Little Guns on the Big Elk: Discovering Fort Hollingsworth, Elk Landing Site (18CE60) Elkton, Cecil County, Maryland

BY

JAMES G. GIBB
GIBB ARCHAEOLOGICAL CONSULTING
2554 Carrollton Road
Annapolis, MD 21403

WILLIAM E. STEPHENS
STEPHENS ENVIRONMENTAL CONSULTING
And
PETER C. QUANTOCK
UNIVERSITY OF DENVER

Submitted to

The Archeological Society of Maryland

August 2012

Abstract

The 2012 Tyler Bastian Annual Field Session in Archeology was held at the Elk Landing site (18CE60) between May 25 and June 4. The goal of the project was to confirm the location of Fort Hollingsworth (1813-1815) as revealed by geophysical survey, soil borings, and detailed topographic mapping conducted since July 2011. The field session crew ground-truthed those findings through the excavation of 14 excavation units, each measuring 2 m by 1 m and forming a more or less continuous trench, one-meter wide, perpendicular to, and across, the projected south front of the breastwork. The trench exposed the backfilled ditch, but—extending through the narrowest area of high radar reflectivity—yielded only residual gravelly sand that had not been returned to the ditch with the dismantlement of the fort in 1815; hence the footprint of the rampart was not discernible. Some of that residuum blanketed a plowed soil south of the earthwork, preserving aboriginal deposits within and beneath the pre-1813 plowzone.

Based on the 2011/2012 findings, the footprint of the ditch can be staked on the ground as the first step in the public interpretation of Fort Hollingsworth and the war in the Chesapeake. We also recommend further archaeological investigations at Fort Hollingsworth to define the east and west ramparts, identify better preserved portions of the ramparts, and to explore the internal structure of the fort. Specific features that should be sought include: gun emplacements (as many as eleven); bombproof or other storage facilities; and evidence of militia bivouacs.

Table of Contents

List of Figures

List of Tables

Chapter 1. Introduction

The Elk Landing Foundation, Inc., under a long-term lease from the Town of Elkton and in consultation with the Maryland Historical Trust, holders of a historic easement, is developing a house museum and historical park at Elk Landing. The easement extends south of the chain link fence at the end of Landing Road and eastward from Little Elk Creek to a line extending southerly from the west fence of the Cecil County correctional facility. Period references place Fort Hollingsworth—an 1813 to 1815 earthenwork intended to repel British attacks—within the easement portion of the 60-acre Elk Landing parcel.

In anticipation of holding the Archeological Society of Maryland's 2012 field session at Elk Landing, the principals—with financial and volunteer support of the Society and of the Archeological Society of the Northern Chesapeake—began geophysical testing of a portion of the property in July 2011 and March 2012, followed by detailed topographic mapping and soil borings in April. The combined field data, coupled with two period references to the fort and its construction, established a compelling case for the location and configuration of the fortification ditch and rampart.

Between May 25 and June 4, 2012, the Archeological Society of Maryland under the direct supervision of the senior author excavated 14 units measuring 2 m by 1 m in a largely contiguous trench running from south of the presumed south face of the rampart northward to the fort's interior. The goals of the excavation were, primarily, to ground-truth magnetometer and ground-penetrating radar interpretations and secondarily to collect some data on the construction of the fort. The Maryland Historical Trust approved a maximum excavation of 40 m^2 to collect data with which to aid site management. The bulk of the field session effort, therefore, was diverted to the testing of the Hollingsworth Farm site (18CE29) in the cultivated field immediately east of the easement property and extending eastward to Big Elk Creek (Figure 1-1). That effort will be documented in a separate report prepared by Dr. Robert D. Wall of Towson University.

This report, addressing only the Fort Hollingsworth investigation and the archaeological and geological background study conducted in advance of fieldwork, consists of seven sections:

1) Introduction
2) Project Location and Environment
3) Culture History
4) Research Agenda and Methods
5) Field and Laboratory Results
6) Summary, Interpretations, and Recommendations
7) Supporting Documentation

All of the work described herein was conducted in accordance with the *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994).

Figure 1-1. Sites 18CE29 and 18CE60.

Chapter 2. Project Location and Environment

Location

Elk Landing is an 18th-century place name applied to an indefinite area within the fork of the Big and Little Elk creeks in Cecil County, Maryland (Maryland Archeological Research Unit 6; Figure 2-1), in the Coastal Plain Province at the head of the Chesapeake Bay and within a few miles of the Delaware state line. Elevations range between 8 and 24 ft above mean sea level (Figure 2-2). The area also has been known as Hollingsworth Farm. Much of the Elk Landing or Hollingsworth Farm, is now a residential subdivision called Hollingsworth Manor, northwest of the historical park, on the west side of Landing Lane.

The incorporated Town of Elkton purchased 41.968 acres of the Hollingsworth Farm from Carleton M. and John M. Young in October 1999, the parcel extending from the tip of the peninsula northward and being one portion of the 100-acre Hollingsworth Farm (Land Records of Cecil County WLB 847/430). The Town since has purchased additional portions of the farm along the east side of Landing Lane and, with the exception of a number of small dwelling lots fronting that road, extending to the south right-of-way line for US 40. The project area lies within the southernmost portion of the combined tracts, a 21.879-acre farmstead parcel described in an historic easement assigned to the State of Maryland and recorded in the Land Records of Cecil County, Book 1236, page 443, and dated 2002. The Historic Elk Landing Foundation leased the area covered by easement from the Town for 99 years on January 17, 2000, for the purpose of creating and operating the Historic Elk Landing living history museum focusing on the Colonial through Federal and Early Republic periods.

Environment

The grounds of Historic Elk Landing occupy the floodplain of Elk River and its two principal tributary creeks, and three low terraces. Most of the land acquired by the town remains in cultivation. That portion leased to the Historic Elk Landing Foundation, Inc., consists of forested wetlands at the south end of the parcel, arable recently taken out of cultivation and maintained as lawn, and the currently cultivated field east of the lawn, south of the county jail, and west of Big Elk Creek. Two 18th-century dwellings survive (Figures 2-3 and 2-4) and several 20th-century outbuildings and one 19th-century barn ruin remain on the property. The Foundation has restored the 18th-century dwellings ("the Stone house" and Hollingsworth House) and maintains the surviving outbuildings. Two other early historic structures, privately owned, lie just beyond the park gates and on the west side of Landing Lane (Figure 2-5). The stone masonry building purportedly dates to the 18th century; the attached framed dwelling does not have an identity in the state tax records since it occupies the same lot as the stone house (Lot 4, 5, or 6 of the 1779 Evans estate division; Land Records BW1/10-11). The frame building to their south, also privately owned, reportedly dates to 1920.

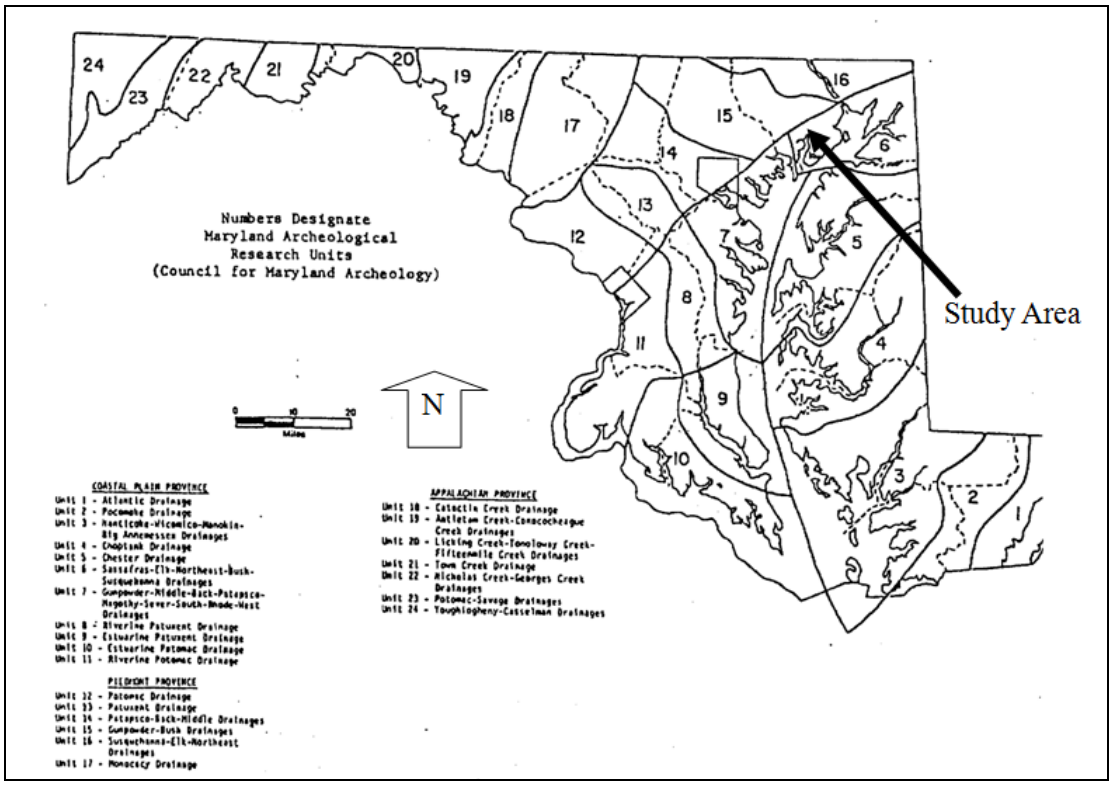

Figure 2-1. Maryland Archeological Research Unit map.
(Source: Shaffer and Cole 1994)

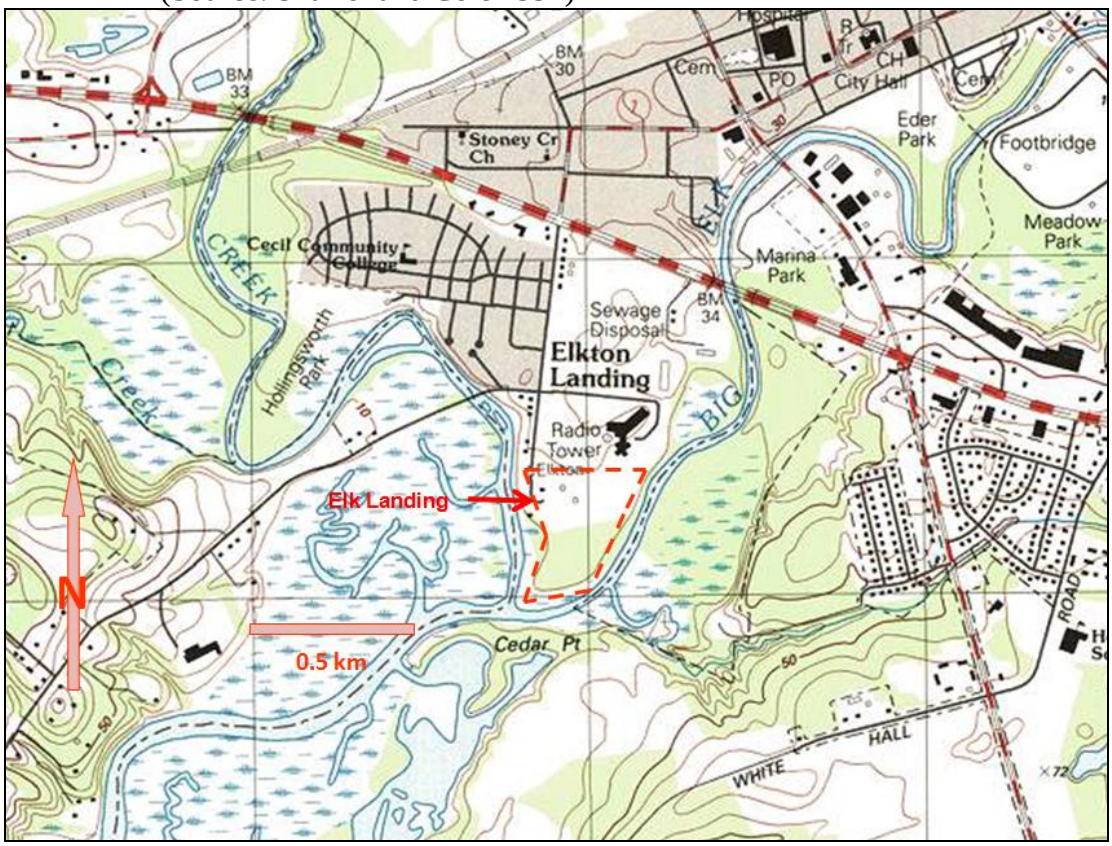

Figure 2-2. USGS 7.5’ Topographic Map, Elkton, MD–DE (2000).

Figure 2-3. Hollingsworth House (2003).

Figure 2-4. Stone House (1936).
Source: Historic American Building Survey, E. H. Pickering, photographer.

Figure 2-5. Privately owned dwellings outside of the park.

N.B. The two structures to the right have been recently renovated. The stone portion purportedly, but probably incorrectly, dates to 1735. Elk Landing Foundation now uses the more accurate, if less precise, date of late 18th century. The light colored frame structure to the left (south) was built ca. 1920.

West of the site is the meandering Little Elk Creek and an extensive marsh. The lands to the north of the bend in the creek were quarried for sand and gravel in the early 20th century and are now occupied by a 1940s-1950s subdivision created by the federal government to house workers for a munitions plant (District Court Case #1555, USA v. William H. & G. Leona Fox, and Isabel H. M. Young).

Soils in the vicinity are generally Quaternary silts and silt loams (Wicomico formation) on Cretaceous glauconitic sands. The core of the farmstead, comprising just under 20% of Elk Landing south of the county jail (Figure 2-6), lies within Elsinboro-Delaco-Urban complex silt loams (ErB). South and east of the farmstead core is Delanco silt loam (DaA), and about 4 acres of Nanticoke Mannington stratified muck and silt loams (NM) borders the peninsula. All of these soils are silt loams overlying stratified gravelly sandy loam, loamy sand, and sandy clay loam. Cultivation, erosion, and various landscaping activities have reduced the thickness and texture of the solum which now ranges in thickness from 50 cm to a little over 1 m and rests on dense gravels and gravelly sands, and the soil texture is more fine sandy silt loam than silt loam.

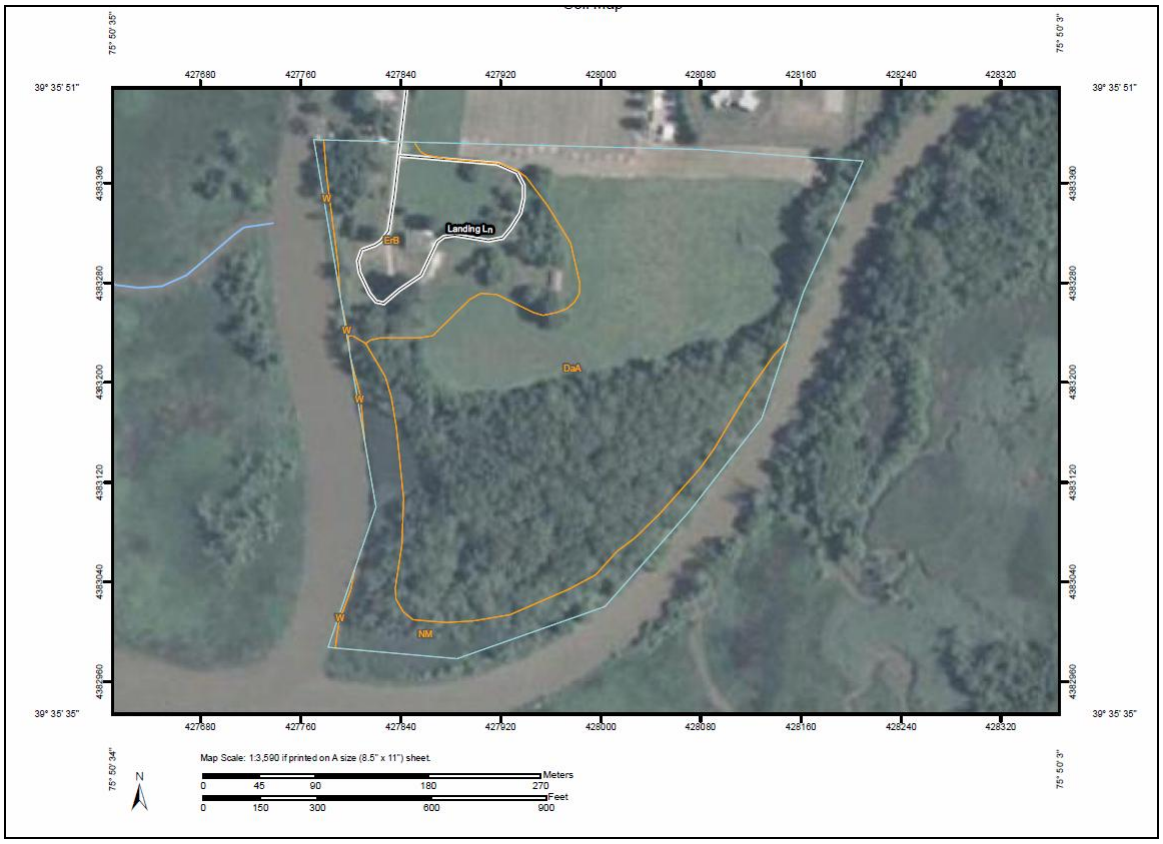

Figure 2-6. Soils map, Elk Landing.

Paleo-environment

A paleo-environmental study was undertaken at the nearby county detention center as part of an archaeological site examination and data recovery in 1981. Thomas and Payne (1981) conducted extensive work at the Hollingsworth Farm site (18CE29), recovering some prehistoric features, a human burial, and numerous prehistoric (and some unidentified historic) artifacts. They commissioned Michelle D. Wheatley-Doyle (in Thomas and Payne 1981, Appendix) to take a core sample and analyze the recovered pollen and microfossils. She identified four zones and two episodes of erosion, but was unable to date the environmental shifts interpreted primarily from 13 pollen samples, nor could she definitively relate the environmental changes to the succession of prehistoric occupations that Thomas and Payne identified. I summarize her results, by zone, as follows:

A. 9.8-12.2 ft below the current surface (hereinafter expressed as ft bs)
cool-adapted mesophytic arboreal species (pines, hemlock, and beech) forming a closed forest with little undergrowth, occupying an eroded surface. The frequency of spruce pollen declined toward the top of the zone, indicating a slight warming trend during a generally cool, moist period;

B. 6-9.8 ft bs
developing deciduous forest with appearance of oak, rise of elm and low frequency of walnut, and disappearance of mosses. Sweet gum at 7 ft bs indicated a mean July temperature of 20-21˚C, approximating current conditions;

C. 4-6 ft bs
decline of hemlock and beech, disappearing at the top of the zone, with elm increasing steadily and pine decreasing slightly. Grasses declined, apparently in connection with erosion, toward the middle of the zone, but became abundant and sedges formed an appreciable part of the assemblage toward the top of the zone, while sweet gum declined, pointing warming and possible drying; and

D. 0-4 ft bs
continued decline of pines and concomitant increases in poplar, elm, grasses, ragweed, and berry-bearing bushes, grasses reaching their maximum expression in the pollen from the top of the core, all indicating the persistence of modern conditions.

The lack of Foraminifera and the recovery of two smooth carapaces from *Cyprideis* (a gastropod, the smooth carapace forms thought to be exclusively freshwater) indicated the persistence of a freshwater environment. The Big Elk and Little Elk creeks remain freshwater streams, though tidally influenced.

Geomorphology

As part of our preparation for the field session, the team undertook detailed topographic mapping and soil boring under the direction of Bill Stephens (Figure 2-7). The topographic map illustrates the presence of three low terraces: T_o, the wetland or floodplain that extends northward from the confluence of Big Elk and Little Elk creeks; T_1, which rises abruptly from T_o some 4 ft to form a narrow band along the edge of T_o and the lower portion of Big Elk Creek; and T_2, which rises 2.5 ft above T_1 on the easement property and more dramatically east of the barn ruin and along the south edge of the jail parcel to Big Elk Creek.

Levee formation is readily discernible on the eastern edge of T_o along Big Elk Creek. The surface of the wetland reveals scours from flood waters, but is generally flat and heavily wooded, the surface springy and wet. Borings conducted at 100 ft intervals across those portions of T_1 and T_2 south of the jail and extending onto T_0 produced fairly consistent results: a well-developed very fine to fine sandy loam on top of a Pleistocene sand and gravel deposit ranging between 0.5 and 1.0 m below grade. An A_p horizon occurs throughout, although it is more irregular in appearance in the presumed area of the fort. Those variations are discussed in Chapter 5. On T_0 the auger encountered deep deposits of muck and saturated fine sandy loam. The preservation of roots and other organic matter 2 m and more below grade suggests recent formation.

T_1 is mostly in mowed lawn within the easement property and entirely plowed beyond the easement to the wood edge and slope above Big Elk Creek. The portion along Little Elk Creek has been altered by construction of Stone House and construction and operation of the Deibert and Brothers barge building operation (1887-1910) and, subsequent to the boatyard's closing, by installation of a pipeline by Standard Oil Company. Recent ground disturbances of the entire terrace include plowing and burrowing by red fox and woodchuck.

T_2 is mostly cultivated north and east of the easement, but within and north of the easement it is covered by the Hollingsworth farmstead and other houselots. Numerous woodchuck dens dot the terrace. The most significant recent disturbance, however, has been in connection with the construction of the Cecil County Corrections Facility; an area largely investigated by the late Ron Thomas and his team in 1980 and 1981.

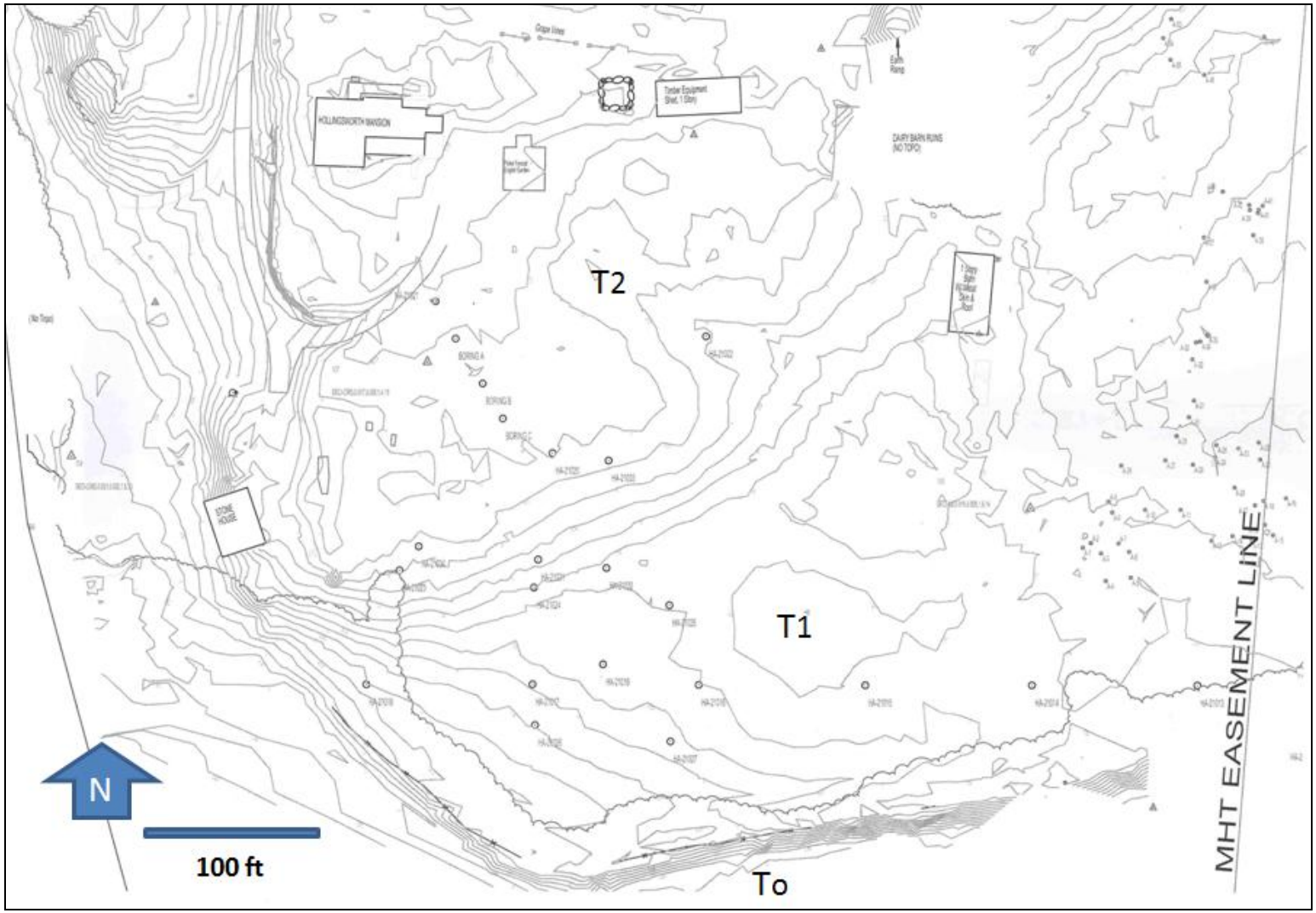

Figure 2-7. Soil borings on terraces To through T2.

