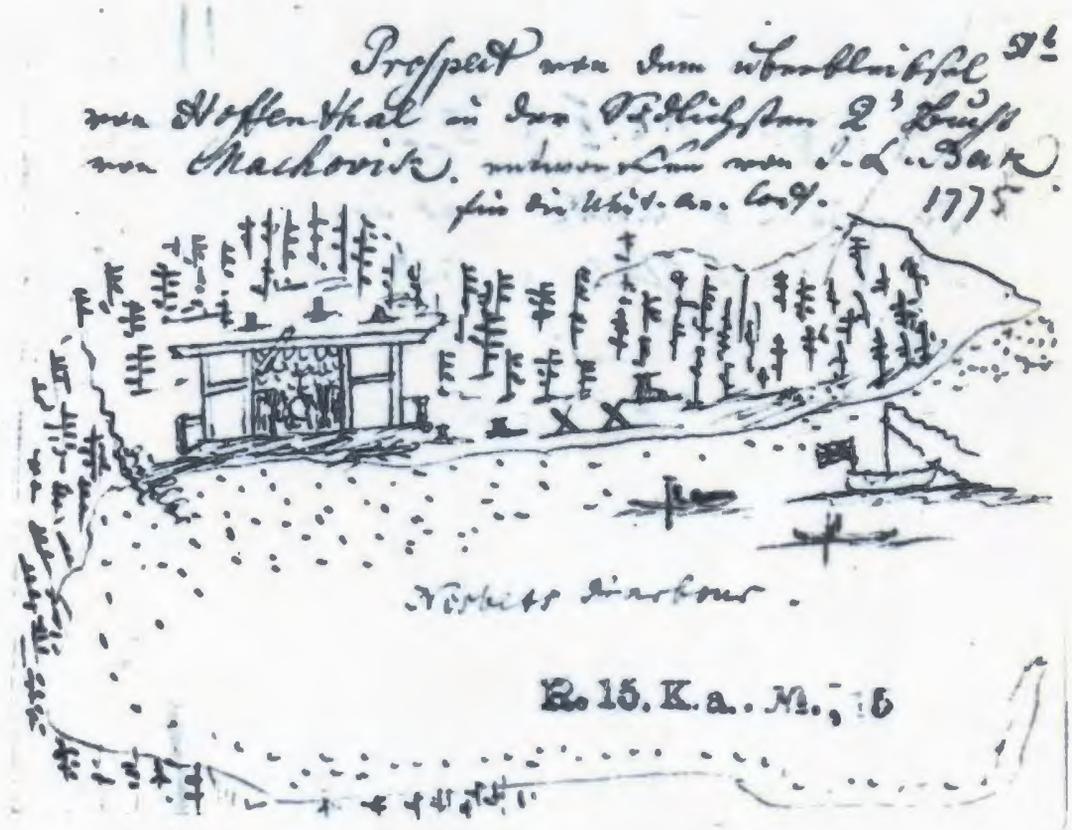


Figure 38: J.L. Beck's sketch of the Hoffnungsthal ruins during Jens Haven's visit in 1775. The caption reads: "Prospect of the remnants of Hoffenthal in the southernmost second bay of Machovik [sic]. sketched by J.L. Beck for the Unity Elders Conference 1775" (Courtesy H. Rollmann and Unity Archives).



Figure 39: Dr. Derek Wilton and the “Red Rocks” in Nisbet Harbour, southeast of Hoffnungsthal (Photo by H. Cary).

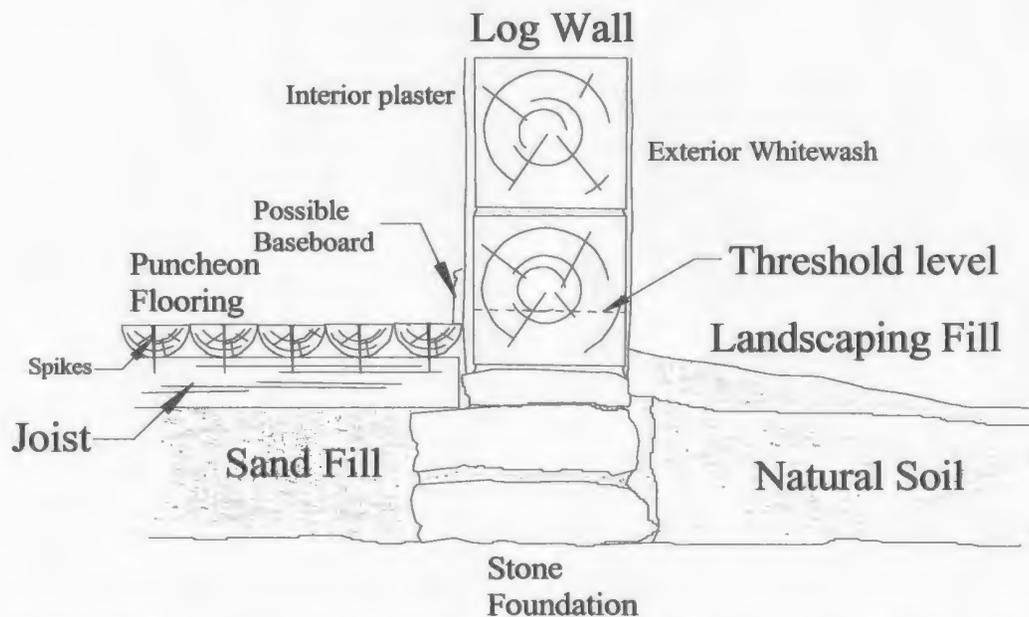


Figure 40: Conjectural cross-section of the foundation, walls, floor and surrounding fill at Hoffnungsthal (drawing by H. Cary from sketch by J. Larson, 2004).

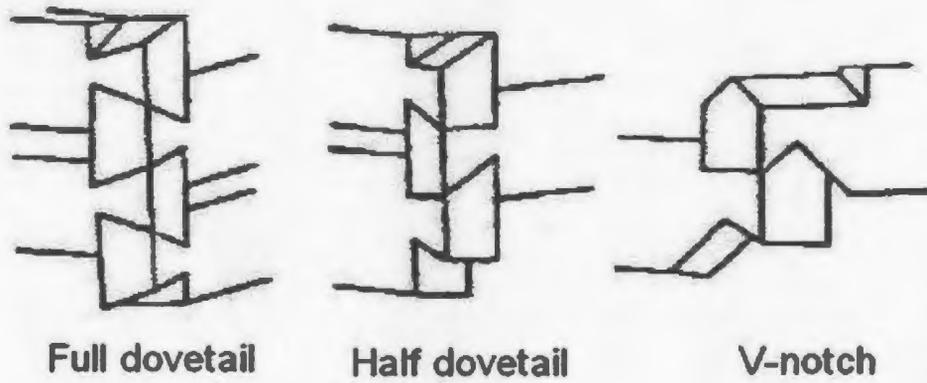


Figure 41: Three corner notching techniques that may have been used at Hoffnungsthal.

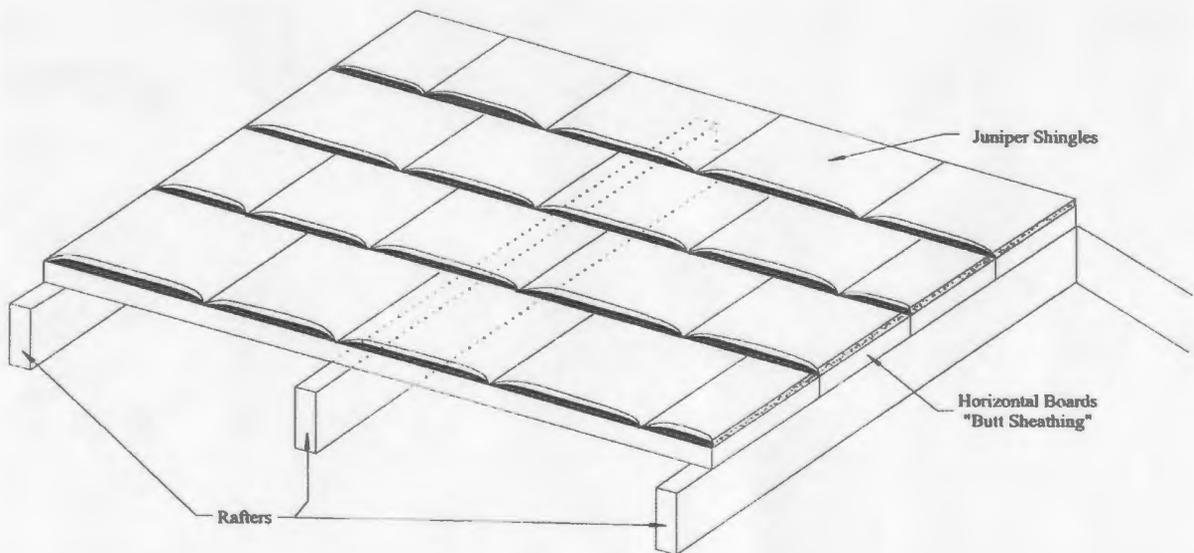


Figure 42: Shingles laid over butt sheathing and rafters.



Figure 43: Artist's conception of Bethlehem, Pennsylvania's first Moravian building. Note the kick roof construction at the eaves (From Jordan 1974:2).



Figure 44: The Bertolet House of Berks County, Pennsylvania showing a pent roof over the doorway (From Glassie 1968:39).

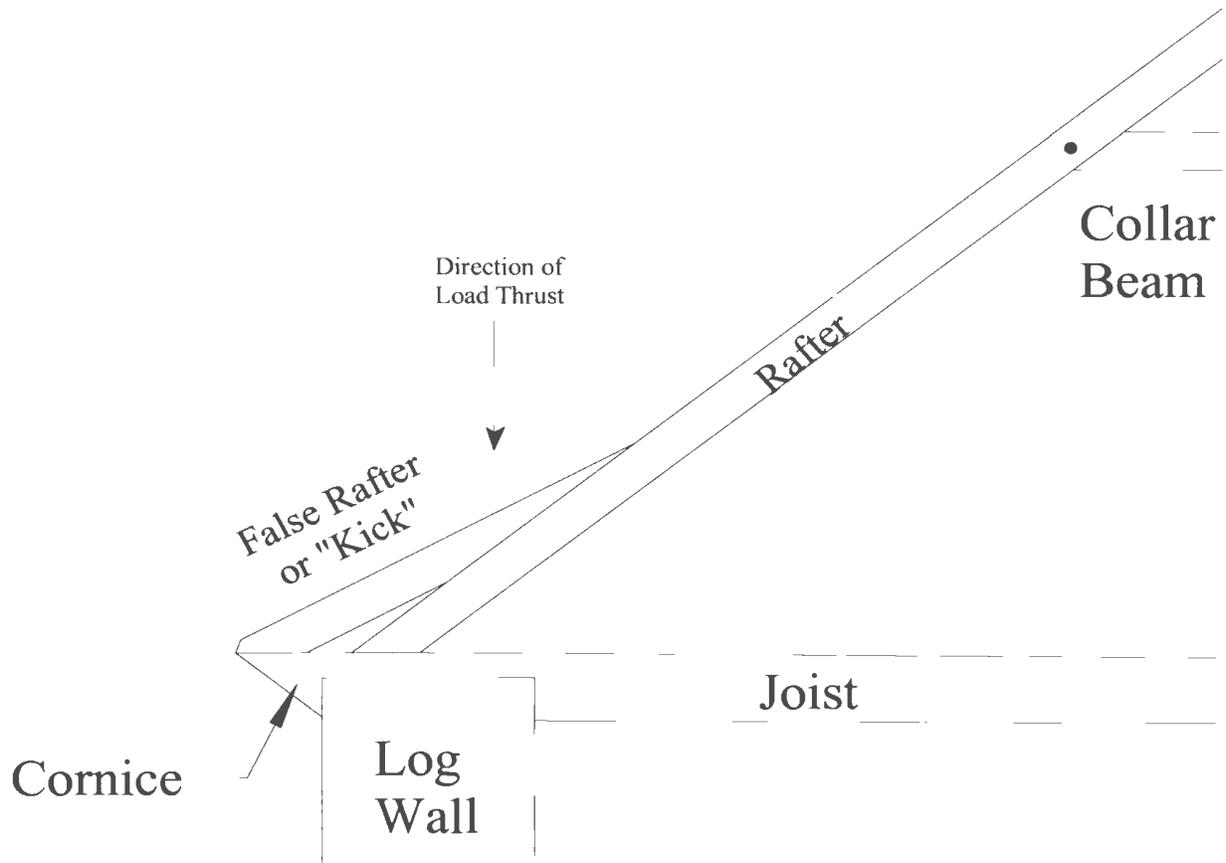


Figure 45: Conjectural cross-section of the “kick” rafter and truss arrangement for Hoffnungsthal’s roof. The bevelled cornice is taken from Beck’s 1775 sketch (Figure 38) (drawn by H. Cary from a sketch by J. Larson, 2004).