The pre-session geologic field investigation consisted of a total of 68 hand auger borings, advanced to refusal, across entire open area of Tract A. Most borings were placed on a 100 by 100 feet grid, on the even 100' state plane grid interval, with random borings sited at locations corresponding to the paleo-channel, the GPR grid corners, mid-points and key GPR high reflectance locations, and infill detail across the slope between terraces T_0 and T_1. The borings were advanced to refusal, which across the upper two terraces tending to be only a couple feet in cobbles, though a few attained depths up to five feet and one attained a depth of over 8 feet. Each boring was logged using a combination of Methods, specifically the Unified Soil Classification System (USCS) and USDA Methods. Encountered subsurface conditions, including texture, color, evidence of contacts and depth intervals were recorded on descriptive boring logs. A six foot ruler graduated in feet, tenths and hundredths of feet corresponding was used to obtain depths and subsequently to establish elevations for the unit intervals and sample intervals.

From the limited subsurface investigation, we were able to deduce a sequence of stratigraphy for the site as shown below (Figure 2-8). As the chart clearly indicates, the geology of the site is more complex than indicated by the published mapping. Little variation was noted across most of the site corresponding to the upper two terraces, but significant variation was observed along the terrace margins. Difficulties penetrating the cobbly layer encountered not far below the surface was somewhat frustrating from a geologic perspective, but given the reported age of the Talbot Formation (mid Pleistocene, 410Ka +/-), for which these cobbly beds are diagnostic, the implications for archaeological exploration were defined.

Across most of the site corresponding to Terraces T_1 and T_2, refusal was encountered in coarse gravel or cobble beds through which we could not advance the auger. The depth to refusal typically ranged from 0.50 to 1.00 m. The original sedimentary structures in the overlying, mostly fine grained silty, strata had been largely obliterated, but texture suggested aeolian deposits may be present in the surface horizon in some locations over alluvial deposits.

The soil profile (solum) per USDA methods consisted of a plow layer, or Ap Horizon, inactive within the easement area, that ranged from as little as 5 cm thick in the Fort Area to as much as 35 cm thick in the edge of the woods where the section had been thickened by clearing activities. In the open field the Ap was typically about 18 cm thick. The Ap overlies a well developed subsoil with Bt horizon, which in places could be divided into two distinct horizons, and in cases where the subsoil was thinnest, the Bt involved the upper part of the gravel. Generally, the gravel and cobble layers in which refusal was encountered comprised the C-Horizon, where some sedimentary structure, mainly that of graded beds, is preserved.

The divide between T_1 and T_2 was investigated, specifically at several locations picked from the 1947 aerial corresponding to the dark, narrow linear feature originally thought to be a road. We were able to penetrate deeper with the hand auger (over 8 feet, or 2.5 m, in one boring) through what we interpreted to be a paleo-channel cross-cutting the terraces from the northeasterly portion of the sewer plant near Route 40 to the dairy barn and even to Little Elk Creek just to the south of the stone house. The feature is obscured within the Hollingsworth site due to intense anthropogenic activity, but still crudely discernible, and was expected to intersect the ditch in front of the former earthwork. These beds cut through the older Talbot Formation beds, contain materials derived from reworking of the coarser fractions of those deposits, and are in turn covered by the solum. What appears to be missing at this location is the Bt2 Horizon, which we suspect is the finer, older Talbot, beds overlying the older basal Talbot gravels. We suspect these beds may be younger than the Talbot albeit penecontemporaneous, but no ages for these heavily oxidized beds are available.

The sloping zone from T_1 to T_0 within the edge of the woods and ranging from elevation from 7.5 to 3.5 feet (1.10 to 2.30 m) above sea level (NAVD88) proved to be both abrupt and instructive. An old fence line running through the edge of the woods was placed approximately

on the contact between T_1 and T_0, which appears to be about 5' MSL, and may have at one time enclosed the area to the south of the field for animal grazing. At the toe of the slope, the soils encountered consisted of sand and fine gravelly sand alluvium, very loose, with interbeds of varved, very plastic silt with variable organic content and massive gleyed clayey silt corresponding to Btg and possible histic epipedons of buried tidal marsh. The base of these deposits was marked by washed gravel, presumably derived by reworking of the adjacent cobbly beds comprising the C horizon of T_1. This lower terrace is the youngest of the terraces and is anticipated to be Holocene in age (Early to Late Archaic).

Work began in areas we expected to be less disturbed than the area around the Fort and Orchard. As such, the stratigraphy and nature of the paleo-channel and other discrete geologic features were documented before entering the area where deeper earth disturbance was anticipated. Several of the borings in the GPR area encountered gravelly deposits where expected, and as predicted by the GPR and magnetometer surveys, but we were able to discern those sediments that had been disturbed from those that had not. From the confirmatory borings, the geometry and position of the fort earthworks was deduced, and the project team was able to plan a continuous series of test units across the feature.

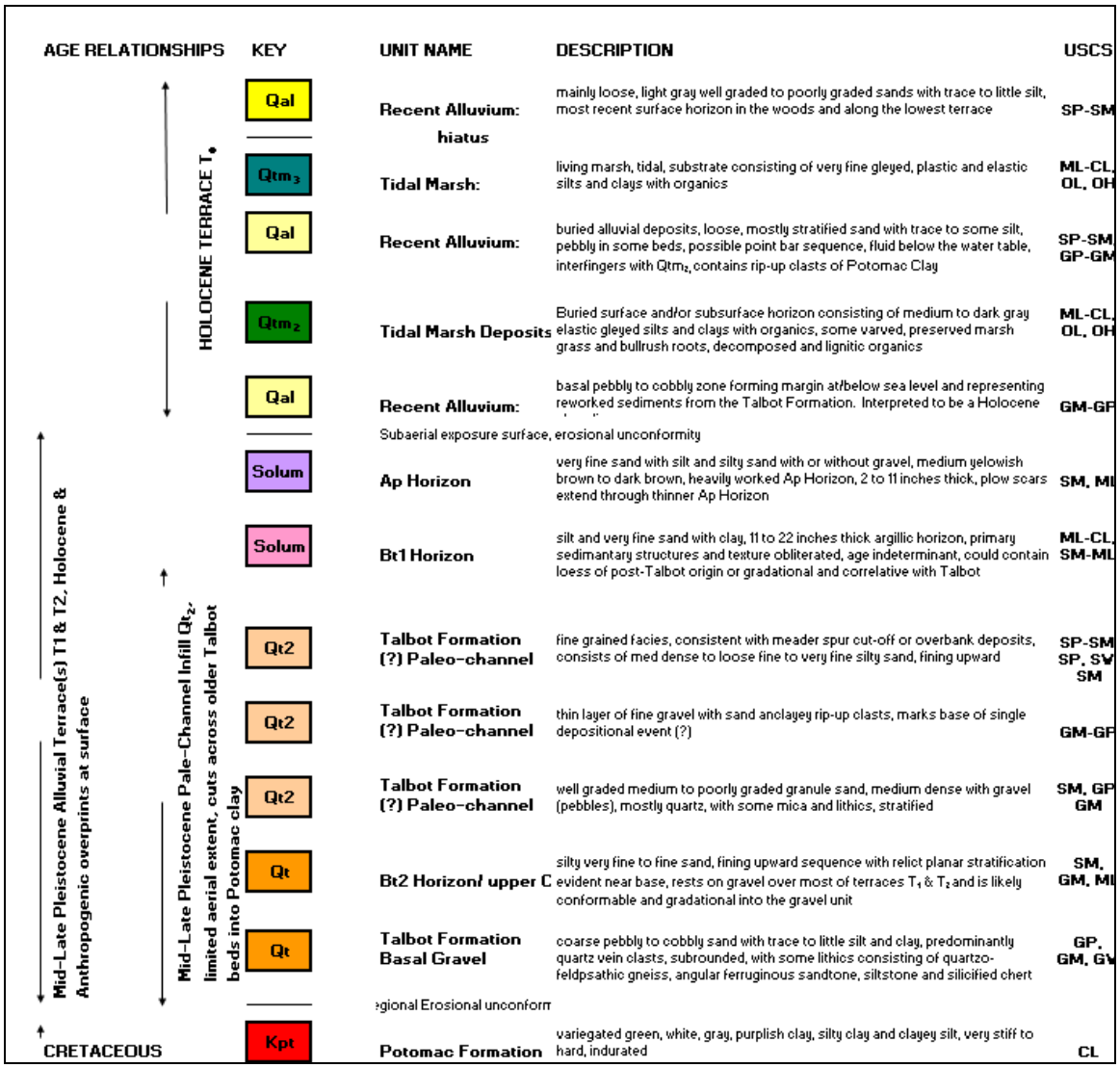

Figure 2-8. Sequence stratigraphy.

Chapter 3. Fort Hollingsworth and the War of 1812

War of 1812

The putative existence of a fort—Fort Hollingsworth—at Elk Landing contributes to the site's historical significance. No archaeological evidence of the fort, however, had been collected, or at least recognized, prior to July 2011. Chapters 4 and 5 describe the methods used in 2011 and 2012, and report and analyze those data. Understanding why the fort was built, and how it was built, requires examination of the causes and course of the war, and of the role that Elk Landing played in the contest between a nation not two score years of age and the western world's most powerful military and economic force.

Ambiguity in the purpose of this second war between the United States and the United Kingdom is revealed in its name. While the names of most wars, even if given after the fact, reveal something of scale and locus, or nature of the conflict, the War of 1812 is simply named for the year in which the United States Congress declared war against Great Britain. In part, the ambiguity may relate to the inconclusive nature of the conflict, the treaty ending it returning both sides to the *status ante bellum*, a diplomatic term for a draw. More to the point, however, is the context: the war between the United States and Great Britain was peripheral to the larger and more protracted struggle between the French and British empires.

From the dynastic wars of the 14th and 15th centuries, to the Colonial wars of the late 17th through mid-18th centuries, the British and French constantly vied for control of lands, trade, and wealth. Even after British and American forces bested the French in the Seven Years War, effectively conquering France's North American possessions, the antagonism continued with French support of the Americans in their Revolutionary War. With the demise of the aristocracy in the French Revolution and the rise of Napoleon Bonaparte, French territorial ambitions once again expanded, locking all of Europe in a war that lasted until 1812. Britain's over-extended navy dominated French naval forces, but only through blockades of French shipping and 'recruitment' of sailors from American merchantmen. Both super-powers issued edicts prohibiting other nations from trading with its foe on pain of confiscation of vessels and cargos and imprisonment of crews. Britain's Royal Navy also impressed sailors that they deemed to be British citizens, and they didn't need to interdict trade to do so, boarding coastal merchantmen and vessels of the US Navy.

Political pressures in the United States, rooted in the party politics that erupted between Federalists and Anti-Federalists (later, Republicans) during the adoption of the US Constitution, and in Western settlers demanding Indian lands, exacerbated British insults at sea and reputed British instigation of Indian attacks in the Northwest Territory, compounded the diplomatic crisis. Added to these factors were American territorial ambitions in Canada (expected as early as the American Revolution to become the fourteenth state) and unimpeded fishing and trading rights in the Newfoundland fisheries and West Indies lent an opportunistic cast to the American declaration of war. Ironically, the Republican dominated federal government lacked the navy and standing army that the Federalist party, ousted by Jefferson Republicans in the acrimonious 1800 election, had tried to build. Republicans decried the expense and threats to democratic institutions imposed by a professional military during the 1790s and it was partly on the strength of

their arguments that they bested President John Adams and the Federalist dominated Congress and Judiciary. On June 18, 1812, a bill of war was signed into law by James Madison, despite a virtually non-existent military.

Madison's government employed privateers and letters of marquee (a legalism that amounted to the same thing as privateer status) while rushing to refit and finish frigates mothballed a decade earlier by the Jefferson administration. These vessels proved remarkably effective against not only British shipping, but in one-on-one engagements with Royal ships-of-the-line in a series of encounters that thoroughly embossed the British Admiralty. Congress appropriated funds to raise regular army units and support militia. Militia in the Northwest Territory, already experienced through clashes with western Native American nations, attacked Upper Canada while regular and militia units attacked Lower Canada along the Saint Lawrence, aided by naval units on the Great Lakes and Lake Champlain. Land forces burned a number of Canadian towns, including the provincial capital of York (now Toronto), in many cases leaving the civilian inhabitants to survive the Canadian winter with little shelter or food.

British reaction to the United States was part strategic and part anger. Although the war with Napoleonic France rapidly drew to a close in 1812, Britain still needed land and naval forces in Europe and European waters. The Admiralty needed to protect British shipping without deploying too much of its navy in the western Atlantic, while protecting Colonial interests in North America, specifically Canada. The British were also incensed by American depredations in Canada and smarted from the pasting some of its proudest naval vessels suffered in the Atlantic. Also, a not inconsiderable factor in British responses to the United States was the experience of some of its naval officers, or their fathers and older brothers, in the attempt to suppress the American Revolution. Some of these men, in their correspondence, evinced condescension, if not outright hatred, to a people they regarded as traitors to the king and their common culture. As the war entered into its third season (Spring 1814), British emotional responses increasingly colored strategy and tactics. It is in this context of changing strategy and tactics…and growing fury of British forces…that Fort Hollingsworth is best interpreted.

There is another aspect of the war worthy of mention, even though it isn't clear to what if any extent it affected the unfolding of events in the upper Chesapeake Bay. The American people were far from united in support of the war. Westerners…settlers in Tennessee, Kentucky, and the Ohio River Valley…generally provided the so-called 'war hawks' as representatives in Congress. They attributed hostilities in the west with Indians to British instigation, overlooking their own land grabs and sharp trading practices. New England, still the heartland of a dying Federalist party, derided the war as devastating to the economy and militarily ill-advised, protesting to the point of considering secession from the United States just before the signing of the Treaty of Ghent (the so-called Hartford Convention of 1814-1815). Pockets of anti-war attitudes occurred throughout the United States, including parts of Maryland. British naval commanders found some Americans willing to sell food and materials in the Chesapeake region, although probably on a much lower order than in the waters off New England and along the Canadian frontier.

In 1813, Napoleon having retreated from Russia and then from the Iberian Peninsula, the Admiralty dispatched naval and land forces to the western Atlantic.

Realizing the continued threat posed by Napoleon and impracticality of holding territory beyond the Michigan Territory, the Admiralty devised a conservative strategy for the United States coast, and it comprised two objectives: bottle up war ships and privateers in American harbors, and draw American troops off of the Canadian frontier by raiding the coast. Witness these secret orders from Lord Bathurst, Secretary of State for War and the Colonies, to Colonel Sir Thomas Beckwith of the British Army dated 20 March 1813:

> It having been judged expedient to effect a diversion of the Coasts of the United states of America, in favor of Upper and Lower Canada, which the American Government have declared it to be their intention to wrest from His Majesty in the course of the ensuing Campaign, Sir J. B. Warren will receive instructions to direct a Squadron to proceed with the troops named in the Margin [of this letter], towards the places on the Coast, where it may appear to him most advisable that a descent should be made.
>
> The number and description of the Force placed under your Command, as well as the object of the Expedition itself, will point out to you that you are not to look to permanent possession of any place, but to the reëmbarking of the Force as soon as the immediate object of each particular attack shall have been accomplished.
>
> As the object of the Expedition is to harass the Enemy by different attacks, you will avoid the risk of general action, unless it should become necessary to secure your retreat (Bathurst 1813, reproduced in Dudley 1992: 325).

British forces risked little in the Chesapeake, using their larger ships to move quickly around the bay, launching raiding parties of Royal Marines in smaller boats to attack undefended or weakly defended landings and villages, and then reëmbarking before the local militia could arrive and offer significant resistance. Regular army troops in the region were few and, in any case, could not match the speed of waterborne British units. From the British perspective, it was a conservative strategy: risk little while increasing the pressure on President Madison to pull regular army troops off of the Canadian frontier. The British fleet, in the meantime, blockaded the mouth of the Chesapeake, inhibiting the movement of privateers and naval vessels from attacking British traffic on the Atlantic.

The British naval and marine forces in the Chesapeake fought seasonally, deploying throughout the Bay from the spring through autumn. In winter, much of the fleet either returned to winter quarters in Bermuda or patrolled the Atlantic coast with a small squadron occupying the mouth of the Bay on blockade duty. Through the latter part of 1812 and the whole of 1813, British forces continued the strategy outlined by Lord Bathurst, focusing efforts on public properties such as wharves and tobacco warehouses and generally avoiding attacks on individual plantations. When the fleet returned in 1814, however, several British ships-of-the-line had been bested by American frigates in one-on-one encounters and American land forces had attacked and burned military and non-military targets in Canada. In 1814, the British were angry. Witness an extract from a letter written by blockade commander Captain Robert Barrie to his mother, Dolly Gardner Clayton, in England. The "Nathan' to which he refers is not an individual, but a shorthand for 'Jonathan,' the somewhat derogatory personification of the United States dating to the Revolutionary War and the immediate predecessor of 'Uncle Sam."

> I hope we shall never make any peace with Nathan that does not reduce him to his proper insignificance as a maritime power…Nathan has suffered in his tender place, cash, & as my friend the great Napoleon seems going leeward, Brother Jonathan may find himself in

> a scrape that he will be glad to get out of on any terms (Barrie 1814; reproduced in Crawford 2002: 17).

This is not to say that British strategy had devolved into revenge. It had not, as appears from a letter of Vice Admiral Cochrane of the Atlantic Squadron to Canada's Governor-General Sir George Prevost, dated 11 March 1814:

> And I hope to make a very considerable diversion in the Chesapeake Bay, to draw off in part the Enemy's Efforts against Canada—I hope to be able to Keep the Enemy in a constant alarm so as to prevent their sparing any part of their Military force from the State, South of Delaware, which if I succeed in, I do not believe from the temper of the Eastern states that they will be able to recruit their Army from thence (Cochranne to Prevost, 11 March 1814; reproduced in Crawford 2002: 39-40).

But the anger is palpable six weeks later in Cochrane's letter to Rear Admiral Cockburn:

> You are at perfect liberty as soon as you can muster a Sufficient force, to act with the utmost Hostility against the Shores of the United States—Their Government authorizes & directs a most destructive War to be carried against our Commerce & we have no means of retaliating but on shore, where they must feel in their Property, what our Merchants do in having their Ships destroyed at Sea; & taught to know that they are at the mercy of an invading foe. This is now the more necessary in order to draw off their attention from Canada, where I am told they are sending their whole military force—Their Sea Port Towns laid in Ashes & the Country wasted will be some sort of retaliation for their Savage conduct in Canada; where they have destroyed or Towns, in the most inclement seasons of the Year; it is therefore but just, that Retaliation shall be made near to the Seat of their Government from whence those Orders emanated, you may depend upon my most cordial Support in whatever you may undertake against the Enemy (Cochrane to Cockburn, 28 April 1814; reproduced in Crawford 2002: 51-52).

Cockburn needed no encouragement. According to Christopher George (2000), in his *Terror on the Chesapeake: the War of 1812 on the Bay*, lashed out against Bay area residents, using the flimsiest excuses to attack, loot, and burn. Lieutenant Colonel Charles Napier (1857: I, p. 218), in his four-volume *Life and Opinions of General Sir James Napier*, describes Cockburn's tactics as uninformed by local intelligence and relying on brute force:

> Local knowledge is very hard to gain, yet we might gain more than we do. …Cockburn…has no idea of military arrangements; and he is so impetuous that he won't give time for others to do for him what he cannot, or will not do for himself. If he had the conducting of any military operation before an active enemy he would get his people cut to pieces…Cockburn trusts to luck, and makes no provision for failure: this may do with sailors, but not on shore, where hard fighting avails nothing if not directed by mind, and most accurate calculation (Napier 1857; quoted in George 2000: 34, 36).

Despite his Vice Admiral Cochrane's orders to Rear Admiral Cockburn, the latter considered…although appears never to have implemented…another strategy: land forces at Elkton at the head of the Chesapeake and, from there, in concert with a naval force sailing up the Delaware River, attack Philadelphia. and destroyed the powder and grain mills in the Brandywine Valley:

> If Philadelphia is supposed to be the Object of greater Importance than the Places I have just mention'd [Washington, DC, and Baltimore], I should deem the landing at Elkton the most advisable Mode of approaching it, as the intended Point of Attack would thereby be masked till the Army would be actually landed and on its March on the Road from Elkton

> to Wilmington (above Newcastle), which is short and good, and does not offer, as far as I know, Difficulties or Opposition of any Kind, and this Movement need not prevent such Ships as may be judged requisite, from proceeding up the Delaware to co-operate with the Army as Circumstances may require (Cockburn to Cochrane 17 July 1814; reproduced in Crawford 2002: 139).

In fact, Cochrane had suggested a similar strategy in a letter written the same day from his station in Bermuda, to the First Lord of the Admiralty, Viscount Robert S. D. Melville (reproduced in Crawford 2002: 133). Cochrane, however, considered landing troops in Philadelphia and then marching them south through the Elkton area on their way to Baltimore. Cochrane was with General Howe when the British occupied Philadelphia during the American Revolution.

Fort Hollingsworth

Whether the people of Cecil County were aware of Cochrane's strategic alternatives, or suspected some variation thereof, remains undetermined. It is more likely, however, that the defensive posture that they assumed was based on British raids that had begun in earnest more than a year before either Cochrane or Cockburn described the Philadelphia option in writing. In April 1813, at the beginning of the British raiding season and at about the time that Cockburn's squadron threatened, but did not attack Baltimore, locals took action:

> [A] meeting of the people of the town [Elkton] and county was called, when not less than 200 convened at the court-house, and in a few minutes $1,000 was raised; a committee of three appointed; and on Saturday the ground laid out for three breast-works; one at Elk Landing [Fort Hollingsworth], one between the landing and Frenchtown, and one at Frenchtown. On Saturday [April 17, 1813] the first was nearly completed—300 feet of a semi-circle; and mounts five 6-pound cannon; the trench sufficient to contain 500 men—besides this, at the landing, we have Captain [Zebediah] Snow's letter of marquee [schooner Atlanta], with six cannon (Baltimore *Patriot*, 22 April 1813; quoted in Eshelman et al., 2010: 110, 112).

Pennsylvania militia reinforced Fort Hollingsworth, as evidenced by a welcoming speech from General Thomas Marsh Forman, published on June 8, 1813, in the Easton *Republican Star*:

> With a foe to contend with, who in our very infancy we have already humbled, we have nothing to dread if we are united.—Let us not be alarmed or discouraged by their plunder & burning, they will themselves become ashamed of the damned work and discontinue the brutal savage warfare. Let us act as virtuous citizens by banishing all party distinction until we have expelled the foe. To you Gentleman officers and soldiers of the Pennsylvania militia in the name of the inhabitants of Elkton, I offer their warmest and most grateful acknowledgments (Brig. Gen. Thomas Marsh Forman, Elkton, May 22, 1813; quoted in Eshelman et al., 2010: 111).

Fort Hollingsworth, under the direct command of Captain Henry Bennett, fended off a British landing party on April 29, 1813 (Eshelman et al., 2010: 112). The raiders disembarked at White Hall Point and marched across the peninsula to Cedar Point (Figure 3-1).

On July 12 of the following year, two months before the attack on Baltimore, another British raiding party attacked Fort Hollingsworth. We have a brief description of the skirmish in a letter from General Thomas Marsh Forman to his wife:

> Five barges were discovered on the [elk] river and about one o'clock they opened upon our view from behind a point, and point blank shot, say ½ a mile. We gave them in all eleven guns, so well directed, that they hastily put about and retreated down the river having fired but three at us, which did us no injury (Gen. T. M. Forman to Martha Ogle Forman, 12 July 1814; quoted in Eshelman et al., 2010: 111).

Depredations continued in the Bay leading to the land attack at North Point and the bombardment at Fort McHenry in mid-September 1814, but the British then descended the Bay and by February of 1815 news of the Treaty of Ghent arrived…the war was over. Fort Hollingsworth was demolished, although exactly when and how has not been ascertained.