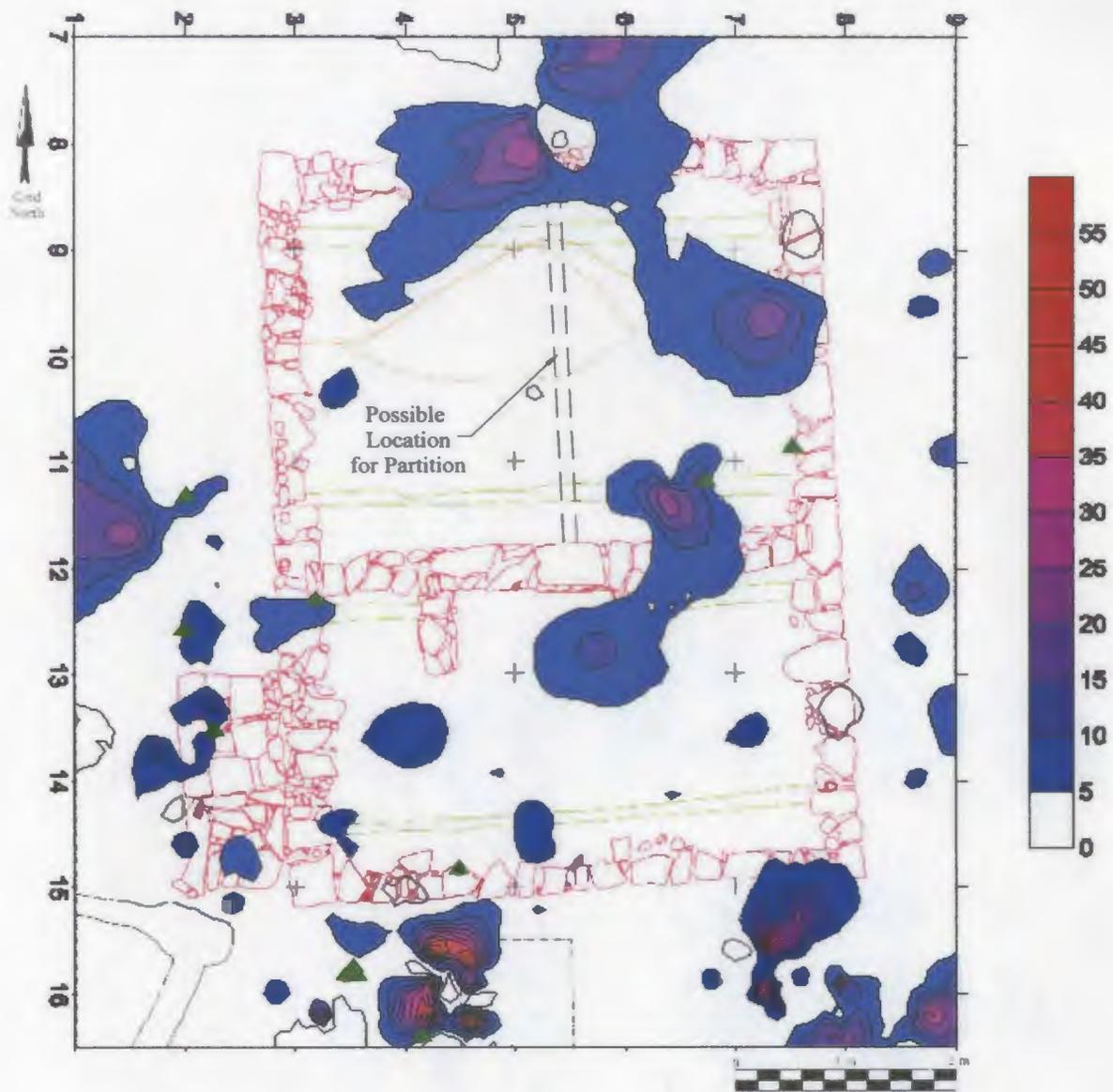


Figure 46: Surfer© plot of the window glass frequencies and lead coming find spots (marked with green triangles) (n=3079) uncovered at Hoffnungsthal (Plan by H. Cary and J. McKay, Surfer© plan by H. Cary).



Figure 47: Simple shed dormers on the mission building at Hopedale. (Photo by G. Price).



Figure 48: A sample of window came (far left) and glass fragments recovered from Hoffnungsthal. The glass piece nearest the came has traces of red paint along its border (Photo by H. Cary).



Figure 49: Red painted wood uncovered at Hoffnungsthal believed to originate from a window frame (Photo by H. Cary).

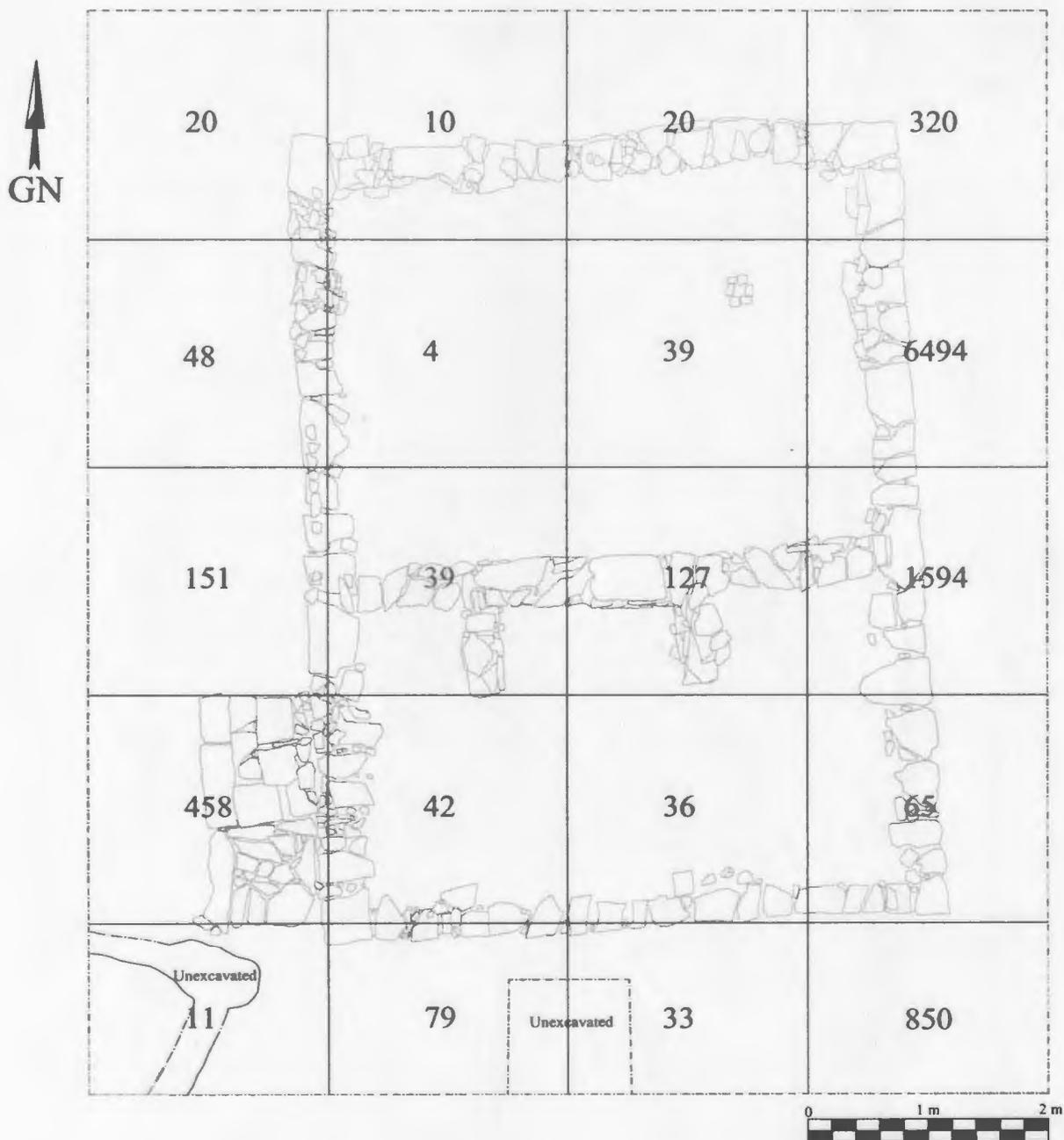


Figure 50: Total artefacts, excluding glass and coming fragments, recovered from each excavation unit (n=10 433). Note the high concentrations around the northeast corner and the stone steps (Map by H. Cary and J. McKay from originals by H. Cary).



Figure 51: A raised hearth in an early nineteenth-century German kitchen (From *Grätzerisches Kochbuch Graz*: Johann Andreas Kienreich, 1802 frontis, reprinted in Weaver 1986:256).



Figure 52: The three ceramic fragments recovered from Hoffnungsthal. The two fragments on the left mend together and are of buff earthenware with a glazed exterior. On the right is a rim fragment from a finer red earthenware vessel with decorative moulding (Photo by H. Cary).



Figure 53: Wood fork handle uncovered outside the west foundation wall. The two tines were not found (Photo by H. Cary).

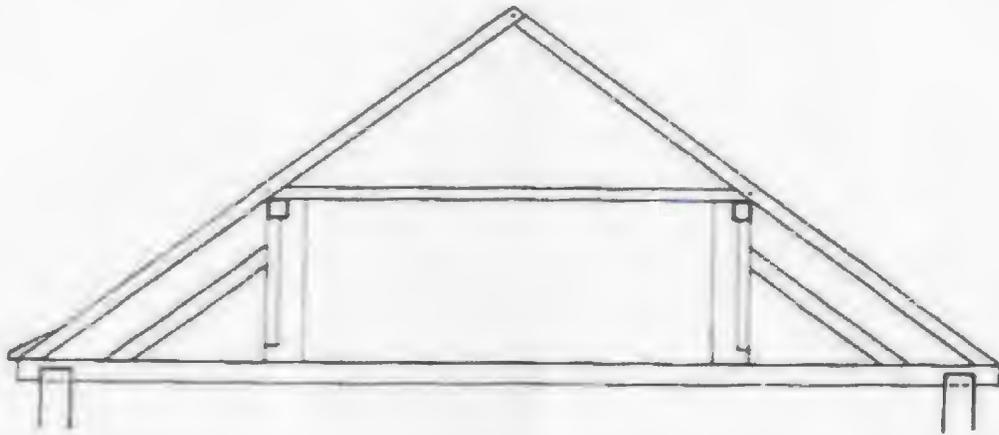


Figure 54: Rafter design of the Abraham Spitler House, Pennsylvania, also found on Moravian structures in Winston-Salem, North Carolina (From Chappell 1986:33 based on measurements by Dell Upton).