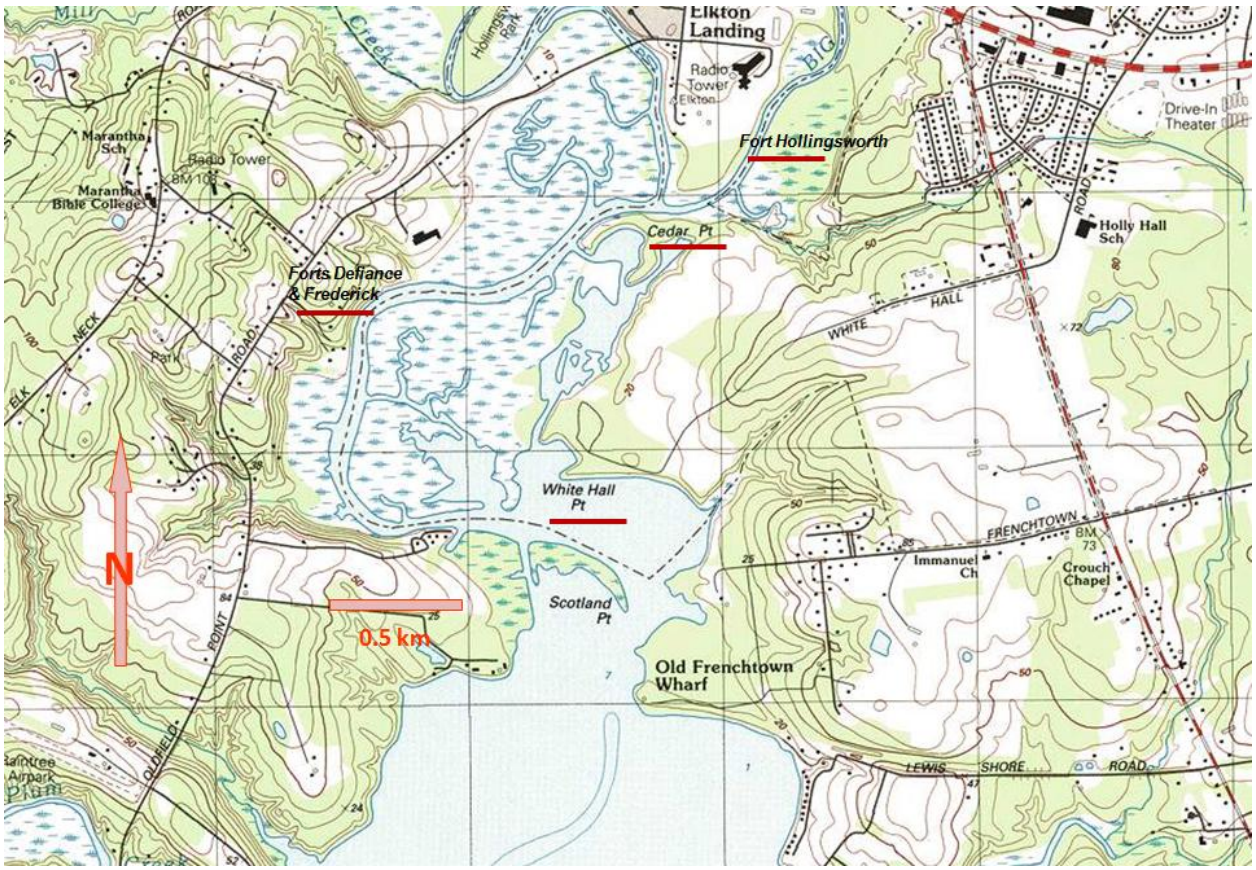

Figure 3-1. Fortified sites and landmarks on Elk River.

Previous Archaeology at the Fort Hollingsworth Locus

While Elk Landing has long been known to be the location of Fort Hollingsworth, the exact location and configuration remained unknown.

Site number 18CE60 originally referred to the Stone House on Hollingsworth Farm, reputedly an addition to a log trading post established by Swede John Hanson Steelmen in the 1690s. Historian Peter S. Craig, drawing on archival and architectural evidence, concluded that the Stone House had been built before 1697 for Steelman as a dwelling and trading post and that evidence of Steelman's trading with local aboriginal groups probably survived in deposits around the structure (Craig cited in Ward 1984). Henry Ward, from the Center for Archaeological Research, University of Delaware,

Newark, conducted an archaeological investigation around the Stone House to test Craig's hypothesis.

Ward (1984) dug a series of auger holes along five transects to locate buried soil horizons and artifact concentrations (Figure 3-2). He noted the auger holes on his site map, but failed to report his methods or findings. His report focuses on six excavation units (A-G; C not used). Again, he failed to report his methods. The units appear to have been 3 ft by 3 ft and 6 ft by 3 ft, excavated in arbitrary levels within natural strata, but the thickness of each level and the stratum in which he dug each remains unreported. He excavated Test Units D, E, F, and G along the walls of the Stone House, Unit D on the interior. Each unit yielded mid-19th through 20th-century domestic and architectural debris, and revealed extensive disturbance from repointing and drainpipe trenches and, presumably from rodent burrowing. The two larger units—A and B—were excavated away from the house: A was 15 ft northeast of the building's northeast corner, and B was 36 ft east of the building in the lawn bordering a cultivated field. Each produced material similar to that recovered from units around the dwelling, although Test Unit B produced 64 undecorated red earthenware sherds and 72 prehistoric lithics; far more than all of the other units combined.

Ward also found a soil stratum below the plowzone in Test Unit B that did not occur elsewhere, a "dense, rocky, orange clay" at least a foot in thickness.

> The mixing of late historic and prehistoric artifacts throughout the clay layer clearly indicates extensive historic disturbance. Additional auger testing [auger transects B, C, D, and E] suggests that the portion of the yard above Slope B may have been subjected to a large-scale fill operation, resulting in the deposition of the clay lens. This operation may have been an attempt to upgrade a poorly drained area similar to those still evident in the surrounding cultivated fields (Ward 1984: 7-8).

He made an error common in archaeology: he invoked "disturbance" as the explanation when that disturbance might represent the very thing he sought. Ward appears to have been unaware of the reported presence of a War of 1812 earthwork on the site: he was looking for a trading post, but he found a filled low-lying area. Had he found the trading post, the earthwork, a combination of the two, or the remains of a plantation or barge building feature? The area required further testing and the artifacts reexamination.

Interest in a possible Steelman occupation of the Stone House, or of the log structure razed ca. 1917, survived Ward's 1984 study. In the autumn of 2002, the three-year-old Historic Elk Landing Foundation contracted Dwayne Pickett to undertake archaeological testing in an around the site of the demolished log building for the expressed purpose of seeking artifacts and features dating to the 1690s and, by extension, to Steelman's occupation. Pickett excavated five 1m^2 units (12-16), and a one-half square meter unit (Unit 5; Figure 3-3). He abandoned two (Units 13 and 14) when he encountered an approximately 3 ft wide trench and an iron pipe, size unspecified. He suggested that this might be part of the Standard Oil Company pipeline that ran along Landing Lane to an offshore pier at the fork in the Elk River.

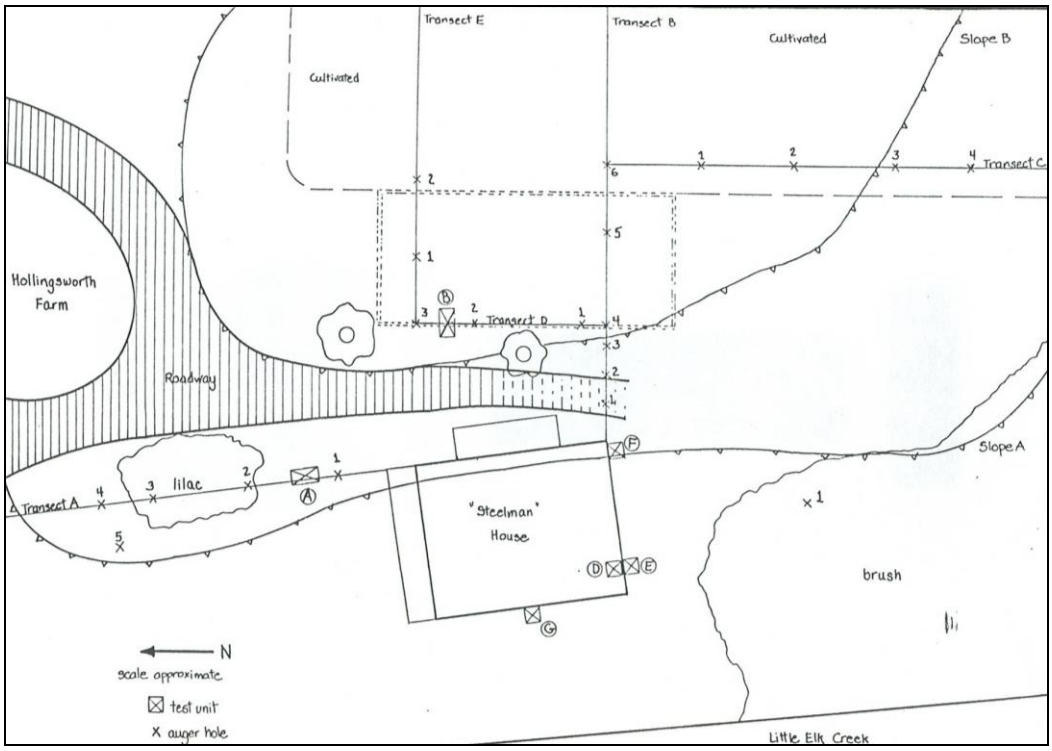

Figure 3-2. Ward (1984) site map.

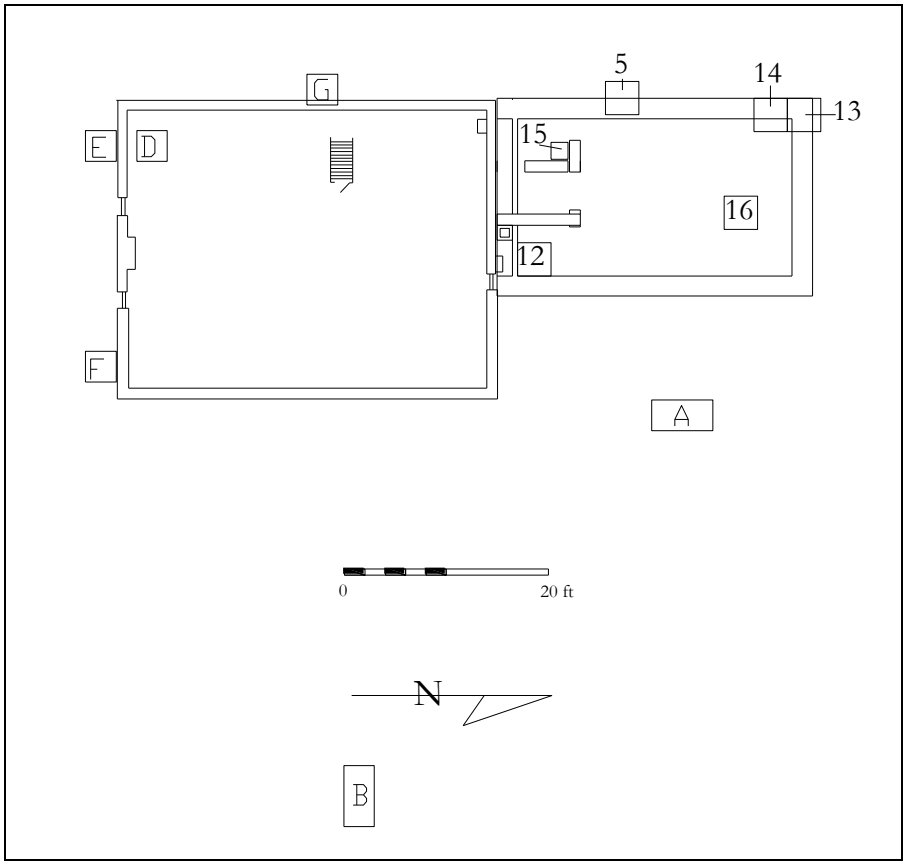

Figure 3-3. Pickett's (2002) log structure test units.
N.B. Lettered units excavated by Ward in 1984.

Pickett (2002b: 20) concluded that the structure might be Zebulon Hollingsworth, Junior's, log storehouse, reputed to have stood at least since 1775. He found nothing to suggest a late 17th or early 18th-century occupation (e.g., North Devon sand tempered earthenware, Rhenish or Westerwald stonewares, Staffordshire slipware, or dipped white salt-glazed stoneware). Only one white salt-glaze stoneware and twelve pearlware sherds recovered from Strata 4 and 5 point to even a late 18th-century occupation. Moreover, much of the other material recovered from those strata (e.g., 11 machine-cut nails, lamp chimney glass, and a grommet) are clearly of more recent vintage. Pickett's spatial analyses of 18th and 19th-century ceramics across the site also point toward an 18th-century occupation of the Hollingsworth House locus, but not of the Stone House locus (Pickett, Heinrich, and Groben 2002: 25). Flood scouring might have removed deposits from outside the Stone House, but not from within. The only evidence for even a late 18th-century date for the Stone House is the 1783 dendrochronology date reported by Cook and Callahan (2001), and that date, if accurate, refers to the year in which the sampled timbers were harvested, not necessarily the date of construction. There are no handwrought nails and only one white salt-glazed stoneware sherd to support that date.

The archaeological data suggest that the Stone House was not built until after 1800, raising the possibility that it did not exist in 1813 when Fort Hollingsworth was erected.

Pickett conducted two other studies near the Stone House that contribute to our understanding of Elk Landing, but which revealed no evidence of the elusive Swede. In 2000, working under the auspices of the Jefferson Patterson Park & Museum in St. Leonard, Maryland, and with funds provided by the National Park Service's American Battlefield Protection Program, Pickett conducted a metal detector survey of the yard and field southeast of the stone house, where historian William Johnston (1881) reported the location of Fort Hollingsworth, a redoubt built and armed by local forces in 1813. Pickett recovered a three-pound cannonball and noted late 18th and early 19th-century ceramics mixed with later material, as well as a thin lens of oyster shells near the stone house. It is possible that his metal detector survey encompassed the clay fill area identified by Ward in 1984.

In the late winter of 2002, Pickett et al. (2002) conducted a shovel test survey of about 22 acres of open fields and lawns, extending northward and eastward from the Stone House to, and beyond, Hollingsworth House (Figure 3-4). In addition to 393 shovel tests, he excavated seven $1m^2$ units: Unit 5 on the west wall of the log structure's foundation, Units 6 through 9 in a cluster of 19th-century artifacts identified by shovel testing, and Units 10 and 11 in areas on either side of Hollingsworth House (Figure 3-5).

From the shovel tests, Pickett recovered 423 prehistoric artifacts, including: a Bare Island and a Lamoka point (both stemmed types), two Rappahannock fabric-impressed sherds (Late Woodland), five quartz-tempered sherds (Middle to Late Woodland), six sand and two grit tempered sherds, a grooved netsinker, 352 flakes, and 47 fire-cracked rocks. The finds are consistent with those from earlier studies summarized above. The recovery rate, particularly of temporally diagnostic materials, was too low to identify components (a limitation of shovel testing regardless of interval), but Pickett could document relatively high concentrations of prehistoric material along the woodline south and east of the stone house.

Shovel testing also yielded 2,740 historic period artifacts, only 36 of which were pearlware or creamware; eight were porcelains (possible Chinese of the late 18th/early 19th centuries. Pickett also recovered eight stonewares, but didn't mention in his Table 4 or in the text whether they were American-made gray or brown stonewares, or European gray, brown, or white stonewares. In any case, the earliest materials concentrated north of Hollingsworth House. Test Units 6 through 9, excavated about 300 ft southeast of the Stone House in an area yielding three creamware and two pearlware sherds, encountered moderate numbers of prehistoric artifacts, but low yields of early 19th-century artifacts.

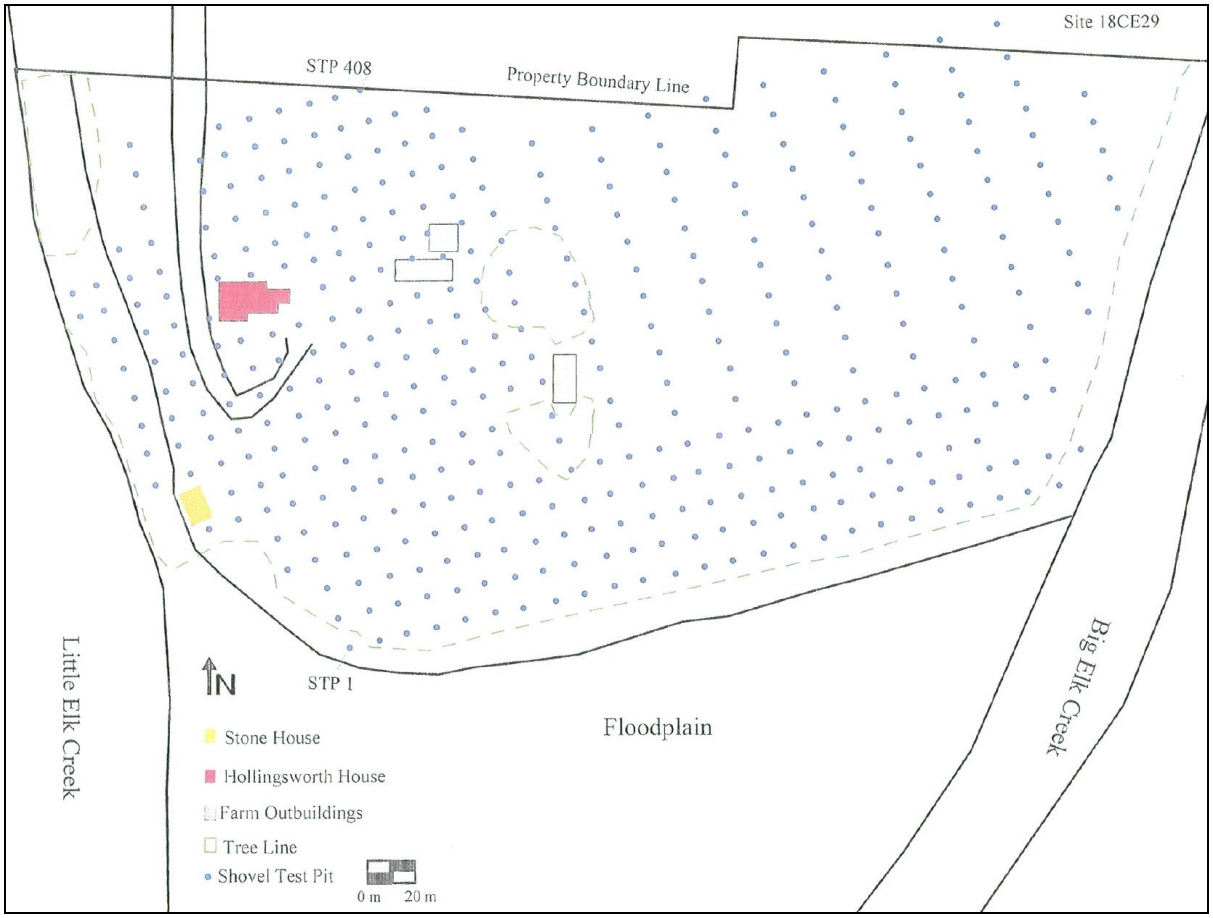

Figure 3-4. Pickett et al.'s (2002: 18) shovel tests.

Test Unit 11, on the north side of Hollingsworth House, produced 19th century domestic and architectural debris, but it also uncovered some of the best evidence of late 18th-century occupation of the site. Earlier work at Hollingsworth House, undertaken by TRC Garrow Associates with Pickett (2001) as principal investigator, also uncovered evidence of 18th-century occupation, as did subsequent work by Gibb (2003). None of these studies produced any artifact or stratigraphic data recognized as related to the War of 1812.

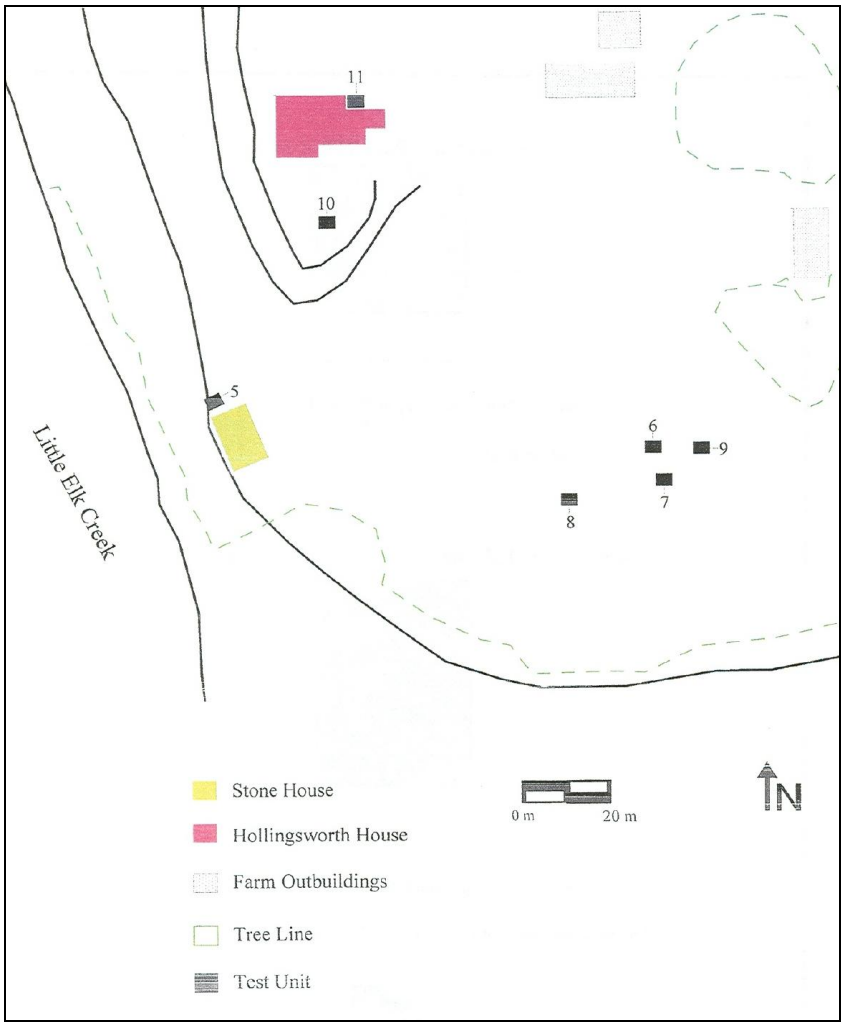

Figure 3-5. Test Units 5 through 11 (Pickett et al., 2002: 19).

Summary

Pickettt, in 2000, found a 3-pound cannonball during a metal detector survey, but made no claim to having found the War of 1812 earthwork, Fort Hollingsworth; but both he and Ward encountered artifact concentrations and soil anomalies east of the Stone House. The redoubt might be in that area. Alternatively, Johnston's (1881) remarks bear reexamination. Was he referring to the Stone House at Elk Landing, or was he referring to Hollingsworth House which, then as now stuccoed, might easily have been mistaken for stone masonry? The data summarized in this chapter, when combined with the findings described in Chapter 5, suggest that the Stone House post-dates the War of 1812. From the perspective of locating the fort, this is an important consideration. Long after the war, Thomas J. Sample, reminiscing in the *Cecil Whig*, described Fort Hollingsworth as "a mud or earth battery built just below the old stone house which stood on the lower wharf" (Sample in *Cecil Whig*, June 26, 1880). Immediately south of the Stone House is marsh; immediately south of the Hollingsworth House is a broad, level terrace (T_2) elevated above the marsh.

Chapter 4. Research Design

Introduction

Unlike previous investigations at Elk Landing, the work reported herein aims solely at identifying the location and collecting structural information on Fort Hollingsworth. The people of Cecil County erected the fort—really a simple breastwork according to firsthand accounts—in April 1813. The rampart extended approximately 300 ft, or 100 m, and the bordering ditch that provided the soil reputedly could hold up to 500 soldiers. (Why soldiers would be in the ditch remains unexplained, but may be attributed to the observer's unfamiliarity with military engineering and tactics.) Zebulon Hollingsworth, on whose houselot the citizens built this earthwork, presumably used slaves to return the rampart material to the ditch whence it came sometime after February 1815; which is to say, after news of the Treaty of Ghent reached the United States and a community celebration occurred on site. The problem, then, is to find a backfilled ditch that likely will have few artifacts related to the construction, use, and demolition of the structure; with redeposited earlier artifacts in the fill and post-1814 artifacts in the layers that have since formed. In short, the current research is an exercise in geomorphology and not conventional archaeology.

To meet these challenges, the Archeological Society of the Northern Chesapeake, with underwriting from the Archeological Society of Maryland and the Maryland Historical Trust, assembled a research team drawing on specialties from within and without the discipline. The methods of these outside disciplines, as well as those used by the excavators, are described in sections below. Our hypothesis has been that the ditch and possibly the base of the rampart will reveal themselves as discernible stratigraphic and geophysical anomalies relative to surrounding deposits. We base our survey area on eyewitness accounts written at the time and on the soil anomaly reported by Henry Ward (1984). Shovel test data from Pickett (2002) do not appear in his report, nor have his field notes been found; hence those soil data are lost to us; an unfortunate circumstance in that access to those data would have simplified the search and provided locational data on portions of the earthwork extending outside of the survey area.

Geophysical Survey

Peter C. Quantock, a master's candidate in the Department of Anthropology, University of Denver, and a specialist in geophysical survey, undertook geophysical survey of the lawn south of Hollingsworth House and east of the Stone House on July 7, 2011 (Quantock 2011), and on March 19 and 20, 2012 (Quantock 2012). The first of the two surveys employed magnetometry, the second ground-penetrating radar.

MAGNETOMETRY

The field team established seven contiguous grids, each measuring 30 m by 20 m, with the aid of a Sokkia SET3110 total station. The coordinates of the grids relate to the grid origin, measured in engineering feet, designated E1000/N1000 at a point 5 ft north of the northwest corner of Hollingsworth House. Quantock deployed a Geoscan G858 Magnetometer system with dual sensors along 61 transects, each 20 m long and 0.5 m apart (Figure 4-1). The gradient measurements between the two sensors adjusted for diurnal variations in the ambient magnetic field. Data from each of the grids were

downloaded into MagMap2000, which configured the data to run in Surfer®, a computer surface trend analysis package employing a kriging algorithm. The half-tone images were then arranged in a drafting program by means of grid corner coordinates. Anomalies in magnetic gradients were then identified and marked on the drawing.

Figure 4-1. Quantock operating magnetometer.

GROUND-PENETRATING RADAR

In the late winter of 2012, the research team returned to Elk Landing. A new grid, approximating the orientation of the magnetometer grid, but sharing a point of origin at E1063.03/N712.61was established. It consisted of a 50 m by 50 m square and a 25 m by 25 m rhomboid extending southward from the southeast quadrant of the main grid (Figure 4-2). Quantock deployed a GSSI SIR-3000 ground-penetrating radar system with 400 MHz dipole antennas and a survey wheel for distance calibration (Figure 4-3). The reflection profiles were collected using a 40 nanosecond time window (equal to depths of about 1.5 to 2.0 meters, or 5 to 7 feet). Velocity analysis measured depth in meters rather than time. One nanosecond in time depth equals 5 cm of actual depth. Forty reflection traces were collected per meter along transects of 50 and 25 meters in each grid. Profiles were spaced 0.5 m apart. Reflection data were processed to yield amplitude slice-maps and linear profiles. These images were used to delineate buried features. Analysis of vertical profiles aids in identifying stratigraphy and the structure of possible buried features in vertical slices. Spatial analysis in planview uses the amplitude slice-maps.

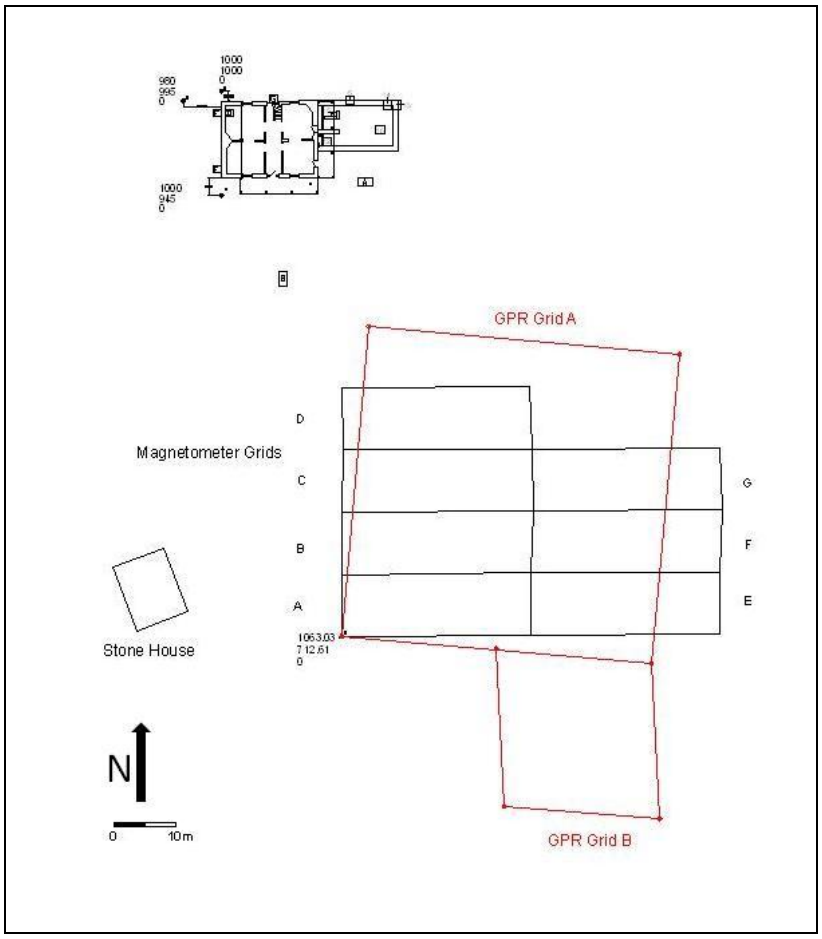

Figure 4-2. Magnetometer and radar grids.

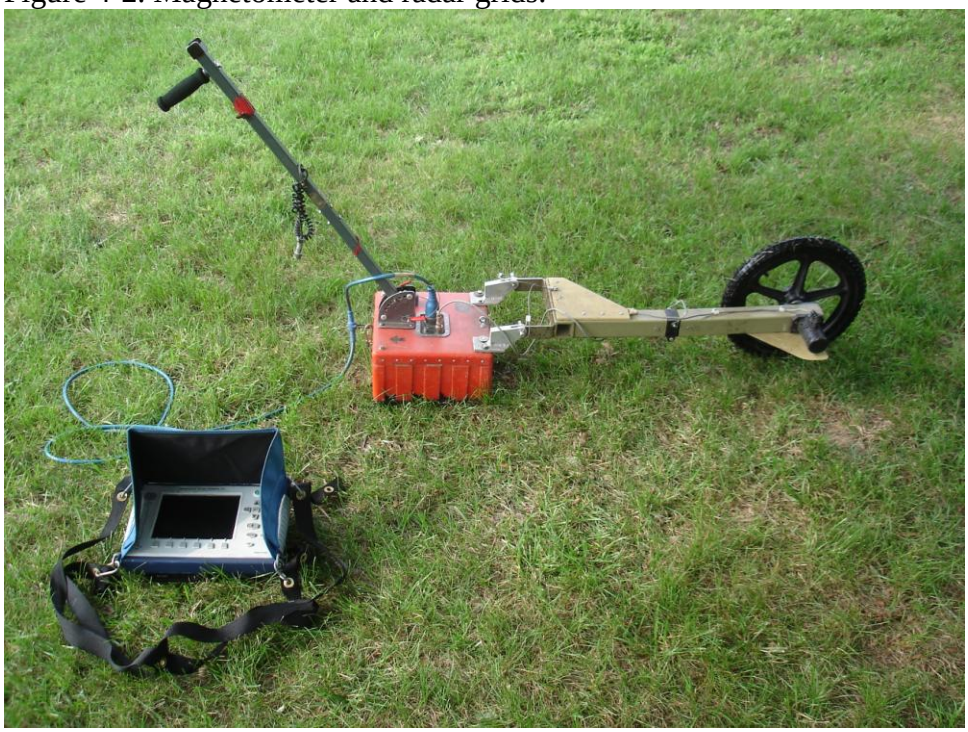
Figure 4-3. Radar unit.

Topographic Mapping

Geologist Bill Stephens of Stephens Environmental Consulting mapped Elk Landing, as well as the Hollingsworth Farm site (18CE29) south of the county correctional facility, between mid-March and mid-May, 2012. Using two surveying instruments, he collected a large number of point positions (easting, northing, and elevation above mean sea level) in engineering feet. The values, after computer processing, produced a topographic map with a contour interval of 0.5 ft. Rectified to the field grid, these contours were used to help interpret the geophysical data.

Soil Boring

Stephens also examined soils across the site and across the portion of the Hollingsworth Farm site south of the jail and extending into the marsh at the south end of the peninsula. He used a 4-inch bucket auger and recorded the soil colors, textures, and other characteristics on forms consistent with those used in geotechnical studies. Borings were 100 ft apart in the cultivated portions of Elk Landing and Hollingsworth Farm, and <50 ft apart in the lawn area of the suspected fort location. Borings on the easement were undertaken with the permission of the Maryland Historical Trust. All borings were mapped with a robotic total station. Borings from above the radar anomaly and on the ridge identified by topographic mapping hit very gravelly yellowish brown very fine sandy loam, the gravel poorly sorted. The material is consistent with the "dense, rocky, orange clay, at least one foot thick" described by Ward (1984).

Excavation

Jim Gibb, principal investigator for the project, reestablished the grid with a Sokkia SET3110 on May 25, 2012. The Maryland Historical Trust, in granting permission for excavation on that portion of Elk Landing on which it holds an historical easement, established a not-to-exceed number of 40 m^2. The research team, combining the geophysical, topographic, and soils data, had identified the hypothesized footprint of the earthwork, or at least that portion (the majority) which appeared to lie within the 50 m by 50 m radar grid. Given the limitations on the amount we could excavate, we agreed to excavate a series of 2 m by 1 m units along a single transect bisecting what appeared to be the main portion of the earthwork, which faces southeast toward Big Elk Creek. The proposed transect would cut through the portion of the radar anomaly that appeared to have the least complexity.

All units were aligned along there long axes to form a nearly contiguous trench 1 m wide (Figures 4-4 through 4-8). Thirteen of the 14 units were in a single line, a fourteenth expanding on one of the units to reveal a partially uncovered feature. Soils were removed stratigraphically and described in terms of color (Munsell values), texture, and gravel content. West wall profiles were drawn at a metric scale of 1:10 and elevations relative to site datum recorded to produce a continuous profile rectified to slope. Heavy gravel deposits that appeared to be natural were unscreened; all other deposits were screened through ¼-inch hardware mesh and collected by unit and stratum.

All artifacts except brick and coal were retained, washed, catalogued, and packaged per current state guidelines (Seifert 1999). Brick and coal were discarded in the laboratory after weighing and counting. The catalogue appears in spreadsheet format as

Appendix A. Continuing the catalogue begun in 2003 (Gibb 2003), lot numbers were assigned beginning with 364.

Historic artifacts were identified using standard sources such as Noël Hume's (1969) *Artifacts of Colonial America*. All lithic artifacts were catalogued using standard categories: decortication flake, cortical shatter, primary flake, secondary flake, tertiary flake, bipolar flake (not used), shatter, core, biface, projectile point, hammerstone, groundstone, and 'utilized' (*read* used) flake. Decortication flakes are those flakes with any trace of cortex, irrespective of size, shape, or other features. Primary flakes have prominent striking platforms (often triangular, but sometimes ogee) and bulbs of percussion, with one or two pronounced dorsal ridges seen in a flake's triangular or trapezoidal section. Primary flakes are the goal of unifacial working and the waste from bifacial working. Secondary flakes result from bifacial flaking. They exhibit: complex flake scars on one edge; a lenticular, often ground, striking platform; and a feathered, irregular edge opposite the striking platform. The ventral surface often exhibits pronounced convexity. Tertiary flakes are small versions of secondary flakes, but with more pronounced bulb of percussion resulting, often, from pressure, rather than percussion, flaking. A large number of flakes may derive from bipolar reduction of small quartz and quartzite pebbles. These are blocky with irregular edges, often with traces of cortex. Silicified, iron cemented sandstones were distinguished from cherts largely on the basis of grain, the latter appearing glassier and lacking obvious inclusions. All aboriginal pottery sherds were described in terms of temper and surface treatment. Gibb classified all artifacts by Class (e.g., lithic, ceramic, architecture), Subclass (e.g., quartz, Earthenware), Variety (e.g., cortical shatter, Pearlware), color or design, and quantity.

The Historic Elk Landing Foundation will curate the collection on site in perpetuity.

Figure 4-4. North units (left) and south units (right).

Figure 4-5. Excavating Units 2, 12, and 4, looking south.

Figure 4-6. Unit 1, foreground, looking north.

Figure 4-7. Calvin Martin and Ann Persson cleaning ditch profile.

Figure 4-8. Calvin Martin and Ann Persson, Units 4 and 12 west profile.

Chapter 5. Results

Introduction

This chapter is organized by the types of methods used and in the order in which they were used; viz., it begins with geophysical survey (archival research already has been discussed in Chapter 3), followed by topographic survey, soil boring, excavation, and laboratory analysis. All data are tied together by accurate, precise (standard error (< 0.1 ft, or 3 cm, in the horizontal) field measurements. Each approach builds on the results of previous work in a manner that is both scientific and conservative in its use of cultural resources and capital.

Geophysical Survey

Magnetometry revealed strong magnetic anomalies forming two linear patterns, in color on Figure 5-1. Two other linear anomalies appear in Grid C and a number of smaller, non-linear anomalies in grids D, E, and F. While the latter are interesting, our hypothesis focuses our attention on linear anomalies that might represent the ditch or rampart base of the earthwork. Without some other kind of independently acquired data, the magnetometry are inadequate for the economical testing of the hypothesis; viz., that the ditch and rampart lie on T_2 south of Hollingsworth House.

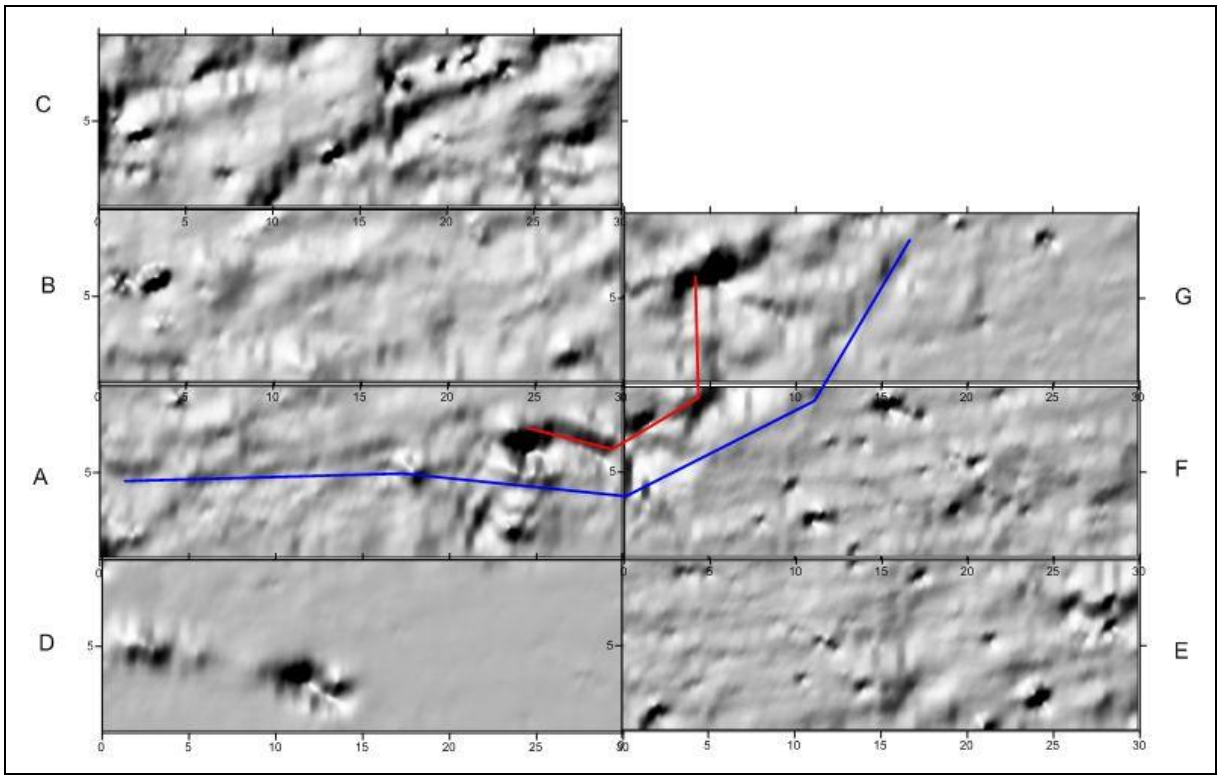

Figure 5-1. Compiled magnetic data.
N.B. Colored lines define linear anomalies in magnetic gradients.

To further test the area, the research team surveyed the approximate extents of the magnetometer grid with ground-penetrating radar. The unit produced one hundred 50-m

transects of data for the main grid and fifty 25-m transects for the supplemental grid. A graphic compilation of the strength and velocity of reflection data for the south half of Transect 27 of the main grid appears as Figure 5-2. While these images are the transformed data analyzed by operators, these are now used to create a series of horizontal time slices representing different depth ranges. These are more easily read and understood and, because they are planview transformations of data tied into a sitewide grid system, are more easily integrated with other kinds of data (e.g., topographic and excavation data, as well as other geophysical data). Figure 5-3 shows the transformations at 10 to 20 nanoseconds and 20-30 ns, converted to estimated depths of 0.5 to 1.0 m and 1.0 to 1.5 m below surface, respectively.

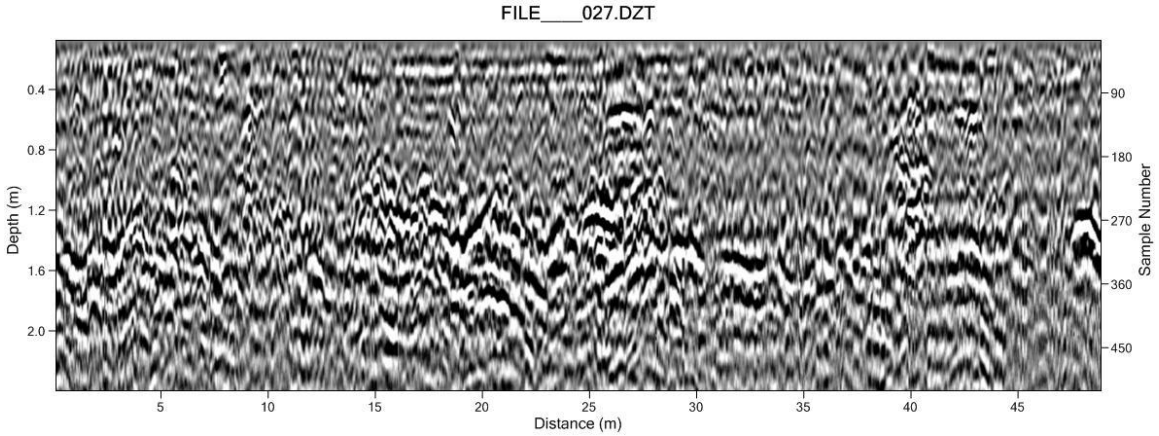

Figure 5-2. Vertical radar Transect 27, south half.

The deeper of the two patterns suggests a southeast facing front in excess of 150 ft long that turns sharply northwest at its east corner, which lies eastward of the survey grid. Low-density reflections, indicated by red arrows, might represent areas in which the base of the rampart was entirely removed, the soil returned to the ditch. The well-defined south line of the anomaly suggests that there has been little downslope erosion, although the irregularity of the northern edge of the south line and the western edge of the likely east rampart suggest considerable spread of ditch material that had not been returned to the ditch upon demolition. These feathery edges likely indicate that the interior walls of the rampart will be difficult to define archaeologically.

Topographic Survey

Topographic survey is critical for most archaeological investigations. The resulting contours, if the data are collected with sufficient care and accuracy, can reveal subsurface anomalies betraying a wide array of archaeological features. They also are integral to understanding the natural transformation processes acting on a site that, if not accounted for, could render some analyses such as surface trends in artifact distributions, misleading if not worthless. The principal questions driving this research—where is the fort and how was it configured—do not rely on the identification of horizontal patterning of artifacts, hence the issue of transformation of horizontal patterns by erosion or plowing downslope are not at issue. But, we are looking for a large subsurface feature that consisted of an earthen rampart of at least 300 ft in length, but unknown height, with an encircling ditch that could accommodate 500 men, built in 1813.

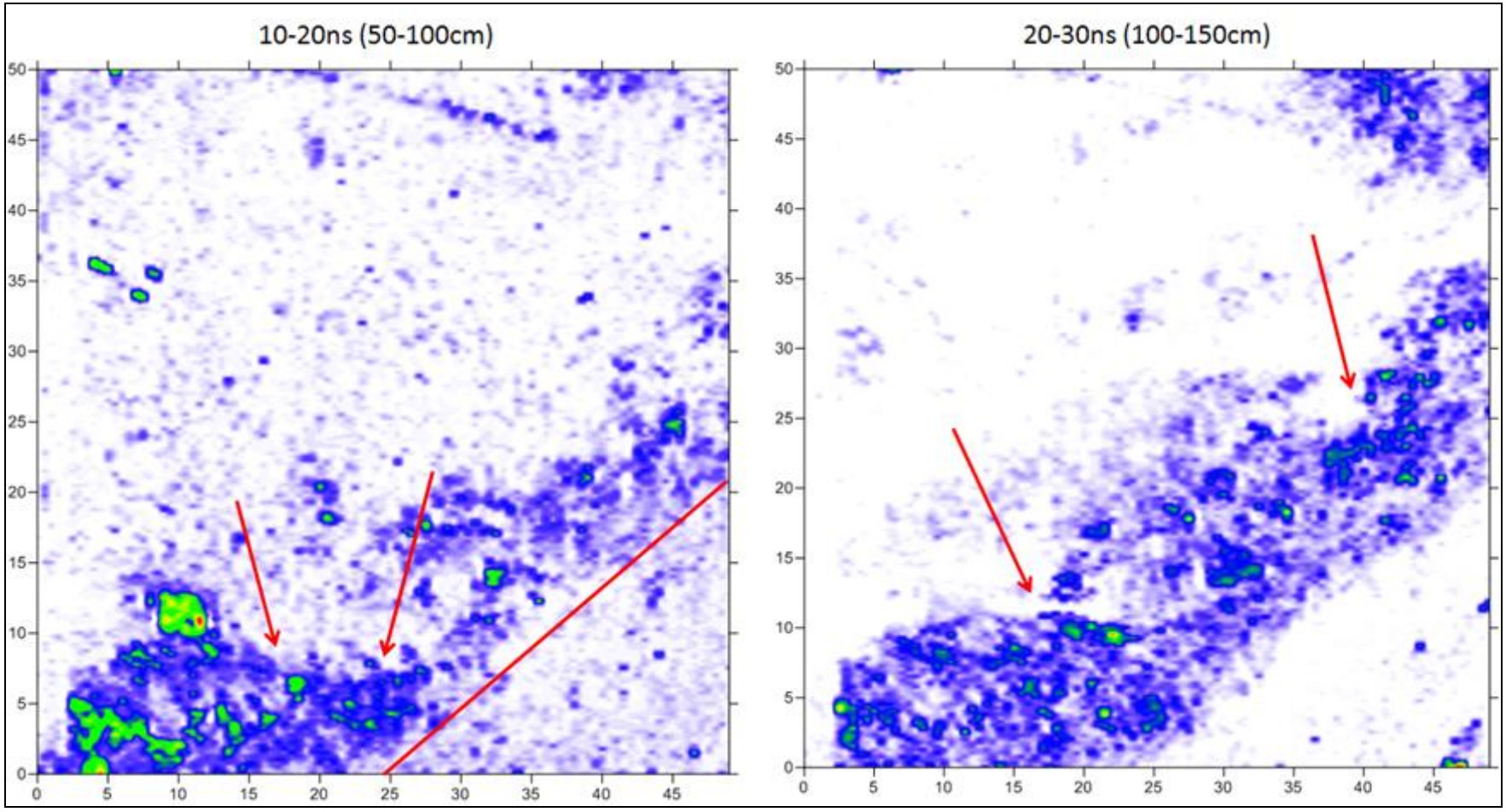

Figure 5-3. Time slice-maps from Grid A.

N.B. Figures show leading edge of probable ditch. Broader areas of blue shading may indicate ditch spoil that formed the base of the rampart. Green anomalies remain unexplained, but could signify gun emplacements or other features related to the occupation of the fort.

Even with the rampart fill returned to the ditch in 1815, some topographic evidence might be anticipated. The landform south of Hollingsworth House, however, did not promise success in isolating any kind of linear topographic features apart from the fall between T_2 and T_1. This feature curves to the northeast and extends to the county jail where it has been obliterated, in part, by construction.

Bill Stephens collected a large quantity of XYZ coordinates (eastings, northings, and their associated elevations) with high degrees of accuracy and precision. The resulting contour map, produced with contour intervals of 0.5 ft (0.15 m), revealed a very interesting pattern (Figures 5-4 And 5-5). Not only do the contours suggest a rectangle open on its long northwest (landward) facing side, but that configuration accords perfectly with the magnetic anomalies and reflection anomalies identified by Peter Quantock.

Excavation

Excavation at Elk Landing began May 26, 2012, the second day of the annual field session, the first having been devoted to reestablishing the survey grid and laying out three 2 m by 1 m excavation units. The field crew placed those units on a single transect that more or less bisected the radar anomaly at, or near, its narrowest point (Figure 5-6). Units 1, 2, and 3 were intended to test deposits north and south of the anomaly as well as within it. Achieving a complete, or near complete, profile section of the hypothesized earthwork simply required filling in between these units with up to 17 additional units (only 11 others were used).

Each unit revealed one of three types of soil profile:

Type 1:

Characteristics: Plowed soil (A_p horizon) overlying weathered subsoil (B_t horizon); A_p horizon is 10YR3/4 to 4/4 silty loam to silty clay loam with gravel inclusions. Generally excavated as Stratum 1 (an A_o horizon) and Stratum 2 (an A_p horizon) with a combined thickness of 10 cm to 20 cm. Plowscars noted and particularly deep and irregular in Unit 3 suggesting miring of the tractor in muddy soil. A surface hearth, found immediately below the sod in Unit 7 probably represents reënactor activity on site. It was left in situ, the unit effectively unexcavated.

Class members: Units 3, 5, 6. 7. 8, 9, 10, and 11.

Interpretation: Area within fort, away from the ditch, will little to no ditch spoil.

Type 2:

Characteristics: Plowed soil (A_p horizon) overlying unweathered mixture of fine sand and poorly sorted gravel (C horizon), the latter thin in places and overlying a B_t horizon; A_p horizon is 10YR3/4 to 4/4 gravelly silty loam to gravelly silty clay loam. Generally excavated as Stratum 1 (an A_o horizon) and Stratum 2 (an A_p horizon) with a combined thickness of 10 cm to 20 cm. No plowscars noted. Gravel fill extends up to 1.2 m below grade in Unit 4. Distinct lensing in the C horizon.

Class members: Units 2, 4, and 12.

Interpretation: Ditch that provided material for the rampart in April 1813 and backfilled by hand (lensing in C horizon) after February 1815.