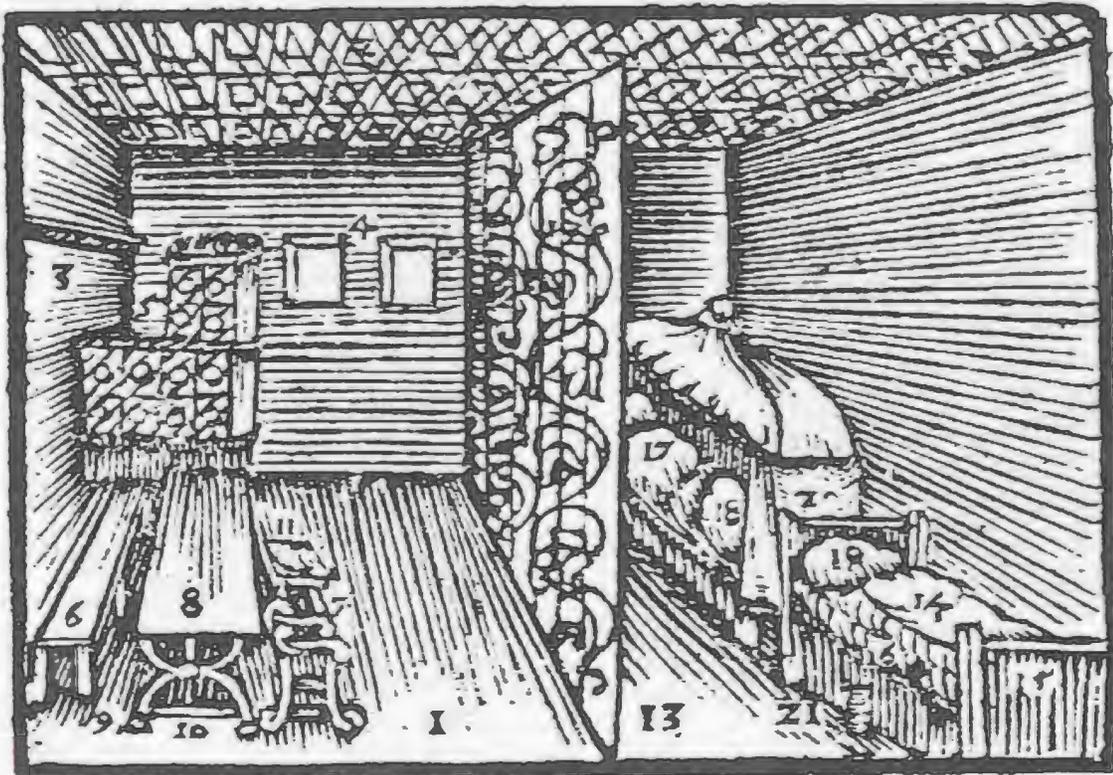


Figure 55: The *Stube* with a curtain separating the sleeping area, which later evolved into the *Kammer*. Note the windows in the “living area” (left) (From Johan Amos Comenius, *Orbis sensualium pictus* Leutschau: Samuel Brewer, 1685 p. 146, reprinted in Weaver 1986:459).

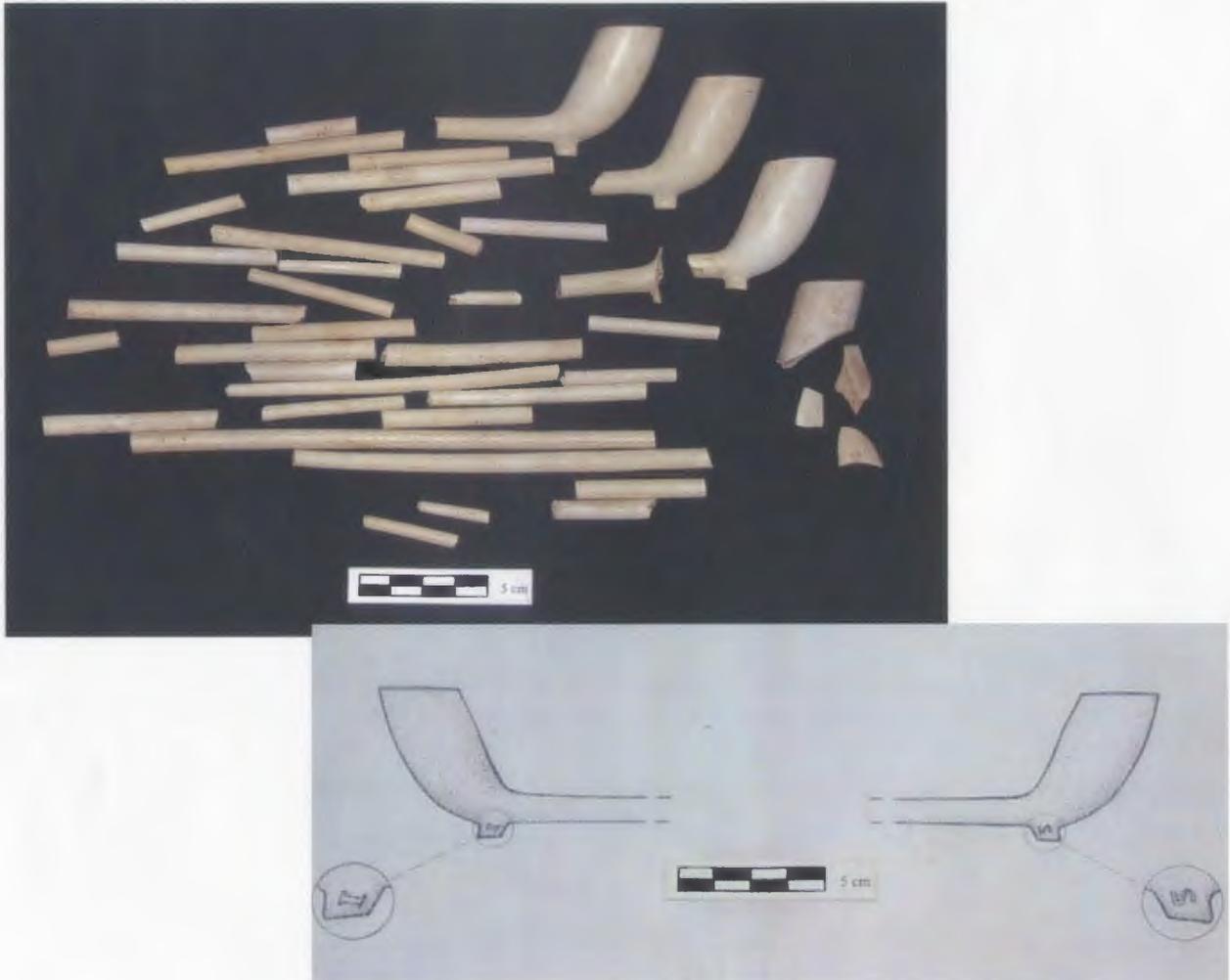


Figure 56: A sample of the clay tobacco pipes collected at Hoffnungsthal. The number shown here were found within a 25 cm² area near the northeast cornerstone (Unit 8). All have a 5/16th bore diameter (n=2029) and 4.6% of the bowls (of n=661) have an “IS” maker’s mark, shown right, possibly originating from a London pipe maker (Oswald 1975) (Pipe photo by H. Cary, illustration by P. King).