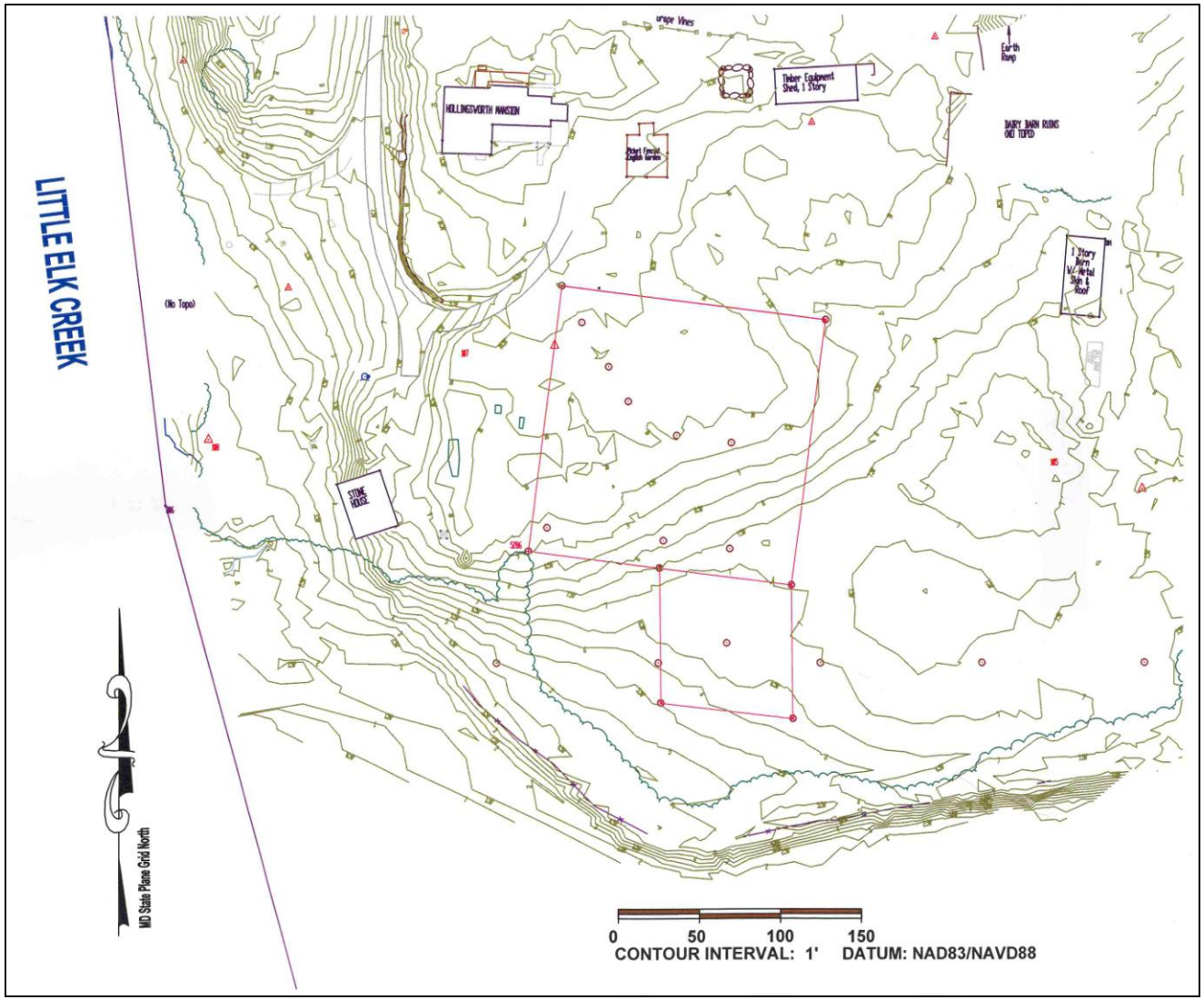

Figure 5-4. Topographic map of Elk Landing site.

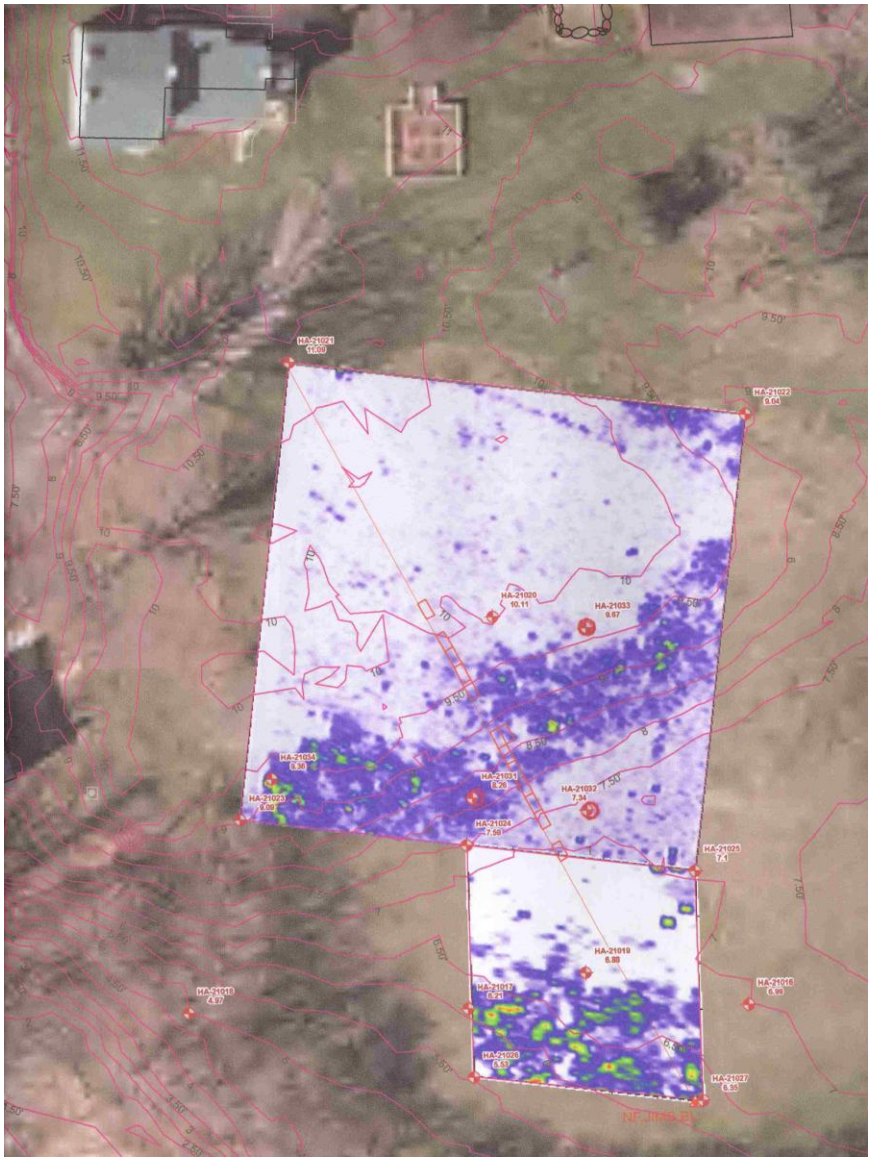

Figure 5-5. Topographic map with geophysical anomalies overlain.

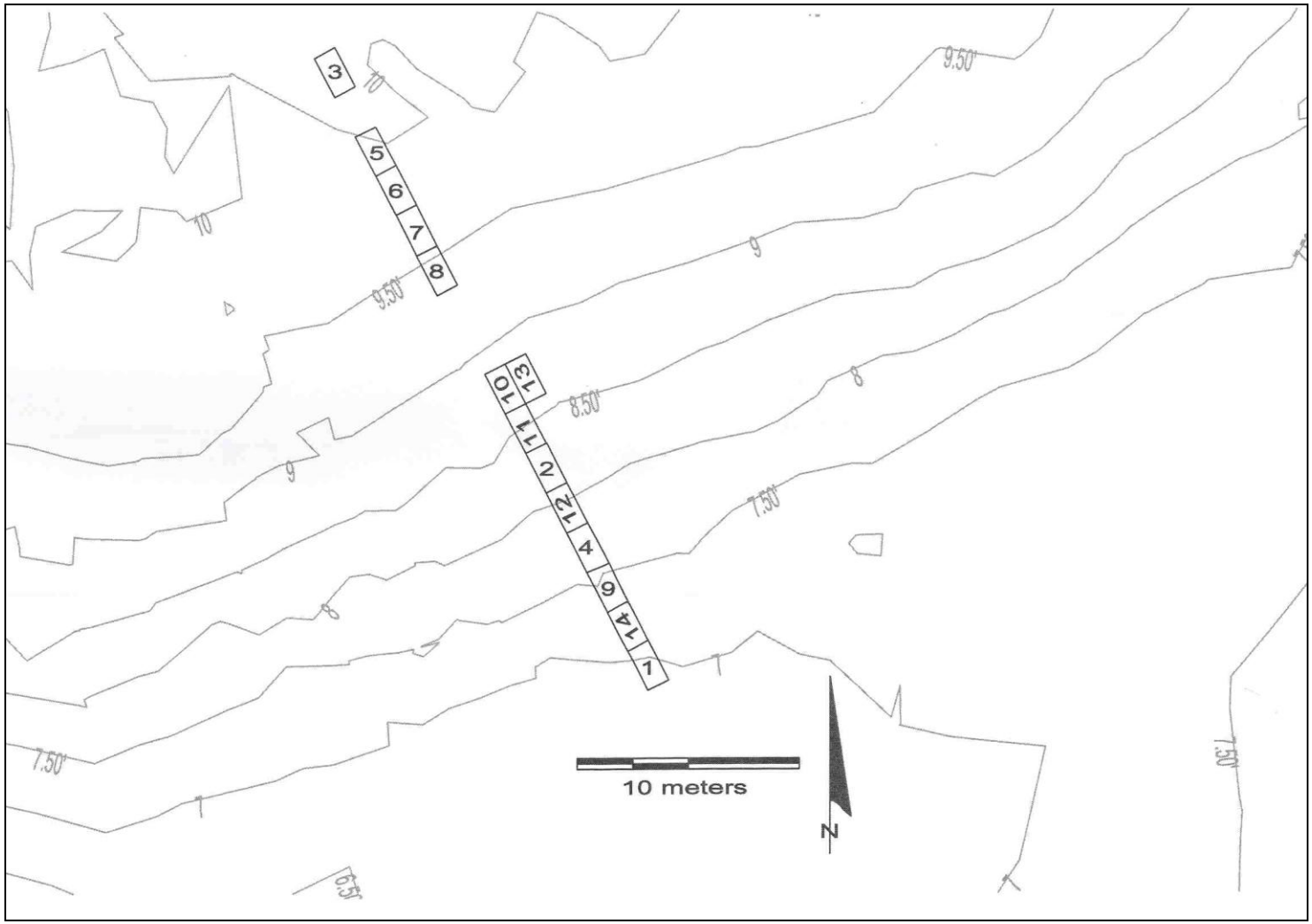

Figure 5-6. Excavation unit placement.

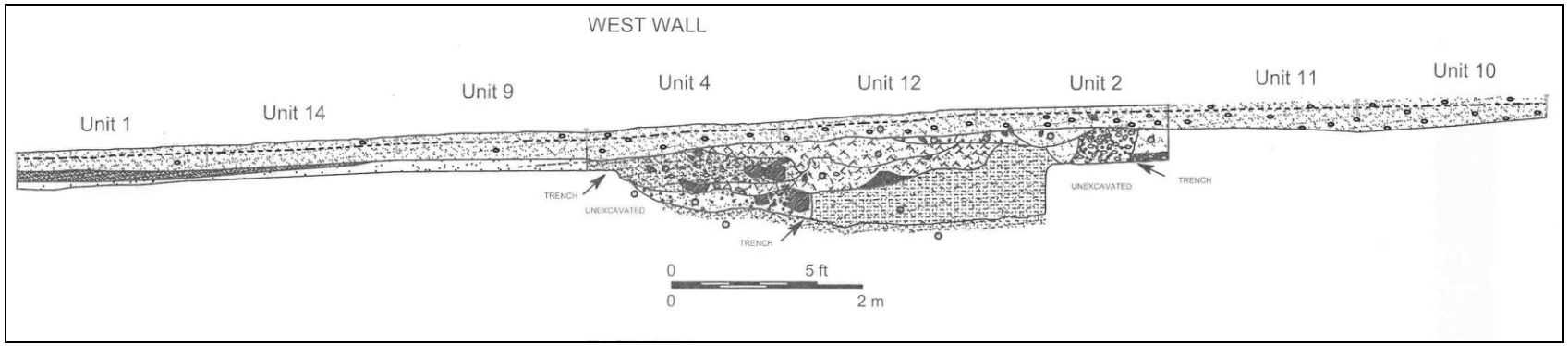

Figure 5-7. Profile drawing of the west wall profile of the transect.

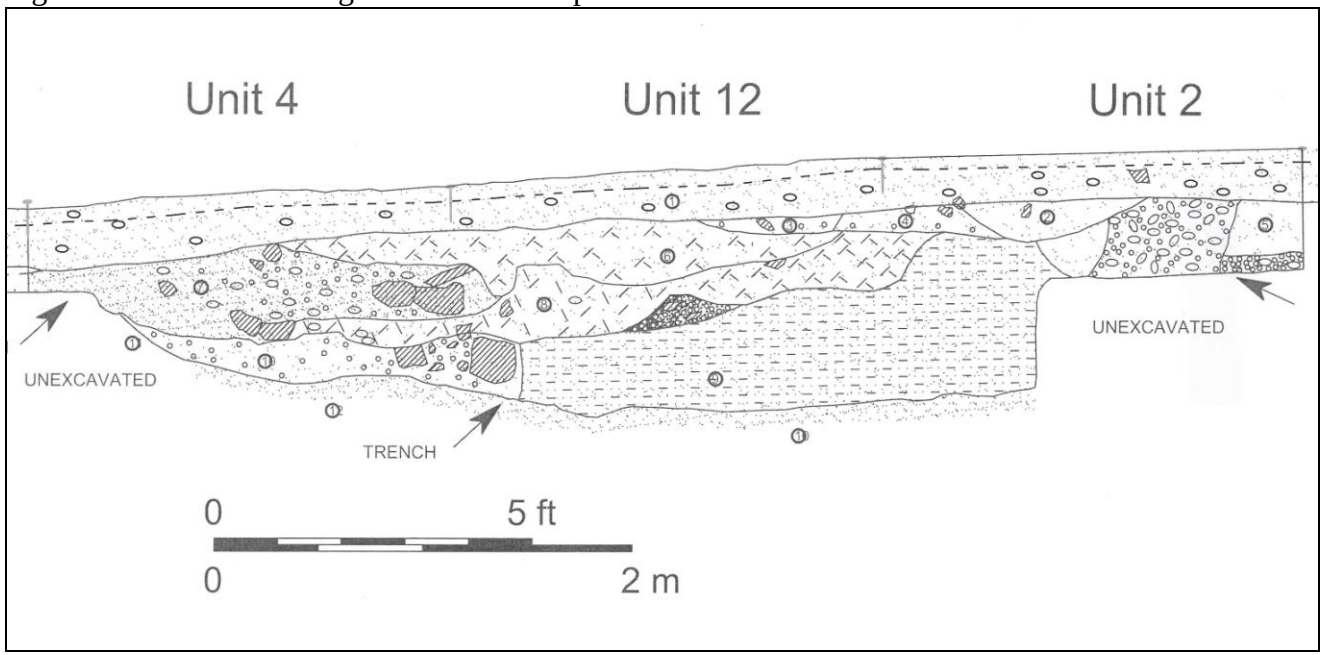

Figure 5-8. Detail of west profile at ditch.

Type 3:

Characteristics: Plowed gravelly soil (A_p horizon) overlying a thin buried Ap (bA_p) horizon that contains virtually no gravel and that overlies an equally gravel free B_t horizon; A_p horizon is 10YR3/4 to 4/4 gravelly silty loam to gravelly silty clay loam. Generally excavated as Stratum 1 (an A_o horizon) and Stratum 2 (an A_p horizon) with a combined thickness of 10 cm to 20 cm. The bA_p horizon is 10YR3/3 silty loam overlying the 10YR4/6 and 10YR3/3 silt loam B_t horizon. The bA_p and upper B_t horizons revealed significant quantities of aboriginal artifacts.

Class members: Units 1 and 14.

Interpretation: Pre-1815 plowed soil protecting from post-1815 plowing by spoil or eroded material from the ditch.

Laboratory

Excavation of 14 units, each measuring 2 m by 1 m, produced a markedly unimpressive 350 historic period artifacts (not including 20th-century plastics, skeet, coal and coal ash, and four oyster shell fragments; Table 5-1). Given the nature of the site (a cultivated field and sometime orchard, used briefly and intermittently as a breastwork), these results are neither surprising nor disappointing. Moreover, most come from the A_p or C horizons. They have been displaced vertically and the dateable material is too sparse and from too narrow an excavation corridor to reveal horizontal patterning. With the exception of one deformed lead round shot (Lot 390), and a possible English flint flake, none of the material is definitively military or can be related to the construction or use of Fort Hollingsworth. Dateable material, particularly ceramics, run the gamut of 18th-century Westerwald and White Salt-Glazed stonewares to early 20th-century decaled cream-colored wares. Architectural material (brick, nails, and window glass) are present, but in numbers and weights too low to suggest a building in or near the trench prior to, during, or after the War of 1812.

Aboriginal artifacts were recovered in greater numbers: 738 pieces of flaked stone and fire-cracked rock (Table 5-2; Figure 5-9), four projectile points (Figure 5-10), and 14 aboriginal pottery sherds, several of which appear to be Early Woodland wares with crushed hornblende temper consistent with Dame's Quarter ware descriptions (Table 5-3; Figure 5-11). All of the stone tools in Figure 5-10 are products of bifacial core reduction. Lithic debitage includes a variety of materials, but locally available silicified, iron-cemented sandstone dominates. Irregular pebbles of the material (Figure 5-12), some approaching boulder size, occur in the Pleistocene gravel bed that underlies the entire landform.

Given the very small area of plowed deposits sampled, little can be said about the aboriginal material. Deposits underlying the spoil south of the ditch may be well-preserved, having been protected from plowing, and especially motorized plowing, since 1813.

Table 5-1. Summary of artifacts by class.

Row Labels	Architecture	Arms	Clothing	Food	Fuel	Indeterminate	Miscellaneous	Transportation	Vessel	Totals
Bone										
Bone, Mammal				1			2			3
Indeterminate				4						4
Brick/Daub/Mortar										
Brick, common red	104									104
Ceramic										
Aboriginal Pottery									14	14
Earthenware, Black Glazed										
Redware									1	1
Earthenware, Creamware									2	2
Earthenware, Indeterminate White									1	1
Earthenware, Lead-glazed Buff									3	3
Earthenware, Lead-glazed Red									31	31
Earthenware, Lusterware									1	1
Earthenware, Pearlware									3	3
Earthenware, Unglazed Red									5	5
Earthenware, Whiteware									17	17
Earthenware,										
Whiteware/Pearlware									8	8
Porcelain, Chinese									1	1
Skeet		625								625
Stoneware, American Brown									1	1
Stoneware, Westerwald									1	1
Stoneware, White Salt-glazed									1	1
Yellowware									1	1
Composite										
Misc. modern								1		1
Glass										
Beverage bottle									5	5
Bottle									10	10
Bottle, machine-molded									19	19
Indeterminate						1			29	30
Lid liner									1	1
Safety glass								1		1
Table glass									2	2
Vial									1	1
Window glass	3									3

Wine Bottle									14	14
Indeterminate										
Misc. modern							0			0
Metal										
Buckle						1				1
Button, Metal			1							1
Indeterminate						1	4			5
Misc. modern							1			1
Nail, indeterminate	51									51
Shot, lead		2								2
Plastic										
Indeterminate							9			9
Lid				1						1
Misc. modern							5			5
Phonograph, 33 RPM							1			1
Shotgun shell		14								14
Shell										
Valve, Oyster				4						4
Stone										
Coal					220					220
Fossil							1			1
Slag/Coal Ash					2					2
Slate, indeterminate						1	1			2
Wood										
Charcoal					14					14
Totals	158	641	1	10	236	4	24	2	172	1248

Table 5-2. Aboriginal stone artifact summary.

Type	Chert, Black	Chert, Gray	Chert, Green	Chert, Replacement	Flint, English	Flint/Chert, calcined	Jasper, Red	Jasper, Yellow	Quartz	Quartzite	Rhyolite	Silicified ironstone	Steatite	Total
Biface	1							1	3	3		2		10
Core (lithic)									1	1		1		3
Fire-cracked rock										121				121
Flake, Decortication	2	4					1	1	69	24		40		141
Flake, Primary	2			1			2		4	11		17		37
Flake, Secondary	4	2					6	3	12	13	2	40		82
Flake, Shatter	3	2	1	1		3	5	1	33	5		38		92
Flake, Tertiary	20	8	4		1		10	7	41	12	2	137		242
Flake, Used							1	1				1		3
Hammerstone										2				2
Indeterminate													1	1
Projectile point									1	1	2			4
Total	32	16	5	1	2	3	25	14	164	193	6	276	1	738

Table 5-3. Aboriginal pottery.

Unit/Stratum	Aboriginal Pottery	Total
Unit 1	8	8
4	8	8
Unit 4	3	3
2	2	2
3	1	1
Unit 5	1	1
2	1	1
Unit 14	2	2
2	2	2
Total	14	14


Figure 5-9. Flakes (top) and fire-cracked rock, Unit 1, Stratum 4, Lot 367.

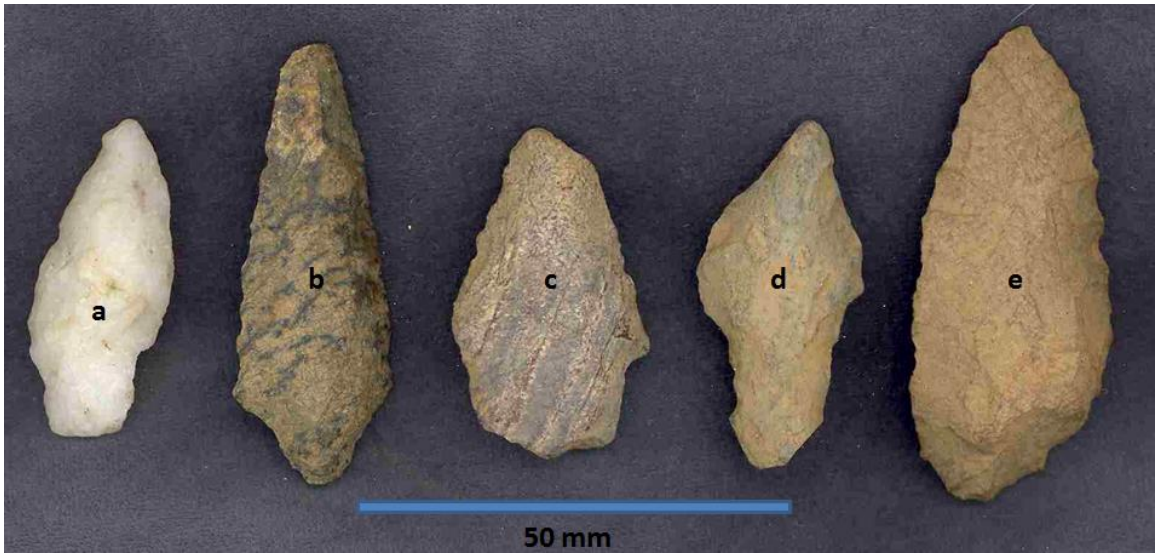

Figure 5-10. Projectile points.
(a) Unit 1, Stratum 4, Lot 367, untyped stemmed; (b) Unit 3, Stratum 4, Lot 375, Morrow Mountain II; (c) Unit 9, Stratum 1, Lot 386, Bare Island; (d) and (e) Unit 12, Stratum 2, Lot 394, Poplar Island and non-diagnostic biface, respectively.

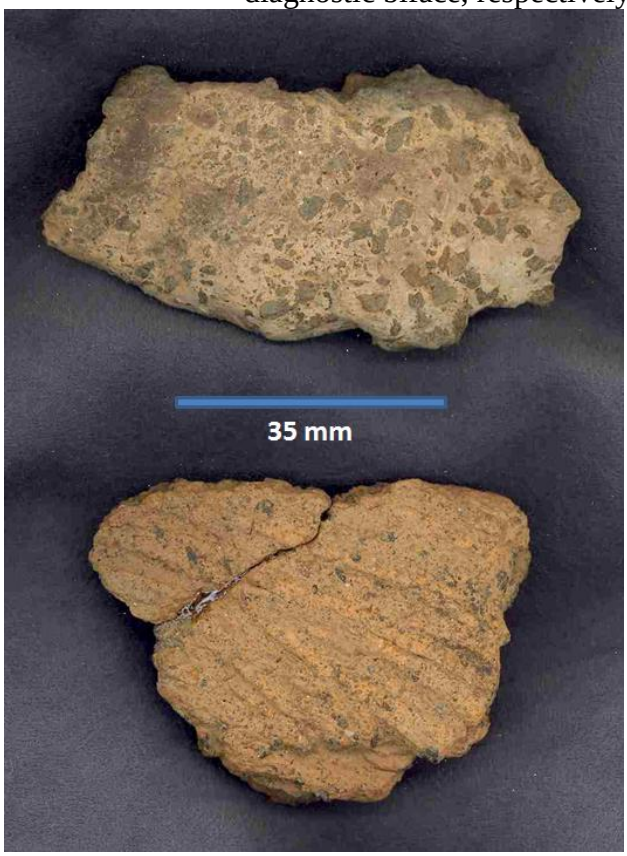

Figure 5-11. Aboriginal pottery, Unit 4, Stratum 2, Lot 389.
Top: eroded Dames Quarter; Bottom: fabric-impressed exterior.

Figure 5-12. Examples of local silicified iron-cemented sandstone.

Chapter 6. Summary, Interpretations, and Recommendations

Summary and Interpretations

Compilation of data from two geophysical surveys, detailed topographic mapping, soil boring, and excavation leaves no doubt about the identification of the ditch that produced the material with which Cecil County's residents built the Fort Hollingsworth rampart in April 1813. Lensing of material in the ditch suggests that ditch was purposefully backfilled (rather than filling gradually through erosion and/or plowing), and that may have occurred soon after the cessation of hostilities in January/February 1815. The radar signature is generally wider than the approximately 4 m (12 ft) wide ditch exposed by the excavation, a product of the deep gravels churned up and spread by ditch excavation and rampart construction. The gravelly soil returns strong, rapid reflections, in contrast to the top 0.50 to 1.0 meter A/B horizon which contains few gravel inclusions.

Deposits immediately outside of the ditch (relative to the rampart) may contain well-preserved aboriginal deposits dating to the Middle Archaic through Late Woodland periods. The excavations did not encounter significant base material from the rampart. Such deposits were avoided using the radar signature as a guide, to avoid deposits too complex to manage with the time, resources, and excavation limits in which the team operated. Where the rampart base survives, additional well-preserved aboriginal deposits likely will occur.

Recommendations for Proposed Construction Area

Based on the magnetic, radar, topographic, and excavation data, we can propose a ditch 12 ft wide defining most of the fort's south side and portions of its west and east sides. Thorough analysis of the individual radar sections should aid in identifying more precisely the ditch edges within the existing geophysical grid. A resurvey with radar that encompasses the 2012 survey area, mapped within the current site-wide system, should allow definitive definition of the ditch, and possibly of portions of the rampart base. With that data imported into the digital drawing file, coordinates can be calculated and the ditch and surviving rampart base staked on the ground. Accurately staked, the Elk Landing Foundation can consider interpretive plans.

Radar resurvey and analysis is a cost-effective means of mapping the fortification; however, "fleshing out" the fort through identification of gun emplacements and bivouacs cannot happen without the primary and defining tool of archaeology…excavation. Much can be learned with limited testing, guided by various survey techniques. To prohibit further excavation at Elk Landing…preserving for a posterity that is equally handcuffed in its efforts to realize the research and public education value of the site…is to depart from the principles of scientific inquiry and reject the very logic for preserving archaeological deposits, which is to allow conservative use of the resource to address new research questions.

References Cited

Cook, Edward R., and William J. Callahan

2001 Tree-ring Dating of the Hollingsworth House Site at Elk Landing, Cecil County, Maryland. Submitted to the Historic Elk Landing Foundation, Elkton, Maryland.

Crawford, Michael J. (Editor)

2002 *The Naval War of 1812: A Documentary History*, V.3, 1814-1815, Chesapeake Bay, Northern Lakes, and Pacific Ocean. Naval Historical Center, Department of the Navy, Washington, DC.

Dudley, William S. (Editor)

1992 *The Naval War of 1812: A Documentary History*, V.2, 1813. Naval Historical Center, Department of the Navy, Washington, DC.

Eshelman, Ralph E., Scott S. Sheads, and Donald R. Hickey

2010 *The War of 1812 in the Chesapeake*. The Johns Hopkins University Press, Baltimore.

George, Christopher T.

2000 *Terror on the Chesapeake: The War of 1812 on the Bay*. White Mane Books, Shippensburg, Pennsylvania.

Johnston, George

1881 *History of Cecil County, Maryland, and the Early Settlements around the Head of the Chesapeake Bay and on the Delaware River, with Sketches of some of the Old Families of Cecil County*. Reprinted in 1989. Genealogical Publishing Company, Baltimore.

Pickett, Dwayne W.

2002 Phase I Archaeological Survey and Limited Phase II Testing at Historic Elk Landing, Elkton, Maryland. Submitted to the Historic Elk Landing Foundation, Elkton, Maryland.

2001 Archaeological Testing in Advance of Renovation Activities at the Hollingsworth House, Historic Elk Landing, Elkton, Maryland. TRC Garrow Associates, Durham, North Carolina. Submitted to the Historic Elk Landing Foundation, Elkton, Maryland.

Pickett, Dwayne W., Keith Heinrich, and Christine Groben

2002 Limited Archaeological Testing within the Foundation of the Log Structure at Historic Elk Landing, Elkton, Maryland. Submitted to the Historic Elk Landing Foundation, Elkton, Maryland.

Quantock, Peter C.

2012 Ground-Penetrating Radar Survey at the Elk Landing Site (18CE60), Elkton, Maryland. Submitted to the Archeological Society of the Northern Chesapeake and the Archeological Society of Maryland.

2011 A Partial Geophysical Survey of the Elk Landing Site (18CE60), Elkton, MD. Archaeological Society of the Northern Chesapeake and the Archeological Society of Maryland.

Shaffer, Gary D., and Elizabeth J. Cole
1994 Standards and Guidelines for Archeological Investigations in Maryland. *Maryland Historical Trust Technical Report Number 2*.

Thomas, Ronald A.
1982 Intensive Archeological Excavations at the Hollingsworth Farm Site Elkton, Maryland. *Maryland Archeology* 18(1): 9-28.

Thomas, Ronald A., and Ted M. Payne
1981 Archaeological Data Recovery at the Hollingsworth Farm Site (18CE29), Cecil County, Maryland. Mid-Atlantic Archaeological Research, Newark, Delaware. Submitted to the Cecil County Commissioners, Elkton, Maryland.

United States Coastal & Geodetic Survey
1844 *Map of Coastal Maryland, detail, Cecil County.* On file at the Maryland Historical Trust and the Cecil County Historical Society.

United States Geological Survey
1970 *U.S.G.S. 7.5–Minute Topographic map, Conowingo Dam, MD–PA.* U.S. Government Printing Office, Washington, D.C.

1942 *U.S.G.S.* 1*5–Minute Topographic map, Havre de Grace, MD–PA.* U.S. Government Printing Office, Washington, D.C.

Ward, H. Henry
1986 The Prehistoric Sites of Elk Landing: A Reanalysis of the Dilks Collections from 18CE29, 18CE30, and 18CE31. The Maryland Historical Trust, Crownsville.

1984 Steelman House Archaeological Project. Center for Archaeological Research, University of Delaware, Newark.

Wheatley-Doyle, Michelle D.
1981 Core Log and Pollen Analysis: Big Elk Creek Marsh. In Ronald A. Thomas and Ted M. Payne, Archaeological Data Recovery at the Hollingsworth Farm Site (18CE29), Cecil County, Maryland. Mid-Atlantic Archaeological Research, Newark, Delaware. Submitted to the Cecil County Commissioners, Elkton, Maryland.

Appendix A: Artifact Catalogue, Elk Landing Site.

Lot	Unit	Str	Qty	Wght (g)	Class	Material	Variety	Type	Element	Comments
364	1	1	1		Food	Plastic	Lid	Disposable	rim	discarded
364	1	1	1		Arms	Plastic	Shotgun shell			discarded
364	1	1	22	28.40	Arms	Ceramic	Skeet			discarded
364	1	1	1	0.05	Vessel	Ceramic	Earthenware, Indeterminate White			
364	1	1	1	0.50	Vessel	Ceramic	Earthenware, Whiteware	Transfer-printed	base	light blue, floral
364	1	1	1	0.20	Architecture	Glass	Window glass			
364	1	1	3	1.50	Fuel	Stone	Coal			discarded
364	1	1	1	4.90	Lithic	Jasper, Red	Flake, Primary			
364	1	1	1	1.00	Lithic	Jasper, Yellow	Flake, Shatter			
364	1	1	1	1.60	Lithic	Quartz	Flake, Secondary			
365	1	2	11	8.50	Arms	Ceramic	Skeet			discarded
365	1	2	1	0.60	Food	Shell	Valve, Oyster			discarded
365	1	2	8	33.00	Fuel	Stone	Coal			discarded
365	1	2	5	19.20	Architecture	Metal	Nail, indeterminate			prob handwrought
365	1	2	1	1.20	Lithic	Steatite	Indeterminate			cultural?
365	1	2	1	10.70	Lithic	Quartz	Flake, Shatter			
365	1	2	1	6.30	Lithic	Quartz	Flake, Primary			
365	1	2	1	0.50	Lithic	Quartz	Flake, Secondary			
365	1	2	1	0.20	Lithic	Quartz	Flake, Shatter			
365	1	2	1	0.80	Lithic	Jasper, Yellow	Flake, Secondary			
365	1	2	2	0.60	Lithic	Jasper, Red	Flake, Tertiary			
365	1	2	1	1.30	Lithic	Chert, Black	Flake, Secondary			
365	1	2	1	1.30	Lithic	Quartzite	Flake, Secondary			
365	1	2	1	0.10	Lithic	Quartzite	Flake, Tertiary			
365	1	2	3	11.00	Lithic	Quartzite	Flake, Primary			
365	1	2	3	2.70	Lithic	Quartzite	Flake, Secondary			
365	1	2	2	0.60	Lithic	Quartzite	Flake, Tertiary			
365	1	2	1	1.20	Vessel	Ceramic	Earthenware, Pearlware	indeterminate	base	
365	1	2	1	14.20	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	base	jug or pot
365	1	2	1	2.00	Vessel	Glass	Beverage bottle	indeterminate	body	
365	1	2	1	0.50	Vessel	Glass	Table glass			colorless
365	1	2	2	0.40	Vessel	Glass	Indeterminate			
366	1	3	9	213.20	Lithic	Stone	Fire-cracked rock			
366	1	3	8	5.10	Fuel	Stone	Coal			discarded
366	1	3	6	10.60	Architecture	Brick/Daub/Mortar	Brick, common red			
366	1	3	1	1.60	Architecture	Metal	Nail, indeterminate			prob handwrought
366	1	3	2	3.50	Vessel	Ceramic	Earthenware, Whiteware	decaled	rim	
366	1	3	2	0.90	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	body	
366	1	3	2	3.70	Vessel	Glass	Wine Bottle		body	green
366	1	3	1	0.20	Vessel	Ceramic	Earthenware, Whiteware/Pearlware	dipped	body	
366	1	3	1	1.70	Lithic	Flint, English	Flake, Gun Flint			some edge damage; black, glassy
366	1	3	1	0.80	Lithic	Rhyolite	Flake, Secondary			

366	1	3	2	0.90	Lithic	Flint/Chert, calcined	Flake, Shatter			
366	1	3	1	1.00	Lithic	Silicified ironstone	Flake, Decortication			black
366	1	3	2	5.00	Lithic	Silicified ironstone	Flake, Primary			black
366	1	3	2	1.50	Lithic	Silicified ironstone	Flake, Secondary			black
366	1	3	5	2.50	Lithic	Silicified ironstone	Flake, Tertiary			black
366	1	3	6	5.20	Lithic	Silicified ironstone	Flake, Shatter			black
366	1	3	1	14.30	Lithic	Jasper, Red	Flake, Decortication			blocky, but scarred
366	1	3	1	3.70	Lithic	Jasper, Red	Flake, Primary			
366	1	3	4	3.00	Lithic	Jasper, Red	Flake, Secondary			
366	1	3	4	0.90	Lithic	Jasper, Red	Flake, Tertiary			
366	1	3	4	3.60	Lithic	Jasper, Red	Flake, Shatter			
366	1	3	1	0.90	Lithic	Jasper, Yellow	Flake, Secondary			
366	1	3	2	8.70	Lithic	Silicified ironstone	Flake, Shatter			yellow
366	1	3	3	3.50	Lithic	Quartzite	Flake, Secondary			
366	1	3	1	0.40	Lithic	Quartzite	Flake, Tertiary			
366	1	3	1	0.70	Lithic	Quartzite	Flake, Shatter			
366	1	3	6	61.00	Lithic	Quartz	Flake, Decortication			
366	1	3	2	2.50	Lithic	Quartz	Flake, Shatter			
366	1	3	1	1.50	Lithic	Quartz	Biface		tip	bifacial core reduction
367	1	4	18	1444.70	Lithic	Quartzite	Fire-cracked rock			
367	1	4	1	4.70	Lithic	Quartz	Projectile point	stemmed	whole	unfinished
367	1	4	6	22.50	Lithic	Quartz	Flake, Decortication			
367	1	4	2	0.80	Lithic	Quartz	Flake, Secondary			
367	1	4	1	0.20	Lithic	Quartz	Flake, Tertiary			
367	1	4	8	8.40	Lithic	Quartz	Flake, Shatter			
367	1	4	3	7.50	Lithic	Silicified ironstone	Flake, Decortication			red
367	1	4	8	4.00	Lithic	Silicified ironstone	Flake, Secondary			red
367	1	4	5	20.10	Lithic	Silicified ironstone	Flake, Shatter			red
367	1	4	2	3.50	Lithic	Silicified ironstone	Flake, Decortication			black
367	1	4	2	28.10	Lithic	Silicified ironstone	Flake, Primary			black
367	1	4	14	7.80	Lithic	Silicified ironstone	Flake, Secondary			black
367	1	4	7	1.80	Lithic	Silicified ironstone	Flake, Tertiary			black
367	1	4	2	0.50	Lithic	Silicified ironstone	Flake, Shatter			black
367	1	4	1	0.05	Fuel	Stone	Coal			discarded
367	1	4	2	4.20	Lithic	Silicified ironstone	Flake, Decortication			yellow
367	1	4	2	3.00	Lithic	Silicified ironstone	Flake, Primary			yellow
367	1	4	5	3.70	Lithic	Silicified ironstone	Flake, Secondary			yellow
367	1	4	6	1.50	Lithic	Silicified ironstone	Flake, Tertiary			yellow
367	1	4	1	0.50	Lithic	Silicified ironstone	Flake, Shatter			yellow
367	1	4	1	0.80	Lithic	Flint/Chert, calcined	Flake, Shatter			
367	1	4	1	8.80	Lithic	Silicified ironstone	Flake, Used			black
367	1	4	2	0.70	Lithic	Chert, Green	Flake, Tertiary			
367	1	4	1	1.00	Lithic	Chert, Green	Flake, Shatter			

367	1	4	1	0.90	Lithic	Chert, Gray	Flake, Decortication			
367	1	4	1	1.40	Lithic	Chert, Gray	Flake, Secondary			
367	1	4	1	0.05	Lithic	Chert, Gray	Flake, Tertiary			
367	1	4	1	0.40	Lithic	Chert, Gray	Flake, Shatter			
367	1	4	4	0.50	Lithic	Chert, Black	Flake, Tertiary			
367	1	4	2	1.00	Lithic	Chert, Black	Flake, Shatter			
367	1	4	1	18.10	Lithic	Jasper, Red	Flake, Used			
367	1	4	2	0.90	Lithic	Jasper, Red	Flake, Secondary			
367	1	4	3	0.80	Lithic	Jasper, Red	Flake, Tertiary			
367	1	4	1	3.20	Lithic	Jasper, Red	Flake, Shatter			
367	1	4	1	13.60	Lithic	Quartzite	Flake, Primary			
367	1	4	1	1.40	Lithic	Quartzite	Flake, Secondary			
367	1	4	2	0.40	Lithic	Quartzite	Flake, Tertiary			
367	1	4	1	1.70	Lithic	Quartzite	Flake, Shatter			
367	1	4	1	0.05	Architecture	Brick/Daub/Mortar	Brick, common red			
367	1	4	1	0.30	Vessel	Glass	Wine Bottle	indeterminate	indeterminate	green
367	1	4	1	0.90	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	
367	1	4	1	0.05	Food	Bone	Indeterminate	indeterminate	indeterminate	calcined
367	1	4	1	1.20	Arms	Metal	Shot, lead	indeterminate	whole	.025 inch
367	1	4	2	1.50	Vessel	Ceramic	Aboriginal Pottery	sand-tempered		incised? Coarse sand
367	1	4	5	8.00	Vessel	Ceramic	Aboriginal Pottery	sand-tempered		Coarse sand
368	1	4	1		Arms	Ceramic	Skeet			discarded
368	1	4	1	1.30	Vessel	Ceramic	Aboriginal Pottery	Dame's Quarter		eroded
368	1	4	1	0.70	Lithic	Silicified ironstone	Flake, Shatter			
368	1	4	2	11.10	Lithic	Quartz	Flake, Decortication			
368	1	4	5	258.70	Lithic	Quartzite	Fire-cracked rock			
369	2	2	18		Arms	Ceramic	Skeet			discarded
369	2	2	1		Fuel	Stone	Coal			discarded
369	2	2	1	0.50	Architecture	Glass	Window glass			
369	2	2	1	1.80	Lithic	Quartzite	Flake, Secondary			
369	2	2	1	1.20	Lithic	Quartz	Flake, Secondary			
369	2	2	1	0.70	Lithic	Quartz	Flake, Shatter			
370	2	3	7		Arms	Ceramic	Skeet			discarded
370	2	3	1		Fuel	Stone	Coal			discarded
370	2	3	1		Miscellaneous	Plastic	Phonograph, 33 RPM			
370	2	3	1	0.80	Lithic	Chert, Black	Flake, Shatter			
370	2	3	3	22.20	Lithic	Quartz	Flake, Decortication			
370	2	3	1	22.60	Lithic	Quartzite	Flake, Primary			
370	2	3	1	37.70	Lithic	Quartzite	Flake, Primary			
371	2	4	1		Fuel	Stone	Coal			discarded
371	2	4	1	0.40	Vessel	Ceramic	Earthenware, Whiteware	indeterminate	indeterminate	
371	2	4	1	1.20	Vessel	Glass	Bottle	indeterminate	indeterminate	colorless
371	2	4	1	0.70	Vessel	Glass	Indeterminate	indeterminate	indeterminate	white
371	2	4	1	0.20	Architecture	Brick/Daub/Mortar	Brick, common red			
371	2	4	1	10.10	Architecture	Metal	Nail, indeterminate	indeterminate	whole	prob handwrought

371	2	4	1	12.00	Indeterminate	Metal	Buckle	indeterminate		nearly intact
371	2	4	1	0.80	Lithic	Quartz	Flake, Secondary			
371	2	4	1	2.00	Lithic	Quartzite	Flake, Primary			
372	3	1	1		Arms	Ceramic	Skeet			discarded
372	3	1	1		Arms	Plastic	Shotgun shell			discarded
372	3	1	1		Miscellaneous	Plastic	Indeterminate			discarded
372	3	1	2	1.00	Vessel	Glass	Bottle, machine-molded			colorless
372	3	1	1	2.40	Miscellaneous	Metal	Indeterminate	indeterminate	indeterminate	T-shaped metal tab, 1 inch long
372	3	1	1	0.10	Lithic	Chert, Green	Flake, Tertiary			
372	3	1	1	0.60	Lithic	Quartzite	Flake, Secondary			
372	3	1	1	7.60	Lithic	Quartzite	Fire-cracked rock			
373	3	2	10		Arms	Ceramic	Skeet			discarded
373	3	2	1		Arms	Plastic	Shotgun shell			discarded
373	3	2	2	0.50	Fuel	Stone	Coal			discarded
373	3	2	1	1.10	Vessel	Ceramic	Earthenware, Whiteware	indeterminate	indeterminate	
373	3	2	1	0.30	Vessel	Glass	Indeterminate	indeterminate	indeterminate	colorless
373	3	2	3	5.10	Architecture	Brick/Daub/Mortar	Brick, common red	indeterminate		
373	3	2	2	3.00	Lithic	Quartzite	Flake, Shatter			
374	2	1	33		Arms	Ceramic	Skeet			discarded
374	2	1	1		Fuel	Stone	Coal			discarded
374	2	1	8	19.20	Architecture	Brick/Daub/Mortar	Brick, common red			
374	2	1	1	5.30	Architecture	Metal	Nail, indeterminate			prob handwrought
374	2	1	1	1.50	Vessel	Glass	Indeterminate	indeterminate	indeterminate	colorless
374	2	1	1	0.30	Vessel	Ceramic	earthenware, Whiteware	indeterminate	indeterminate	
374	2	1	3	0.40	Miscellaneous	Metal	Indeterminate	metal foil		
374	2	1	3	88.50	Lithic	Quartzite	Fire-cracked rock			
374	2	1	1	26.00	Lithic	Silicified ironstone	Biface	indeterminate	midsection	yellow/black
374	2	1	1	9.10	Lithic	Silicified ironstone	Flake, Primary	platform preparation		black
374	2	1	1	0.60	Lithic	Chert, Black	Flake, Tertiary			red/black
374	2	1	1	0.30	Lithic	Quartzite	Flake, Tertiary			
374	2	1	1	0.90	Lithic	Silicified ironstone	Flake, Shatter			red/black
374	2	1	1	4.90	Lithic	Silicified ironstone	Flake, Secondary			black
374	2	1	1	0.20	Lithic	Silicified ironstone	Flake, Tertiary			black
374	2	1	1	2.30	Lithic	Quartzite	Flake, Secondary			
374	2	1	1	0.40	Lithic	Quartz	Flake, Secondary			
374	2	1	2	6.70	Lithic	Quartz	Flake, Shatter			
375	3	4	1		Lithic	Quartzite	Projectile point	Morrow Mountain II		Coe 2006: Fig 34C
375	3	4	13		Fuel	Stone	Coal			discarded
375	3	4	2		Arms	Ceramic	Skeet			discarded
375	3	4	6	11.60	Architecture	Brick/Daub/Mortar	Brick, common red			
375	3	4	2	102.40	Lithic	Quartzite	Fire-cracked rock			
375	3	4	1		Transportation	Glass	Safety glass			discarded
375	3	4	4	11.50	Architecture	Metal	Nail, indeterminate			prob handwrought
375	3	4	1	1.50	Vessel	Glass	Table glass	indeterminate	body	colorless
375	3	4	1	0.30	Vessel	Ceramic	Earthenware, Whiteware/Pearlware	indeterminate	indeterminate	

375	3	4	1	0.20	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	clear glaze
375	3	4	2	2.10	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	black glaze
375	3	4	3	1.00	Vessel	Glass	Wine Bottle	indeterminate	indeterminate	green
375	3	4	2	26.70	Lithic	Quartz	Flake, Decortication			
375	3	4	2	0.50	Lithic	Quartz	Flake, Tertiary			
375	3	4	2	1.00	Lithic	Quartz	Flake, Shatter			
375	3	4	1	0.60	Lithic	Quartzite	Flake, Tertiary			
375	3	4	1	0.05	Lithic	Chert, Gray	Flake, Tertiary			
375	3	4	2	0.50	Lithic	Silicified ironstone	Flake, Shatter			black
375	3	4	2	10.80	Lithic	Silicified ironstone	Flake, Shatter			purple
375	3	4	1	5.90	Lithic	Silicified ironstone	Flake, Primary	platform preparation		
375	3	4	1	0.60	Lithic	Silicified ironstone	Flake, Tertiary			
376	4	1	1		Fuel	Stone	Coal			discarded
376	4	1	11		Arms	Ceramic	Skeet			discarded
376	4	1	1	3.00	Vessel	Glass	Indeterminate	indeterminate	indeterminate	colorless
376	4	1	6	305.00	Lithic	Quartzite	Fire-cracked rock			
376	4	1	1	9.50	Lithic	Silicified ironstone	Flake, Decortication			black
376	4	1	1	1.30	Lithic	Chert, Black	Flake, Tertiary			
376	4	1	1	0.20	Lithic	Chert, Black	Flake, Tertiary			
376	4	1	1	0.10	Lithic	Jasper, Yellow	Flake, Tertiary			
376	4	1	1	0.90	Lithic	Silicified ironstone	Flake, Tertiary			black
377	4	2	25		Arms	Ceramic	Skeet			discarded
377	4	2	2		Arms	Plastic	Shotgun shell			discarded
377	4	2	13	4.80	Fuel	Wood	Charcoal			discarded
377	4	2	2		Fuel	Stone	Coal			discarded
377	4	2	3	10.00	Architecture	Brick/Daub/Mortar	Brick, common red			moldy, discarded
377	4	2	2	14.10	Architecture	Metal	Nail, indeterminate	common	head, shank	prob handwrought
377	4	2	1		Miscellaneous	Plastic	Indeterminate			
377	4	2	2	8.60	Vessel	Glass	Bottle, machine-molded	indeterminate	body	colorless
377	4	2	1	1.40	Architecture	Glass	Window glass			
377	4	2	1	1.70	Vessel	Glass	Beverage bottle	indeterminate	body	amber
377	4	2	1	2.00	Vessel	Ceramic	Earthenware, Lead-glazed Buff	indeterminate	body	holloware, brown
377	4	2	1	0.70	Lithic	Silicified ironstone	Flake, Secondary			
377	4	2	1	0.10	Lithic	Silicified ironstone	Flake, Tertiary			
377	4	2	1	1.30	Lithic	Jasper, Yellow	Flake, Decortication			
377	4	2	2	0.60	Lithic	Silicified ironstone	Flake, Tertiary			yellow
377	4	2	1	4.70	Lithic	Jasper, Yellow	Flake, Used			
377	4	2	1	0.80	Lithic	Silicified ironstone	Flake, Decortication			black
377	4	2	2	0.90	Lithic	Chert, Black	Flake, Tertiary			
377	4	2	1	4.90	Lithic	Chert, Black	Flake, Primary			used
377	4	2	1	0.90	Lithic	Quartz	Flake, Secondary			
377	4	2	7	44.20	Lithic	Quartz	Flake, Decortication			
378	4	2	16		Arms	Ceramic	Skeet			discarded
378	4	2	6		Fuel	Stone	Coal			discarded
378	4	2	2	1.80	Food	Shell	Valve, Oyster			discarded