Figure 57: A sample of the musket balls and shot unearthed at Hoffnungsthal (Photo by H. Cary).

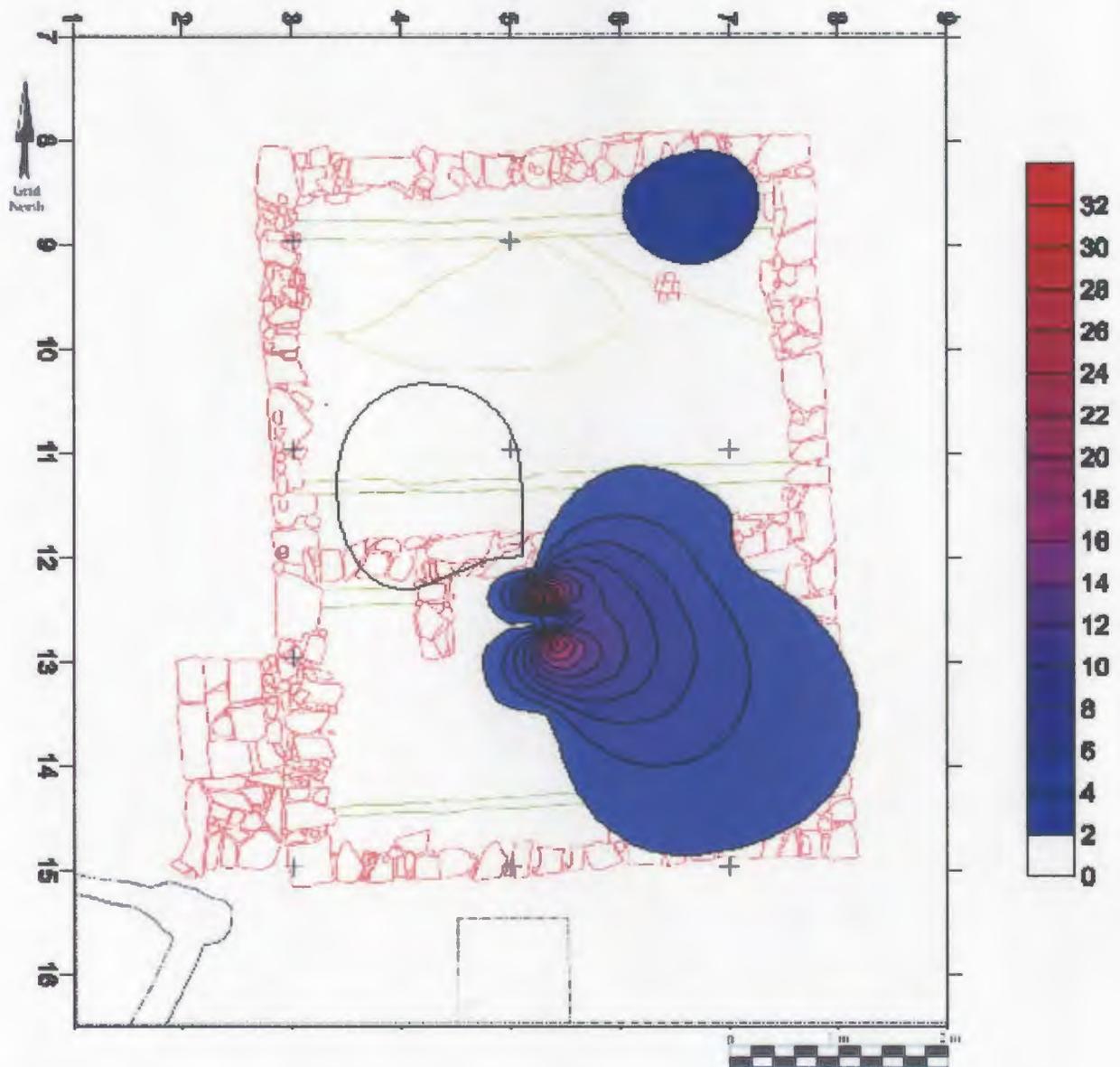


Figure 58: Surfer© plot of the nail and spike finds (n=164) at Hoffnungsthal. Compare the distributions shown here with the chimney collapse boundaries (Lot 9) illustrated in Figure 33 (Plan by H. Cary and J. McKay, Surfer© plan by H. Cary).

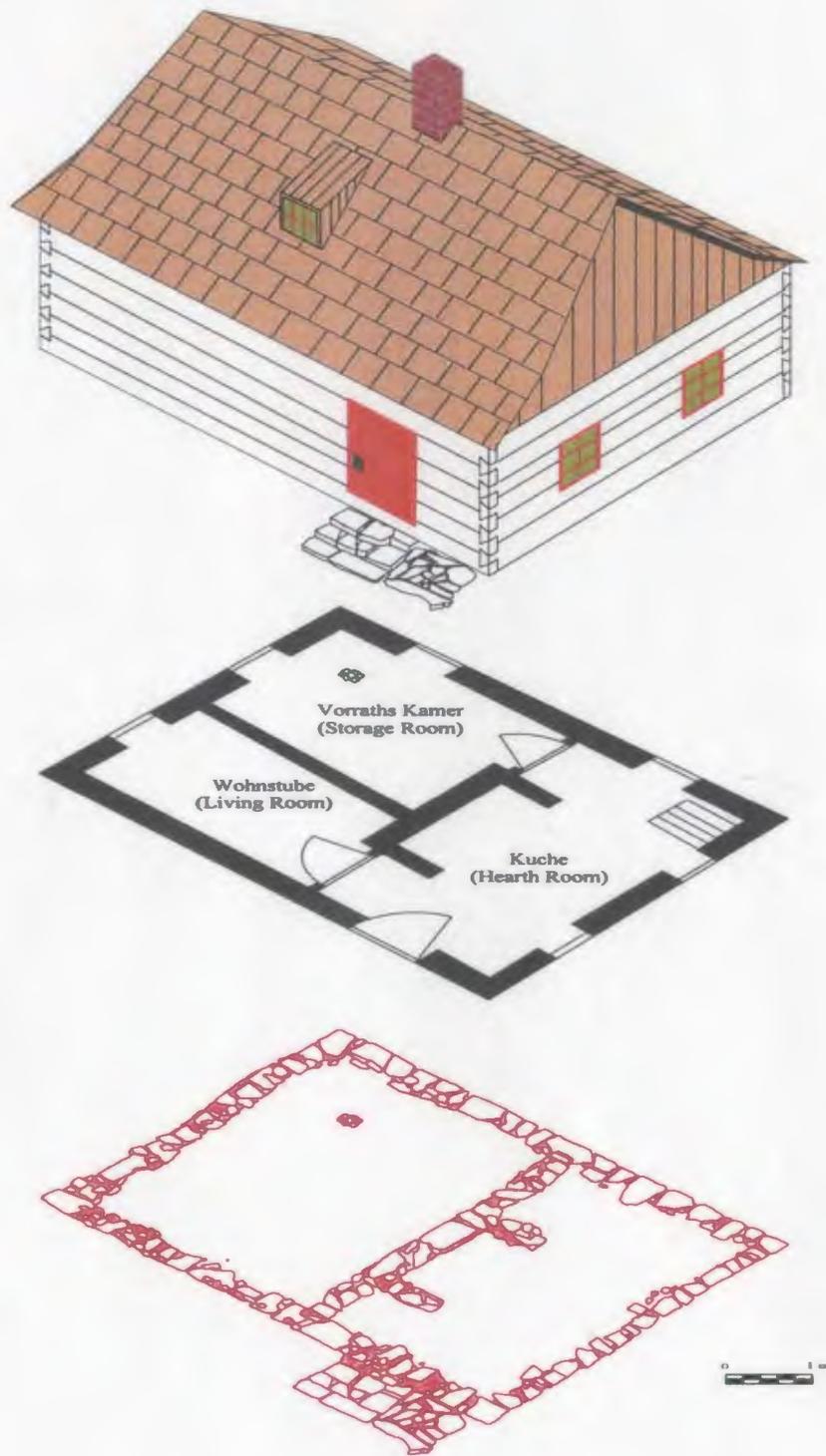


Figure 59: A conjectural reconstruction of the Hoffnungsthal mission house. For clarity the east dormer window is omitted.

Appendix B:
Lot Phasing and Summaries

Appendix B: Lot Phasing and Summaries

Lot Phasing

Phase	Lots
Phase I: Natural soil development pre-1752	Strata: 32, 34, 38, 39, 40
Phase II: August-September, 1752 construction	Fills: 2B, 22, 27, 28, 29, 31, 33, 35 Features: 3, 17A, 17B, 17C, 17D, 17E, 19, 23, 24, 25, 26 Cuts: 36
Phase III: 1752/3 Occupation	Strata: 30
Phase IV: Destruction, degeneration and natural soil development, 1753-mid twentieth century.	Strata: 2, 9, 10, 18, 20, 21
Phase V: Natural soil development and occupation activities mid twentieth century to present.	Strata: 1, 4, 6, 11, 13, 15 Cuts: 5, 7, 8, 12, 14, 16

Lot Summaries

- Lot 1 Recent moss/sod/soil development. Moderately compacted moss and sand with strong root network. Black (10YR2/1). 1-24 cm thick.
- Lot 2 Post 1752/3 natural soil development. Moderately compacted sandy clay largely free of stone. Yellowish brown (10YR5/4). 1-24 cm thick.
- Lot 2B 1752/3 occupation/floor level. Loosely compacted silt/sand free of stone. Brown (7.5YR5/4). Excavated to 88 cm below datum.
- Lot 3 House foundation. Large, flat and angular Upper Aillik foundation stones measuring 3 × 6 × 2 cm to 60 × 40 × 40 cm within compacted, friable clay matrix. Clay matrix is olive-grey (5Y7/2). 2-3 courses, 24-60 cm wide. 31-61 cm thick. Foundation dimensions are 6.94 m north/south, 5.26 m east/west. Within builder's trench (Lot 35).
- Lot 4 Recent "blubber" pit fill. Organic sand with high charcoal composition. Black (7.5YR2.5/1). 15 cm thick. Associated with Lot 5 interface.
- Lot 5 Recent "blubber" pit interface. 55 cm diameter, 15 cm deep cut. Filled by Lot 4.
- Lot 6 Recent "blubber" pit fill. Loosely compacted organic matrix with high charcoal content. Black (7.5YR2.5/1). 14 cm thick. Associated with Lot 7 interface.

- Lot 7 Recent “blubber” pit interface. 65 cm diameter, 14 cm deep cut. Filled by Lot 6.
- Lot 8 Interface of Andersen prospecting activity c. 2000. 1.8 m long by 45 cm wide, and 23 cm deep cut. Not filled.
- Lot 9 Central fireplace/ chimney collapse. Large, flat and angular Upper Aillik stone (4 × 4 × 2 cm to 108 × 33 × 8 cm) and brick up to 23 × 10 × 6.5 cm within friable, highly compacted clay matrix. Olive-grey (5Y4/2). 1-46 cm thick.
- Lot 10 Post 1752/3 windblown sand. Loosely compacted and light brown (7.5YR6/3) with black mica flecks. 1-12 cm thick.
- Lot 11 Recent glass refuse pit fill. Loosely compacted organic matrix with high concentrations of modern bottle and window glass and plastic. Black (7.5YR2.5/1). 6 cm thick.
- Lot 12 Recent glass refuse pit interface. 1.4 m long by 40 cm wide by 6 cm deep cut. Filled by Lot 11.
- Lot 13 Recent glass refuse pit fill. Loosely compacted organic matrix with high concentrations of modern bottle and window glass and plastic. Black (7.5YR2.5/1). 19 cm thick.
- Lot 14 Recent glass refuse pit interface. 65 cm long by 50 cm wide by 19 cm deep. Filled by Lot 13.
- Lot 15 Recent glass refuse pit fill. Loosely compacted organic matrix with high concentrations of modern bottle and window glass and plastic. Black (7.5YR2.5/1). 21 cm thick.
- Lot 16 Recent glass refuse pit interface. 50 cm diameter and 21 cm deep. Filled by Lot 15
- Lot 17A Organic stain of northern-most floor joist. Black (7.5YR2.5/1) and brown (7.5YR5/4). 18-20 cm wide and 10 cm thick. 4.25 m long.
- Lot 17B Organic stain of floor joist north of hearth. Black (7.5YR2.5/1) and brown (7.5YR5/4). 5-18 cm wide and 8 cm thick. 4.45 m long.
- Lot 17C Organic stain of floor joist to west side of hearth. Black (7.5YR2.5/1) and brown (7.5YR5/4). 12-16 cm wide and 5 cm thick. 90 cm long.