378	4	2	10	378.80	Lithic	Quartzite	Fire-cracked rock			one granitic
378	4	2	7		Miscellaneous	Plastic	Indeterminate			
378	4	2	3	1.70	Vessel	Glass	Bottle, machine-molded			colorless
378	4	2	1	10.90	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	base	mug, brown
378	4	2	1	2.60	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	body	brown
378	4	2	1	2.20	Architecture	Brick/Daub/Mortar	Brick, common red			
378	4	2	2	5.70	Lithic	Silicified ironstone	Flake, Shatter			red
378	4	2	1	1.70	Lithic	Quartz	Flake, Decortication			
378	4	2	3	0.90	Lithic	Quartz	Flake, Tertiary			
379	4	3	2	104.70	Lithic	Quartzite	Fire-cracked rock			
379	4	3	1	1.60	Vessel	Ceramic	Aboriginal Pottery	poss. Dame's Quarter	indeterminate	eroded
380	4	4	7	349.20	Lithic	Quartzite	Fire-cracked rock			
380	4	4	1	7.30	Lithic	Quartz	Flake, Decortication			
380	4	4	1	0.50	Lithic	Silicified ironstone	Flake, Tertiary			yellow
381	5	1	12		Arms	Ceramic	Skeet			discarded
381	5	1	3		Fuel	Stone	Coal			discarded
381	5	1	1	0.50	Food	Shell	Valve, Oyster			discarded
381	5	1	2	15.80	Architecture	Brick/Daub/Mortar	Brick, common red			discarded
381	5	1	1		Transportation	Composite	Misc. modern	Champion J-40 spark plug	discarded	
381	5	1	1		Miscellaneous	Plastic	Misc. modern			discarded
381	5	1	2	9.80	Vessel	Glass	Bottle, machine-molded			colorless
381	5	1	1	0.30	Vessel	Glass	Bottle, machine-molded			amber
381	5	1	1	0.60	Vessel	Ceramic	Earthenware, Pearlware	indeterminate	base	
381	5	1	1	0.30	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	holloware, brown
381	5	1	1	87.30	Lithic	Quartzite	Biface			failed
381	5	1	1	18.00	Lithic	Quartz	Flake, Shatter			
381	5	1	1	1.00	Lithic	Quartz	Flake, Decortication			
381	5	1	4	1.60	Lithic	Quartz	Flake, Tertiary			
382	5	2	20		Arms	Ceramic	Skeet			discarded
382	5	2	25		Fuel	Stone	Coal			discarded
382	5	2	5	3.50	Architecture	Brick/Daub/Mortar	Brick, common red			
382	5	2	1	12.30	Architecture	Metal	Nail, indeterminate	common	whole	prob handwrought
382	5	2	3	5.80	Vessel	Glass	Bottle	indeterminate	body	amber
382	5	2	2	3.60	Vessel	Glass	Bottle	indeterminate	body	colorless
382	5	2	1	5.60	Vessel	Glass	Wine Bottle	indeterminate	body	foot of seal?
382	5	2	1	0.30	Vessel	Glass	Vial	indeterminate	body	dark green
382	5	2	1	0.60	Vessel	Ceramic	Earthenware, Whiteware	indeterminate	indeterminate	
382	5	2	2	2.00	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	brown
382	5	2	1	0.40	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	clear glaze
382	5	2	12	352.30	Lithic	Quartzite	Fire-cracked rock			
382	5	2	1	0.30	Vessel	Ceramic	Aboriginal Pottery	no temper		
382	5	2	1	2.80	Lithic	Jasper, Yellow	Biface	drill	tip	modified point
382	5	2	1	81.20	Lithic	Quartzite	Biface	indeterminate	base	large, in production
382	5	2	1	35.70	Lithic	Chert, Black	Biface	indeterminate	base	large, in production

382	5	2	3	11.20	Lithic	Silicified ironstone	Flake, Decortication			red
382	5	2	1	15.40	Lithic	Silicified ironstone	Flake, Primary			red
382	5	2	1	0.30	Lithic	Silicified ironstone	Flake, Tertiary			
382	5	2	1	0.20	Lithic	Jasper, Red	Flake, Tertiary			
382	5	2	3	1.20	Lithic	Chert, Black	Flake, Tertiary			
382	5	2	1	0.50	Lithic	Jasper, Yellow	Flake, Secondary			
382	5	2	1	0.10	Lithic	Jasper, Yellow	Flake, Tertiary			
382	5	2	1	1.30	Lithic	Chert, Gray	Flake, Decortication			
382	5	2	1	2.40	Lithic	Silicified ironstone	Flake, Decortication			red
382	5	2	1	1.70	Lithic	Silicified ironstone	Flake, Decortication			black
382	5	2	1	2.30	Lithic	Silicified ironstone	Flake, Shatter			black
382	5	2	2	1.40	Lithic	Silicified ironstone	Flake, Tertiary			black
382	5	2	1	4.60	Lithic	Quartzite	Flake, Primary			
382	5	2	2	3.50	Lithic	Quartzite	Flake, Decortication			
382	5	2	1	1.20	Lithic	Quartz	Flake, Decortication			
382	5	2	2	0.20	Lithic	Quartz	Flake, Tertiary			
382	5	2	2	1.30	Lithic	Quartz	Flake, Shatter			
383	6	1	43		Arms	Ceramic	Skeet			discarded
383	6	1	9		Fuel	Stone	Coal			discarded
383	6	1	1		Fuel	Wood	Charcoal			discarded
383	6	1	2	10.50	Vessel	Glass	Bottle			colorless
383	6	1	1	0.70	Vessel	Glass	Bottle			amethyst
383	6	1	1	0.50	Vessel	Ceramic	Porcelain, Chinese	indeterminate	body	
383	6	1	1	0.30	Vessel	Ceramic	Earthenware, Creamware	indeterminate	body	
383	6	1	1	0.30	Vessel	Ceramic	Earthenware, Lead-glazed Red	manganese mottled	rim	holloware, brown
383	6	1	1	14.00	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	base	most glaze gone
383	6	1	1	1.80	Architecture	Metal	Nail, indeterminate	indeterminate	head	prob handwrought
383	6	1	6	172.50	Lithic	Quartzite	Fire-cracked rock			
383	6	1	5	55.20	Lithic	Quartz	Flake, Decortication			
383	6	1	1	0.70	Lithic	Silicified ironstone	Flake, Decortication			yellow
383	6	1	1	0.90	Lithic	Chert, Black	Flake, Tertiary			
384	6	2	7		Arms	Ceramic	Skeet			discarded
384	6	2	5		Fuel	Stone	Coal			discarded
384	6	2	1	8.30	Architecture	Metal	Nail, indeterminate	common	whole	prob handwrought
384	6	2	2	8.00	Architecture	Metal	Nail, indeterminate	common	shank	prob handwrought
384	6	2	3	2.60	Architecture	Brick/Daub/Mortar	Brick, common red			
384	6	2	1	23.00	Lithic	Quartzite	Fire-cracked rock			
384	6	2	1	3.10	Lithic	Silicified ironstone	Flake, Decortication			red
384	6	2	2	0.90	Lithic	Silicified ironstone	Flake, Tertiary			black
384	6	2	1	1.10	Lithic	Silicified ironstone	Flake, Primary			black
384	6	2	1	1.00	Lithic	Chert, Gray	Flake, Tertiary			white/black
384	6	2	1	1.90	Lithic	Quartz	Biface	indeterminate	tip	prob. Point
384	6	2	1	3.20	Lithic	Quartz	Flake, Decortication			
384	6	2	3	0.60	Lithic	Quartz	Flake, Tertiary			
384	6	2	1	4.30	Lithic	Quartz	Flake, Shatter			

384	6	2	3	2.20	Vessel	Glass	Bottle, machine-molded			colorless
384	6	2	1	0.50	Vessel	Glass	Wine Bottle			green
384	6	2	1	2.80	Vessel	Ceramic	Earthenware, Lead-glazed Buff	indeterminate	body	holloware, brown
384	6	2	1	4.20	Vessel	Ceramic	Yellowware	indeterminate	base	
384	6	2	6	3.30	Vessel	Ceramic	Earthenware, Whiteware/Pearlware	indeterminate	base	
	7	1	0		Miscellaneous	Indeterminate	Misc. modern			no artifacts recovered
385	8	1	62		Arms	Ceramic	Skeet			discarded
385	8	1	11		Fuel	Stone	Coal			discarded
385	8	1	3		Miscellaneous	Plastic	Misc. modern			discarded
385	8	1	2	17.90	Architecture	Metal	Nail, indeterminate	common	head	prob handwrought
385	8	1	2	4.60	Architecture	Metal	Nail, indeterminate	indeterminate	shank	prob handwrought
385	8	1	3	5.40	Architecture	Brick/Daub/Mortar	Brick, common red			
385	8	1	1	1.20	Vessel	Glass	Bottle, machine-molded	embossed		colorless
385	8	1	1	2.50	Vessel	Glass	Indeterminate			colorless
385	8	1	1	0.90	Vessel	Ceramic	Stoneware, White Salt-glazed	indeterminate	indeterminate	
385	8	1	1	0.30	Vessel	Ceramic	Earthenware, Creamware	indeterminate	indeterminate	
385	8	1	1	2.30	Vessel	Ceramic	Earthenware, Black Glazed RW	indeterminate	indeterminate	
385	8	1	1	8.10	Vessel	Glass	Wine Bottle			green
385	8	1	1	18.10	Lithic	Silicified ironstone	Biface	indeterminate	tip	black
385	8	1	1	0.40	Lithic	Flint, English	Flake, Tertiary			
385	8	1	1	0.40	Lithic	Chert, Black	Flake, Tertiary			
385	8	1	1	0.30	Lithic	Silicified ironstone	Flake, Tertiary			black
385	8	1	1	1.10	Lithic	Silicified ironstone	Flake, Tertiary			black
385	8	1	1	1.20	Lithic	Silicified ironstone	Flake, Secondary			black
385	8	1	1	17.10	Lithic	Quartzite	Flake, Decortication			
385	8	1	1	1.50	Lithic	Quartzite	Flake, Secondary			
385	8	1	3	6.70	Lithic	Quartz	Flake, Decortication			
385	8	1	1	12.10	Lithic	Quartz	Flake, Primary			
385	8	1	2	2.30	Lithic	Quartz	Flake, Secondary			
385	8	1	1	0.90	Lithic	Quartz	Flake, Tertiary			
385	8	1	2	3.30	Lithic	Quartz	Flake, Shatter			
385	8	1	7	108.20	Lithic	Quartzite	Fire-cracked rock			
386	9	1	18		Fuel	Stone	Coal			discarded
386	9	1	2		Fuel	Stone	Slag/Coal Ash			discarded
386	9	1	60		Arms	Ceramic	Skeet			discarded
386	9	1	4		Arms	Plastic	Shotgun shell			discarded
386	9	1	5	11.70	Architecture	Brick/Daub/Mortar	Brick, common red			
386	9	1	7	43.00	Architecture	Metal	Nail, indeterminate	common		prob handwrought
386	9	1	1	3.80	Vessel	Glass	Beverage bottle	20th C	body	light green
386	9	1	4	18.40	Vessel	Glass	Indeterminate		body	colorless
386	9	1	2	1.10	Vessel	Glass	Indeterminate		body	aqua
386	9	1	1	0.80	Indeterminate	Glass	Indeterminate			aqua
386	9	1	2	6.40	Vessel	Ceramic	Earthenware, Whiteware	decaled	rim	floral; mendable, plate
386	9	1	1	0.50	Vessel	Ceramic	Earthenware, Lusterware	indeterminate	body	
386	9	1	2	1.80	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	brown

386	9	1	1	4.40	Vessel	Ceramic	Stoneware, American Brown	indeterminate	body	
386	9	1	1	1.50	Vessel	Ceramic	Earthenware, Unglazed Red	indeterminate	indeterminate	poss faience
386	9	1	1	1.50	Vessel	Glass	Wine Bottle	indeterminate	body	green
386	9	1	1	0.05	Miscellaneous	Bone	Bone, Mammal	rodent	max/mandible	
386	9	1	1	0.30	Miscellaneous	Bone	Bone, Mammal	rodent	molar	
386	9	1	1	0.60	Miscellaneous	Stone	Fossil			poss peg tooth
386	9	1	1	0.90	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	highly sintered
386	9	1	5	327.00	Lithic	Quartzite	Fire-cracked rock			
386	9	1	1	6.70	Lithic	Rhyolite	Projectile point	Bare Is/Calvert	whole	some serration
386	9	1	1	3.10	Lithic	Chert, Black	Flake, Primary			
386	9	1	1	0.10	Lithic	Chert, Black	Flake, Tertiary			
386	9	1	1	0.30	Lithic	Chert, Gray	Flake, Shatter			
386	9	1	1	0.60	Lithic	Silicified ironstone	Flake, Tertiary			yellow
386	9	1	1	0.50	Lithic	Rhyolite	Flake, Tertiary			
386	9	1	1	6.50	Lithic	Chert	Flake, Primary			veins of chalcedony (?)
386	9	1	1	1.30	Lithic	Chert	Flake, Shatter			veins of chalcedony (?)
386	9	1	6	3.30	Lithic	Silicified ironstone	Flake, Tertiary			red
386	9	1	1	1.60	Lithic	Silicified ironstone	Flake, Decortication			red
386	9	1	1	35.30	Lithic	Silicified ironstone	Core (lithic)			black
386	9	1	5	6.30	Lithic	Silicified ironstone	Flake, Shatter			black
386	9	1	1	2.50	Lithic	Silicified ironstone	Flake, Secondary			black
386	9	1	6	3.90	Lithic	Silicified ironstone	Flake, Tertiary			black
386	9	1	1	1.20	Lithic	Quartzite	Flake, Tertiary			
386	9	1	1	7.90	Lithic	Quartzite	Flake, Primary			
386	9	1	2	31.00	Lithic	Quartzite	Flake, Decortication			
386	9	1	1	11.80	Lithic	Quartz	Flake, Shatter			
386	9	1	1	92.90	Lithic	Quartzite	Core (lithic)			
386	9	1	1	32.40	Lithic	Chert, Black	Flake, Decortication			
386	9	1	5	29.70	Lithic	Quartz	Flake, Decortication			
386	9	1	1	2.70	Lithic	Quartz	Flake, Primary			
386	9	1	1	1.30	Lithic	Quartz	Flake, Secondary			
386	9	1	2	0.50	Lithic	Quartz	Flake, Tertiary			
386	9	1	5	3.80	Lithic	Quartz	Flake, Shatter			
387	9	1	1	149.70	Lithic	Quartzite	Fire-cracked rock			
387	9	1	1	13.70	Lithic	Silicified ironstone	Flake, Primary			red
387	9	1	1	2.70	Lithic	Silicified ironstone	Flake, Decortication			black
387	9	1	1	0.60	Lithic	Silicified ironstone	Flake, Shatter			red
387	9	1	1	0.20	Lithic	Silicified ironstone	Flake, Tertiary			black
387	9	1	2	0.60	Lithic	Silicified ironstone	Flake, Tertiary			yellow
387	9	1	1	0.40	Lithic	Chert, Gray	Flake, Tertiary			
387	9	1	1	0.20	Lithic	Quartzite	Flake, Tertiary			
387	9	1	1	0.60	Lithic	Rhyolite	Flake, Tertiary			
387	9	1	1	0.40	Lithic	Quartz	Flake, Tertiary			
387	9	1	1	0.50	Architecture	Metal	Nail, indeterminate	indeterminate	shank	prob handwrought
388	9	2	5	322.20	Lithic	Quartzite	Fire-cracked rock			

388	9	2	2	0.80	Architecture	Brick/Daub/Mortar	Brick, common red			discarded
388	9	2	1	0.30	Fuel	Stone	Coal			discarded
388	9	2	1	8.20	Lithic	Silicified ironstone	Flake, Primary			black
388	9	2	3	0.80	Lithic	Silicified ironstone	Flake, Tertiary			black
388	9	2	1	0.40	Lithic	Silicified ironstone	Flake, Tertiary			yellow
388	9	2	1	0.80	Lithic	Silicified ironstone	Flake, Secondary			red
388	9	2	1	0.40	Lithic	Silicified ironstone	Flake, Tertiary			red
388	9	2	1	5.10	Lithic	Silicified ironstone	Flake, Shatter			red
388	9	2	1	2.10	Lithic	Silicified ironstone	Flake, Secondary			yellow
388	9	2	1	0.60	Lithic	Silicified ironstone	Flake, Decortication			yellow
388	9	2	1	2.00	Lithic	Quartzite	Flake, Secondary			
388	9	2	2	5.60	Lithic	Quartz	Flake, Decortication			
388	9	2	2	0.80	Lithic	Chert, Black	Flake, Tertiary			
388	9	2	1	1.10	Lithic	Chert, Gray	Flake, Tertiary			
389	4	2	1	42.40	Vessel	Ceramic	Aboriginal Pottery	Dame's Quarter		eroded surfaces
389	4	2	1	35.10	Vessel	Ceramic	Aboriginal Pottery	Dame's Quarter		cord-marked
390	10	1	1	26.30	Arms	Metal	Shot, lead	round shot	whole	~.7 inch dia; deformed
390	10	1	2		Arms	Plastic	Shotgun shell			discarded
390	10	1	51		Arms	Ceramic	Skeet			discarded
390	10	1	20		Fuel	Stone	Coal			discarded
390	10	1	4	20.10	Architecture	Metal	Nail, indeterminate	indeterminate		prob handwrought
390	10	1	15	227.90	Architecture	Brick/Daub/Mortar	Brick, common red	sandstruck		one bat
390	10	1	5	267.70	Lithic	Quartzite	Fire-cracked rock			
390	10	1	3	2.10	Vessel	Glass	Indeterminate			colorless
390	10	1	2	1.70	Vessel	Glass	Indeterminate			amethyst
390	10	1	1	1.10	Vessel	Glass	Beverage bottle			amber
390	10	1	2	0.30	Vessel	Ceramic	Earthenware, Whiteware	indeterminate	indeterminate	
390	10	1	2	1.70	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	black
390	10	1	1	1.20	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	brown
390	10	1	1	1.20	Vessel	Ceramic	Earthenware, Lead-glazed Buff	indeterminate	indeterminate	brown
390	10	1	1	1.20	Vessel	Ceramic	Earthenware, Unglazed Red	indeterminate	indeterminate	brown
390	10	1	1	1.60	Miscellaneous	Stone	Slate, indeterminate	indeterminate	indeterminate	slate
390	10	1	1	0.90	Lithic	Chert, Black	Flake, Tertiary			
390	10	1	3	2.20	Lithic	Silicified ironstone	Flake, Tertiary			black
390	10	1	3	1.20	Lithic	Silicified ironstone	Flake, Tertiary			red
390	10	1	2	2.20	Lithic	Silicified ironstone	Flake, Decortication			red
390	10	1	6	184.80	Lithic	Quartzite	Flake, Decortication			
390	10	1	2	1.80	Lithic	Quartz	Flake, Decortication			
390	10	1	1	43.00	Lithic	Quartzite	Hammerstone	small	whole	uncertain identification
391	10	2	1	0.70	Lithic	Quartzite	Flake, Shatter			
391	10	2	3	238.60	Lithic	Quartzite	Fire-cracked rock			
392	11	1	28		Fuel	Stone	Coal			discarded
392	11	1	66		Arms	Ceramic	Skeet			discarded
392	11	1	1		Miscellaneous	Metal	Misc. modern	tent stake	whole	7" wire type; discarded
392	11	1	3	3.80	Architecture	Brick/Daub/Mortar	Brick, common red			

392	11	1	2	5.30	Architecture	Metal	Nail, indeterminate	indeterminate	shank	prob handwrought
392	11	1	2	0.90	Vessel	Glass	Indeterminate	indeterminate	rim	amethyst
392	11	1	2	0.70	Vessel	Glass	Indeterminate	indeterminate		colorless
392	11	1	1	3.10	Vessel	Glass	Lid liner	Mason	rim	white
392	11	1	1	0.80	Vessel	Glass	Wine Bottle	indeterminate	indeterminate	green
392	11	1	1	5.40	Vessel	Ceramic	Stoneware, Westerwald	indeterminate	base	
392	11	1	1	4.70	Vessel	Ceramic	Earthenware, Pearlware	indeterminate	base	plate
392	11	1	3	2.50	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	
392	11	1	3	0.30	Food	Bone	Indeterminate	indeterminate	indeterminate	
392	11	1	5	167.00	Lithic	Quartzite	Fire-cracked rock			
392	11	1	1	40.30	Lithic	Quartz	Core (lithic)		whole	used
392	11	1	1	20.60	Lithic	Quartzite	Flake, Decortication			
392	11	1	1	2.20	Lithic	Quartz	Flake, Secondary			
392	11	1	7	1.90	Lithic	Quartz	Flake, Tertiary			
392	11	1	2	1.10	Lithic	Chert, Black	Flake, Secondary			
392	11	1	4	38.30	Lithic	Silicified ironstone	Flake, Decortication			red
392	11	1	1	0.40	Lithic	Silicified ironstone	Flake, Decortication			yellow
392	11	1	1	0.40	Lithic	Silicified ironstone	Flake, Tertiary			yellow
392	11	1	1	18.00	Lithic	Quartzite	Flake, Decortication			
392	11	1	1	6.50	Lithic	Quartzite	Flake, Primary			
392	11	1	1	0.70	Lithic	Silicified ironstone	Flake, Decortication			yellow
392	11	1	2	5.00	Lithic	Silicified ironstone	Flake, Decortication			black
392	11	1	1	3.70	Lithic	Silicified ironstone	Flake, Primary			
392	11	1	2	0.60	Lithic	Silicified ironstone	Flake, Tertiary			
393	12	1	72		Arms	Ceramic	Skeet			discarded
393	12	1	18		Fuel	Stone	Coal			discarded
393	12	1	2	58.70	Architecture	Brick/Daub/Mortar	Brick, common red	extruded	mildewed	discarded
393	12	1	15	177.10	Architecture	Brick/Daub/Mortar	Brick, common red	indeterminate	mildewed	discarded
393	12	1	3	10.00	Architecture	Metal	Nail, indeterminate	indeterminate		prob handwrought
393	12	1	1		Miscellaneous	Plastic	Misc. modern	vinyl record 33 RPM		
393	12	1	3	2.40	Vessel	Ceramic	Earthenware, Whiteware	indeterminate	rim	
393	12	1	1	0.10	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	brown
393	12	1	1	1.40	Vessel	Ceramic	Earthenware, Unglazed Red	indeterminate	indeterminate	
393	12	1	1	8.10	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	rim	black
393	12	1	1	2.10	Vessel	Glass	Bottle	indeterminate	neck	aqua
393	12	1	1	0.20	Vessel	Glass	Indeterminate	indeterminate	indeterminate	ligh green
393	12	1	1	0.20	Vessel	Glass	Beverage bottle	20th C	indeterminate	amber
393	12	1	1	0.40	Lithic	Jasper, Yellow	Flake, Tertiary			
393	12	1	3	1.70	Lithic	Silicified ironstone	Flake, Tertiary			yellow
393	12	1	1	3.60	Lithic	Silicified ironstone	Flake, Decortication			yellow
393	12	1	4	1.10	Lithic	Silicified ironstone	Flake, Tertiary			red
393	12	1	1	0.20	Lithic	Chert, Gray	Flake, Tertiary			
393	12	1	1	4.80	Lithic	Chert, Gray	Flake, Decortication			
393	12	1	1	4.70	Lithic	Silicified ironstone	Flake, Primary			
393	12	1	1	1.80	Lithic	Silicified ironstone	Flake, Secondary			