- Lot 17D Organic stain of floor joist to east side of hearth. Black (7.5YR2.5/1) and brown (7.5YR5/4). 16 cm wide and 5 cm thick. 1.25 m long.
- Lot 17E Organic stain of southern-most floor joist. Black (7.5YR2.5/1) and brown (7.5YR5/4). 10-18 cm wide and 5 cm thick. 4.40 m long.
- Lot 18 Rock pile. Large, flat and angular Upper Aillik stones (15 × 9 × 5 cm to 51 × 15 × 10 cm) in loosely compacted sand/silt matrix. Brown (7.5YR4/2). 2.8 m long by 91 cm wide, and excavated to 101 cm below datum.
- Lot 19 Central hearth/fireplace. Large, flat and angular Upper Aillik stones (5 × 5 × 5 cm to 60 × 40 × 40 cm) with very compacted friable clay matrix. Olive-grey (5Y4/2). Firebox wall measures 196 × 45 cm, east cheek is 86 × 50 cm and west cheek is 80 × 34 cm. Height ranges from 50-60 cm.
- Lot 20 Brick and organic debris from collapse inside hearth. Loosely compacted, mottled, friable and silty clay with high brick content and some charcoal. Dark reddish brown (2.5YR3/4) and dark grey (10YR4/1). 3-10 cm thick.
- Lot 21 “B” Horizon soil development outside foundations. Loosely compacted, silty clay with some small angular stone averaging 1 × 1 × 1 cm. Olive-grey (5Y4/2). 1-10 cm thick.
- Lot 22 1752 landscaping fill outside foundations. Loosely compacted sand/silt with some angular and rounded stone between 1 × 1 × 1 cm to 8 × 8 × 2 cm. Brown (7.5YR4/3). Excavated to 121 cm below datum.
- Lot 23 Stone footings. 7 × 3 × 3 cm to 55 × 18 × 10 cm flat and angular Upper Aillik stones within compacted, friable clay matrix. Olive-grey (5Y4/2). 25-45 cm wide. Excavated to 80-88 cm below datum.
- Lot 24 Stone steps. Flat and angular Upper Aillik stones (5 × 5 × 5 cm to 72 × 30 × 10 cm) within compacted clay matrix. Olive-grey (5Y4/2). 90 cm square. Excavated to 76-110 cm below datum.
- Lot 25 Stone ramp. Flat and angular Upper Aillik stones (4 × 4 × 4 cm to 92 × 25 × 10 cm) within sand matrix. Olive grey (5Y4/2). 90 cm square. Excavated to 76-110 cm below datum.
- Lot 26 Brick feature. Six (20 × 7 × 6 cm to 20 × 10 × 7 cm) bricks arranged in circular pattern 24 cm diameter. Very pale brown (10YR7/3). 20 cm thick.

- Lot 27 Fill inside brick feature. Loosely compacted sand/silt. Pale brown (10YR6/3) with black mica flecks. 19 cm thick.
- Lot 28 Sand fill inside hearth. Loosely compacted sand/silt with some rounded cobblestone (1 × 1 × 1 cm to 5 × 5 × 5 cm). Brown (7.5YR5/3) with black mica flecks. Excavated to 102 cm below datum.
- Lot 29 1752/3 levelling fill inside northern foundation walls. Loosely compacted sand/silt with small rounded stone (1 × 1 × 1 cm to 4 × 4 × 2 cm). Brown (7.5YR5/4). 5-42 cm thick.
- Lot 30 1752/3 burn/occupation fill. Hard packed sand/silt with small angular stone (1 × 1 × 1 cm to 8 × 8 × 2 cm). Mottled black (7.5YR2.5/1) and dark grey (7.5YR4/1). 110 cm long by 95 cm wide and 2-7 cm thick.
- Lot 31 1752/3 sand/clay and stone levelling fill inside foundations. Loosely compacted sand/silt with clay inclusions and some flat and angular Upper Aillik stone (30 × 20 × 6 cm). Pinkish grey (7.5YR7/2) and greenish-grey (GLEY 1 5/1 5GY) and black mica flecks. 10-35 cm thick.
- Lot 32 Ground surface prior to 1752 construction outside foundations. Very loosely compacted sand/silt. Pinkish grey (7.5YR7/2) and black (7.5YR2.5/1). Excavated to 118 cm below datum.
- Lot 33 Brown sand banked against interior of foundation walls. Loosely compacted sand/silt. Brown (7.5YR4/3). 1-20 cm thick.
- Lot 34 Original ground surface prior to 1752 construction inside foundations. Loosely compacted sand/silt. Pinkish grey (7.5YR7/2) and black (7.5YR2.5/1). Excavated to 119 cm below datum.
- Lot 35 1752 builder's trench fill. Hard packed friable clay with loosely compacted brown sand inclusions. Olive-grey (5Y5/2) and brown (7.5YR5/4). 48 cm thick.
- Lot 36 1752 builder's trench interface. Extends 6-12 cm from Lot 3 and 48 cm deep.
- Lot 37 Number not assigned to a stratigraphic unit.
- Lot 38 Natural soil development pre-1752. Loosely compacted sand/silt. Averages 10 cm thick. Munsell reading not taken.
- Lot 39 Natural soil development pre-1752. Loosely compacted sand/silt. Averages 10 cm thick. Munsell reading not taken.

Lot 40 Natural soil development pre-1752. Hard packed sand. Dark reddish brown (2.5YR3/4). Excavated to 137 cm below datum.