393	12	1	5	1.30	Lithic	Silicified ironstone	Flake, Tertiary			
393	12	1	1	0.70	Lithic	Silicified ironstone	Flake, Shatter			
393	12	1	3	5.60	Lithic	Quartz	Flake, Decortication			
393	12	1	2	3.60	Lithic	Quartz	Flake, Shatter			
393	12	1	3	0.80	Lithic	Quartz	Flake, Tertiary			
393	12	1	1	156.70	Lithic	Quartzite	Flake, Decortication			
393	12	1	2	153.10	Lithic	Quartzite	Fire-cracked rock			
393	12	1	1	250.00	Lithic	Quartzite	Hammerstone			
394	12	2	1		Arms	Ceramic	Skeet			discarded
394	12	2	1	7.60	Architecture	Metal	Nail, indeterminate	indeterminate	shank	prob handwrought
394	12	2	1	15.80	Lithic	Quartzite	Biface	indeterminate	whole	
394	12	2	1	5.10	Lithic	Rhyolite	Projectile point	Poplar Island	whole	heavily reworked
394	12	2	1	4.20	Lithic	Silicified ironstone	Flake, Primary			
394	12	2	1	5.30	Lithic	Rhyolite	Flake, Secondary			uncertain material
394	12	2	1	1.10	Lithic	Silicified ironstone	Flake, Decortication			
394	12	2	2	0.80	Lithic	Silicified ironstone	Flake, Tertiary			
394	12	2	1	4.50	Lithic	Quartzite	Flake, Decortication			
394	12	2	1	3.80	Lithic	Quartz	Flake, Primary			
394	12	2	1	66.80	Lithic	Quartzite	Fire-cracked rock			
395	13	1	3		Arms	Plastic	Shotgun shell			discarded
395	13	1	25		Arms	Ceramic	Skeet			discarded
395	13	1	9		Fuel	Stone	Coal			discarded
395	13	1	3	8.00	Architecture	Metal	Nail, indeterminate	indeterminate	shank	prob handwrought
395	13	1	9	211.20	Architecture	Brick/Daub/Mortar	Brick, common red			one glazed surface
395	13	1	1	7.00	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	body	holloware, brown
395	13	1	1	0.10	Vessel	Ceramic	Earthenware, Unglazed Red	indeterminate	indeterminate	
395	13	1	3	1.40	Vessel	Glass	Indeterminate	indeterminate	indeterminate	colorless
395	13	1	10	420.60	Lithic	Quartzite	Fire-cracked rock			
395	13	1	2	1.90	Vessel	Glass	Wine Bottle	indeterminate	indeterminate	green
395	13	1	1	0.10	Lithic	Chert, Black	Flake, Tertiary			
395	13	1	3	3.00	Lithic	Quartz	Flake, Decortication			
395	13	1	3	0.60	Lithic	Quartz	Flake, Tertiary			
395	13	1	1	3.70	Lithic	Quartz	Flake, Tertiary			
395	13	1	3	1.20	Lithic	Silicified ironstone	Flake, Tertiary			black
395	13	1	2	0.70	Lithic	Silicified ironstone	Flake, Shatter			black
395	13	1	2	1.10	Lithic	Silicified ironstone	Flake, Tertiary			red
395	13	1	4	1.30	Lithic	Silicified ironstone	Flake, Tertiary			yellow
395	13	1	1	0.10	Lithic	Silicified ironstone	Flake, Tertiary			red/white; poss chert
396	14	1	25		Fuel	Stone	Coal			discarded
396	14	1	49		Arms	Ceramic	Skeet			discarded
396	14	1	1	0.70	Vessel	Glass	Wine Bottle			green
396	14	1	5	8.70	Vessel	Glass	Bottle, machine-molded	panel	body	embossed
396	14	1	3	1.40	Vessel	Glass	Indeterminate	indeterminate	body	amethyst
396	14	1	1	0.40	Vessel	Ceramic	Earthenware, Whiteware	molded	rim	raised dots; eroded
396	14	1	2	1.20	Vessel	Ceramic	Earthenware, Whiteware	indeterminate	indeterminate	

396	14	1	1	8.60	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	base	mug, brown
396	14	1	2	1.50	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	body	brown
396	14	1	1	1.00	Vessel	Ceramic	Earthenware, Unglazed Red	indeterminate	indeterminate	
396	14	1	1	0.70	Vessel	Ceramic	Earthenware, Lead-glazed Red	indeterminate	indeterminate	oddly shaped, poss ornamental
396	14	1	11	7.60	Architecture	Brick/Daub/Mortar	Brick, common red			
396	14	1	7	44.10	Architecture	Metal	Nail, indeterminate			prob handwrought
396	14	1	1	0.80	Indeterminate	Stone	Slate, indeterminate			
396	14	1	1	1200.00	Indeterminate	Metal	Indeterminate	indeterminate	indeterminate	5" x 4" x .5" iron
396	14	1	7	283.80	Lithic	Quartzite	Flake, Decortication			
396	14	1	2	1.10	Lithic	Quartzite	Flake, Tertiary			
396	14	1	10	37.80	Lithic	Quartz	Flake, Decortication			
396	14	1	7	2.00	Lithic	Quartz	Flake, Tertiary			
396	14	1	2	6.20	Lithic	Quartz	Flake, Shatter			
396	14	1	1	1.50	Lithic	Quartz	Biface	indeterminate	indeterminate	poss point fragment
396	14	1	1	41.30	Lithic	Silicified ironstone	Flake, Primary			used; red
396	14	1	4	16.10	Lithic	Silicified ironstone	Flake, Decortication			black
396	14	1	1	3.70	Lithic	Silicified ironstone	Flake, Primary			black
396	14	1	14	6.10	Lithic	Silicified ironstone	Flake, Tertiary			black
396	14	1	3	2.40	Lithic	Silicified ironstone	Flake, Shatter			black
396	14	1	4	1.60	Lithic	Jasper, Yellow	Flake, Tertiary			
396	14	1	5	2.80	Lithic	Silicified ironstone	Flake, Tertiary			yellow
396	14	1	4	4.60	Lithic	Silicified ironstone	Flake, Decortication			red
396	14	1	11	6.20	Lithic	Silicified ironstone	Flake, Tertiary			red
396	14	1	1	1.40	Lithic	Silicified ironstone	Flake, Secondary			red
396	14	1	1	2.40	Lithic	Chert, Black	Flake, Secondary			
396	14	1	1	0.40	Lithic	Silicified ironstone	Flake, Tertiary			calcined
396	14	1	1	0.70	Lithic	Chert, Gray	Flake, Decortication			
396	14	1	1	2.10	Lithic	Chert, Gray	Flake, Secondary			
396	14	1	2	1.10	Lithic	Chert, Gray	Flake, Tertiary			
396	14	1	1	1.10	Clothing	Metal	Button, Metal	South Type 7	whole	
397	14	2	4	171.30	Lithic	Quartzite	Fire-cracked rock			
397	14	2	2	228.70	Lithic	Quartzite	Flake, Decortication			
397	14	2	1	0.70	Lithic	Quartzite	Flake, Primary			
397	14	2	5	15.10	Lithic	Quartz	Flake, Decortication			
397	14	2	1	0.10	Lithic	Quartz	Flake, Tertiary			
397	14	2	5	1.60	Lithic	Silicified ironstone	Flake, Tertiary			black
397	14	2	3	3.00	Lithic	Silicified ironstone	Flake, Secondary			red
397	14	2	6	2.10	Lithic	Silicified ironstone	Flake, Tertiary			red
397	14	2	4	4.20	Lithic	Silicified ironstone	Flake, Tertiary			red/black
397	14	2	5	4.20	Lithic	Silicified ironstone	Flake, Tertiary			yellow
397	14	2	1	4.50	Lithic	Chert, Black	Flake, Decortication			
397	14	2	1	0.10	Lithic	Chert, Black	Flake, Tertiary			
397	14	2	1	0.40	Lithic	Chert, Green	Flake, Tertiary			
397	14	2	1	0.10	Food	Bone	Bone, Mammal	indeterminate	indeterminate	calcined
397	14	2	2	1.50	Vessel	Ceramic	Aboriginal Pottery	indeterminate	indeterminate	

Appendix B: Credentials

James G. Gibb, Ph.D
2554 Carrollton Road
Annapolis, Maryland 21403
(443) 482–9593 JamesGGibb@verizon.net www.gibbarchaeology.net

EDUCATION

2010 Microsoft Certified Application Specialist—Access
2003 Certificate in Computer–Aided Design & Drafting, Anne Arundel Community College
1994 Ph.D. in Anthropology, Binghamton University
1985 M.A. in Anthropology, Binghamton University
1978 B.A. in Anthropology, State University of New York at Stony Brook

PROFESSIONAL EXPERIENCE

Thirty-six years of archaeological field and laboratory experience in six eastern states and Arizona, on sites ranging in age from early prehistoric to late 20th century. Author of approximately 180 technical reports. Thirty–three years of supervisory experience and 24 years as Principal Investigator in Sole Proprietorship consulting firm. Published one book, edited two others, published 20 professional papers, two dozen public information articles, and eight book reviews. More than six years as the consulting archaeologist to the City of Annapolis Historic Preservation Commission, during which I have conducted scores of assessments and reviewed the reports of others working in the City.

SELECT PUBLICATIONS

2009 Farm and Factory: Agricultural Production Strategies and the Cheese and Butter Industry. *Historical Archaeology* 43(2): 84-108. (with David J. Bernstein and Stephen Zipp)

2009 *The Archaeology of Institutional Life.* University of Alabama Press, Tuscaloosa. April M. Beisaw, senior editor.

2007 Western Maryland Red Earthenware: Consumer Choice at the Early 19th-Century Reiff Site. *Maryland Archeology* 43(1):1-14.

2006 Garrett's Chance #3 (18PR704): A Hilltop Paleoindian site in Southern Prince George's County. *Maryland Archeology* 42(2):1-6.

2006 Dove's Nest Afire! An Early Colonial House in Aquasco, Prince George's County. *Maryland Archeology* 42(2):7-14.

2006 Cellaring Wine at Melwood Park (18PR225), Prince George's County, Maryland. *Maryland Archeology* 43(1): 24-32.

2006 Median Ceramic Dates for Hagerstown Valley Pottery. *Maryland Archeology* 42(1): 15–23.

2006 Archaeology in the Zone: Can Plowed Sites Yield Bountiful Harvests? Forum organized and compiled by Julia A. King. *The Journal of Middle Atlantic Archeology Middle* 22: 114-117.

2003 The Archaeologist as Playwright. In *Ancient Muses: Archaeology and the Arts*, edited by John H. Jameson, Jr., Christine Finn, and John E. Ehrenhard, pp. 25-39. University of Alabama Press, Tuscaloosa and London. Reprinted in *The Heritage Reader*, edited by Graham Fairclogh, Rodney Harrison, John Jameson, Jr., and John Scholfield, pp. 545-556, Taylor & Francis Group, Boca Raton, Florida, 2008.

2000 Learning Cast Up from the Mire: Archaeological Investigations of Schoolhouses in the Northeastern United States. *Northeast Historical Archaeology* 29: 107–129. (with April M. Beisaw)

2000 Imaginary, But by No Means Unimaginable: Storytelling, Science, and Historical Archaeology. *Historical Archaeology* 33 (2): 1–6.

2000 Reflection, Not Truth, the Hero of My Tale: Responding to Lewis, Little, Majewski, and McKee and Galle. *Historical Archaeology* 33(2): 20–24.

1999 *A Layperson's Guide to Historical Archaeology in Maryland*. Archeological Society of Maryland. (Editor and contributor)

1997 Selby Bay Phase Subsistence Strategies at the Smithsonian Pier Site, Anne Arundel County, Maryland. *Maryland Archeology*. 33(1&2): 59–76. (with Anson H. Hines)

1997 Necessary but Insufficient: Archaeology Reports and Community Action. In "In the Realm of Politics: Prospects for Public Participation in African–American and Plantation Archaeology," edited by Carol McDavid and David W. Babson. Special Issue of *Historical Archeology* 31(3): 51–64.

1996 *The Archaeology of Wealth: Consumer Behavior in English America*. Plenum Press, New York.

1995 The History of Helb Barn. *The Calvert Historian* 10(2):5–18. (with Matt Croson)

1994 Dated Window Leads from Colonial Sites in Anne Arundel County, Maryland. *Maryland Archeology* 30(2):23–28.(with Al Luckenbach)

1994 English Trade Tokens from a 17th Century Colonial Site in Southern Maryland. *Maryland Archeology* 29(1 & 2):55–60.

1994 *"Dwell Here, Live Plentifully, and Be Rich": Consumer Behavior and the Interpretation of 17th Century Archaeological Assemblages from the Chesapeake Bay Region*. UMI, Ann Arbor Michigan.

1993 Dutch Pots in Maryland Middens; or, What light from yonder pot breaks? *Journal of Middle Atlantic Archaeology* 9:67–86. (With Wesley J. Balla)

1993 Publishing in Local History Journals. *Journal of Middle Atlantic Archaeology* 9:41–48.

1991 Gender, Activity Areas and Homelots in the 17th Century Chesapeake Region. *Historical Archaeology* 25(4):109-131. (with Julia A. King)

1990 Making Cheese: Archaeology of a 19th Century Industry. *Historical Archaeology* 24(1):18-33. (with David Bernstein and Daniel F. Cassedy)

1989 History Exhibits and Theories of Material Culture. *Journal of American Culture* 12(2):27-34. (with Karen Lee Davis)

1988 Unpuzzling the Past: Critical Thinking in History Museums. *Museum Studies Journal* 3:41-45. (with Karen Lee Davis)

PUBLICATIONS: PUBLIC INFORMATION AND INTERPRETATION

2001 *Recognizing and Reporting Archeological Sites*. Educational pamphlet produced for Free State Electric, Waldorf, Maryland. Greenhorne & O'Mara, Greenbelt, Maryland (with Varna Boyd).

2001 Fischer's Station on the Chesapeake Beach Railway, Anne Arundel County, Maryland (1908–1935). *The Calvert Historian* 27: 7–42.

2000 Lessons…from Our Long Lost Neighbors: Oysters eaten 1,800 years ago have a moral for our times. *Bay Weekly* 8(46).

2000 Linden: An Urban Farmstead in Prince Frederick, Calvert County, Maryland (1868–1988. *The Calvert Historian* 26: 39–55.

2000 Animating History at Colonial London Town. *Chesapeake Life Magazine* (January–February): 92–95. (with John Kille)

1999 Revolutionary Spirits: A Play in Two Acts. Performed at London Town Historic Park by the London Town Publik House Players, April 1999.

1998 Ghosts of London: A Play in Three Acts. Performed at London Town Historic Park by the London Town Publik House Players, October 1998; reprised October 1999.

1998 Letters from London: A Provident Visit. *The New Bay Times* August 6–August 12, 1998.

1998 Letters from London II. *The New Bay Times* June 25–July 1, 1998.

1998 Letters from London: Sheriff Rawlings Expected Trouble; He Found it. *The New Bay Times* May 28–June 3, 1998.

1997 The Dorsey–Bibb Tobacco Flue: Innovation and Entrepreneurship in Southern Maryland Agriculture. *The Calvert Historian* 11(2): 4–20.

1995 Helb Barn: A Pennsylvania German Barn in Calvert County. *The Calvert Historian* 10(2): 5–18. (with Matthew E. Croson)

1994 Railroad Ghosts. *The New Bay Times* 2(10): 14–16 (May/June 1994). Reprinted in *The Calvert Historian* 21(1): 63–70.

1993 Chesapeake Bay Life: Finding History through Garbage. *The New Bay Times* 8(1):10 (July 29–August 11, 1993). Reprinted as "Archaeological Clues to Life in Colonial Calvert County: The William Stephens Land Site, c.1660–1680," in *The Calvert Historian* 21(1): 7–16.

1990 A Road Without Rails: The Baltimore and Drum Point Railroad, 1868–1891. *The Calvert Historian* 5(2):20–35.(With Paula F. Mask)

1990 Using Calvert County's Agricultural Censuses. *The Calvert Historian.* 5(2):9–17.

1990 Charlotte Hall Academy, 1797–1900. *St. Mary's Chronicles* 38(2): 305–311.

1988 National Geographic Sponsors Museum Archaeology. *Patterson Points* 3(2):2.

1988 Quarry Farm Harvest. *Chemung Historical Journal* 34(2):3818–3819.

1988 Center Lisle Tannery, 1858–c.1920. *Broome County Historical Society Newsletter* (Spring 1988).

1986 The Role of a Covered Bridge. *Broome County Historical Society Newsletter* (Spring 1986). Reprinted in the *Empire State Courier: The Journal of the New York State Covered Bridge Association*.

Peter C. Quantock

1637 Preston Road
Alexandria, VA 22302
quantock74@gmail.com
240-601-4549

EDUCATION

2012 MA candidate, Anthropology Program, University of Denver
2007 BA in Ancient Studies, University of Maryland Baltimore County

FIELD SCHOOLS

2007 Clunia del Sulpicia, Clunia, Spain
Dr. Francesc Tuset and Dr. Miguel Ángel de la Iglesia, Directors
2006 Field School in Historical Archaeology, University of Maryland,
Dr. Mark P. Leone, Director

RESEARCH INTERESTS

Public Archaeology, Colonialism, Cultural Resource Management, Settlement Patterns, Geoarchaeology, Geophysics

PROFESSIONAL EXPERIENCE

2012 Crew Chief, University of Denver Field School in Historical Archaeology
2007-present Research Assistant, Port Tobacco Archaeological Project, Port Tobacco, MD
2007-2011 Assistant Archaeologist, Gibb Archaeological Consulting, Annapolis, MD
2007-2008 Archaeology Teaching Assistant, University of Maryland Field School in Historical Archaeology

GRANTS AND SCHOLARSHIPS

2012 Archaeological Society of Maryland Grant for Geophysical Survey
2010-12 Graduate Teaching Assistantship, University of Denver
2010-12 Dean's Scholarship, University of Denver
2011 Charles County Archaeological Society of Maryland, Inc Grant for Geophysical Survey
2009 Community Foundation of Charles County Grant
2007 The Explorers Club Washington Group Exploration and Field Research Grant

PUBLICATIONS

"Memory vs. Archaeology at Kingston"(in press). Anne T. Hayward, Peter C. Quantock, and Kelley M. Walter. *Northeast Historical Archaeology.*
"Low-Density Archaic Sites: Are We Finding but not Recognizing Them?" (2009). *Maryland Archaeology* 45(1 & 2):51-57. Kelley M. Walter, Peter C. Quantock and Anne T. Hayward.
"Port Tobacco:A Shifting Settlement Pattern" (2009). *Maryland Archaeology* 45(1 & 2):58-66. Peter C. Quantock, Anne T. Hayward and Kelley M. Walter.

PRESENTATIONS AND CONFERENCE PAPERS

"Port Tobacco: Geophysical Survey of a Colonial Port Town" (2012). Paper presented at the 45th Annual Meeting of the Society for Historical Archaeology, Baltimore, MD.
"Testing of a Middle Archaic Site at Elizabeth Hills St. Mary's County, MD" (2010). Paper presented at the Archaeological Society of Maryland Spring Symposium, Derwood, MD.
"Port Tobacco: A Shifting Settlement Pattern" (2010). coauthored by Anne Hayward and Kelley Walter, Paper presented at the Annual Middle Atlantic Archaeological Conference, Ocean City, MD.
"The Swann Site: Oysters on the half shell" (2009). Paper presented at the Charles County Archaeological Society, Port Tobacco, MD.

"Lucy Henson's Laundering and Health Care Services" (2009). coauthored by Dr. James Gibb, Paper presented at the Annual Middle Atlantic Archaeological Conference, Ocean City, MD.
"Port Tobacco: Survey of a 350 year old town" (2009). Paper presented at the Annual Middle Atlantic Archaeological Conference, Ocean City, MD.
"Dividing the Space of this Place: Nineteenth-Century Port Tobacco, Maryland" (2008). coauthored by Dr. April Beisaw, Paper presented at the Annual Council for Northeast Historical Archaeology, St. Mary's, MD.
"Single Component Late Archaic Sites in Prince George's and Cecil Counties, Maryland" (2008). Paper presented at the Annual Middle Atlantic Archaeological Conference, Ocean City, MD.

TECHNICAL REPORTS
Ground-Penetrating Radar at the Point Lookout Confederate Cemetery, St. Inigoes, MD (2012). Peter C. Quantock. Prepared for the Descendants of Point Lookout Prisoners of War Organization.
Ground-Penetrating Radar Survey at the Elk Landing Site (18CE60), Elkton, MD (2012). Peter C. Quantock. Prepared for the Northern Chesapeake Chapter of the Archaeological Society of Maryland, Inc.
Search for Newtowne Chapel (18ST859), Newtown Neck, Leonardtown, St. Mary's County, Maryland (2011). James G. Gibb, Scott D. Lawrence, and Peter C. Quantock. Prepared for Fr. Brian Sanderfoot, Pastor, St. Francis Xavier Roman Catholic Church, Leonardtown, MD.
Conspiracy! Port Tobacco and the Plot to Assassinate President Lincoln (2011). James G. Gibb, Peter C. Quantock, Anne T. Hayward, and Kelley M. Walter. Prepared for The National Park Service and Charles County Government.
A Partial Geophysical Survey of the Elk Landing Site (18CE60), Elkton, MD (2011). Prepared for the Northern Chesapeake Chapter of the Archaeological Society of Maryland, Inc.
A Ground-Penetrating Radar Survey of the Historic Graveyard at Griffin's Choice, Dameron, MD (2011). Prepared for John & Suzanne Lawrence Dameron, MD.
A Partial Ground-Penetrating Radar Survey at Melwood Park, Upper Marlboro, MD (2011). Prepared for the Melwood Parke Foundation, INC.
The 2009 Field Session of the Archeological Society of Maryland: Site Examinations at Port Tobacco. Peter C. Quantock, Anne Hayward, and Kelley Walter. Submitted to The Archeological Society of Maryland, The Society for the Restoration of Port Tobacco, Inc, and The Maryland Historical Trust.
The 2008 Field Session of the Archeological Society of Maryland: Site Examinations at Port Tobacco. James G. Gibb, April Beisaw, and Peter C. Quantock Submitted to The Archeological Society of Maryland The Society for the Restoration of Port Tobacco, Inc., and The Maryland Historical Trust.

PROFESSIONAL MEMBERSHIPS
Archaeological Society of Maryland – 2006 to present
Council for Northeast Historical Archaeology – 2007 to present
Middle Atlantic Archaeological Conference – 2007 to present
Society for Historical Archaeology – 2011 to present

Stephens Environmental Consulting, Inc.

Environmental Consulting ♦ Engineering ♦ Land Planning ♦ Remediation
Conventional & GPS Surveying

PO Box 485 • North East, MD 21801
Phone: (302) 286-0406 Fax: (410) 658-7298
www.StephensENV.com
Contact: bstephens@stephensenv.com

Innovative Design & Environmentally Conscientious Solutions Since 1995

CAPABILITY STATEMENT

SECI is a small, full service environmental consulting, civil engineering-geosciences and surveying corporation serving the mid-Atlantic – Capital Cities region since 1995 (DE, MD, PA, VA, NC and WV). SECI provides professional services to clients in Land Development/ Brownfield Redevelopment, Mining and Energy sectors. SECI also provides Litigation Support and Expert Testimony in environmental cases.

FUNDAMENTAL CORPORATE DATA

- FED INFO: (*available on request to Federal Agencies and clients*)
- NAICS CODES: 541330, 541370, 541620, 541690, & 562910

PROFESSIONAL SERVICES

ENVIRONMENTAL & NATURAL RESOURCES
Phase 1, 2 & 3 ESA's
HSCA Consulting
NEPA EA's & EIS's
LUST Site Characterization & Closure
UST Removal (DE Only)
PA/SI/RI/FS/RD & RAO for Hazardous Sites
Voluntary Cleanup (VCP) Investigations and Closure
Brownfield Redevelopment Support
Wetland Delineations, Restoration Design & Permitting
Forest Stand Delineations (FSD-MD)
Energy Sector Upstream-Downstream services

HYDROGEOLOGIC-GEOLOGIC-GEOTECH.
Soils & Geologic Mapping, Borehole Logging
Geologic & Mineral Potential Investigations. P&Q
Karst Sinkhole and Subsidence Potential Studies
PGIA/FGIA/SIR for reclaimed wastewater disposal
Groundwater, Recharge & Mounding Modeling
Contaminant Fate & Transport Modeling
Aquifer Test Design & Analysis
Infiltration Feasibility Studies & Design
Coastal vulnerability studies
Mine Exploration Geology
Soils Laboratory Testing

SURVEYING & MAPPING
ALTA-ACSM Surveys[1]
Boundary, Topographic & "Existing Conditions" Surveys[1]
Utility & Storm Water Facility As-built Surveys[1]
Pipe-Line Corridor Studies & Surveys
Easement, Route & Right-Of-Way Surveys[1]
Subdivision/ Record Plats[1]
Legal Descriptions
Construction Stake-out
GPS Control Surveys
Surveys of Delineated Natural Resources
GIS Mapping and Database Development

CIVIL DESIGN & MINING
Land/Pad-Site & Subdivision Planning & Design
Storm Water Management, E & S Control Plans
Pond Code 378 Design & Breach Analysis
Flood Studies for small watersheds
Roadway, Drainage Design & Grading Plans
Utility Design & Plans
Agency Coordination & Permitting Assistance
Design Charettes & Public Hearings
Forest Conservation Plans (MD)
Mine Permitting, Mining and Reclamation Plans
Surface Water Hydrology Modeling

(1) Surveying Services limited to DE, MD & PA

KEY PERSONNEL

- William (Bill) E. Stephens, Jr., PG (DE, NC, PA, VA): President, Owner & Primary Point of Contact
  E-mail: bstephens@stephensenv.com Cell: 302-540-3453
- Michael A. Nawrocki, PE (CO, DE, MD, PA, VA, WV, NY, WY, MT, IL,): Supervising Engineer, Director
- Michael J. Early, PLS (DE, MD, PA, NJ): Supervising Surveyor, Director

SELECTED CLIENTS

Independence Construction Materials
Dave Schnackenberg, PE
610-222-3182
David.Schnackenberg@icmatls.com

Mr. Ken Simmons (several entities)
443-309-0694 (cell)
cecoutilitiesinc@aol.com

West Cecil Health Center
Mr. Mark Rajkowski, Executive Director
410-378-9696
mrajkowski@westcecilhealth.org

Gulf Stream Development Corporation
Mr. Robert Harris, President
302-539-6178
bob@gulfstreamdevcopr.com

CORPORATE CERTIFICATIONS, LICENSES

- DE Survey Corp License #: S8-0000023
- DE Cert of Auth. For Eng #.: 978
- DE Business License #: 1997114168
- DE UST Removal Contractor/Supervisor
- DE DNREC-SIRB Approved HSCA Consultant
- MD DNR Qualified Professional (FSD/FCP) (Mr. Stephens)
- MD Survey Corp License #: 21070
- MD MDA Nutrient Management Professional & Level 2 TSP (Mr. Stephens)