

**TRANSITIONS AND CONTINUITY:  
EARTHENWARE AND STONEWARE  
POTTERY PRODUCTION  
IN  
NINETEENTH CENTURY NORTH CAROLINA**

by

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May 1997

Doctoral Dissertation  
Department of Anthropology  
University of North Carolina at Chapel Hill



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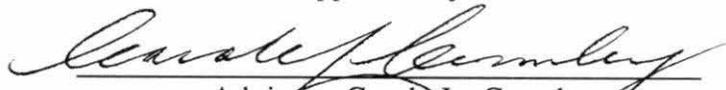
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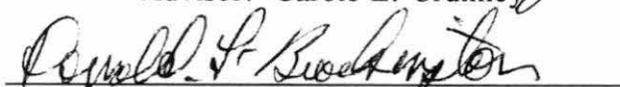
A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Anthropology.

Chapel Hill

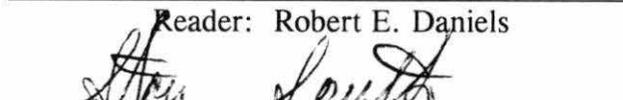
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## ABSTRACT

LINDA F. CARNES-MCNAUGHTON: Transitions and Continuity:  
Earthenware and Stoneware Pottery Production  
in Nineteenth Century North Carolina  
(under the direction of Dr. Carole L. Crumley.)

An interdisciplinary and multi-evidential study of two nineteenth-century pottery kiln sites in North Carolina was conducted to discover the **technological transition from earthenware to stoneware** ceramic production. Archaeological excavations at the Solomon Loy Pottery Site (31Am191) located in Alamance County uncovered the remains of two large circular kilns and over 16,000 artifacts. Historical research and oral testimonies discovered three generations of Loy potters in the surrounding community. The Daniel Seagle Pottery Site (31Ln59) located in Lincoln County was also excavated and produced the remains of a rectangular groundhog style kiln and pottery fragments. In addition, living descendants of the Seagle family were located in the community and provided useful oral histories. Comparisons were drawn between the two ethnic origins of the potters (one German and one possibly French Huguenot from Germany), the communities in which they settled and set up shops, and their surviving heritage. Final analysis of the artifacts recovered from each site and the features recorded during excavations provided a vivid recreation of nineteenth century pottery making and the technological transitions it endured. Historical data and oral testimonies were used to enhance the genealogical records, and the **continuity of their craft and communities** into the twentieth century provided valuable information to understand the settlement patterns and social networks of these clay clans.

## ACKNOWLEDGEMENTS

As with any endeavor that requires a great deal of time and labor, it is the unselfish contributions of others which make it a success. This dissertation represents a decade of research and distillation, therefore I first wish to thank my doctoral committee for their patience and cooperation, particularly my Chair, Dr. Carole Crumley. The comments and suggestions offered by my committee were beneficial and substantive in every respect. Secondly, I wish to thank the Research Laboratories of Anthropology at the University of North Carolina for providing me field equipment, laboratory space, curation storage, and access to their color imaging computer. Special thanks are due to Tom Maher for his diligent tutoring efforts with Adobe Photoshop and production of the color plates.

In the field, I wish to thank the site property owners, Mr. William Hoyle and Mr. Eugene Whitehead, and their families, for allowing access and excavation on their lands. Their support and cooperation was essential and appreciated. Other contributors in the communities provided valuable information regarding family histories or pottery collections, among them were Bill C. Beam, Ann Dellinger, Roscoe and Forrest Loy, Hugh and Allen Campbell, and Ross Stephens. Terry and Martha Young provided shelter and hospitality for the Lincoln County fieldwork, and I thank them. Pottery consultants in the field included the late Dorothy and Walter Auman, Hal and Eleanor Pugh, Mark Hewitt, Burlon Craig, and Charlie Lisk. Other experts in the field who contributed to this research were Dr. John Burrison, Carl Steen, William Vincent, and Dr. Charles G. Zug, III.

Field and laboratory work for this study was conducted with a faithful team of local and regional volunteers who contributed many hours, days and weeks to this research.

Without their help and companionship my task would have been virtually impossible and lonely. I am particularly grateful to the following volunteers and colleagues who gave generously in time and effort: Fielding Deaton, Ralph (Bobby) Farmer, Katherine Fitzpatrick, David Fuerst, Dr. Julia Hammett, Mark Heavner, Bill Jurgelski, Frank and Helen Kalkbrenner, Dale Kaukeinen, Dr. Janet Levy, Dr. Alan May, Robert Pace, Jack and Chris Sheridan, Dr. Ann Tippitt, Steve Wood, and members of the Cumberland County Archaeological Society.

Finally, I remain indebted to my family and friends whose love and encouragement kept me going. To Kirk, my friend, companion, cook, and scotch-mate, thank you for your constant support, patience, and love.

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## CHAPTER I

### *WHEN VITALITY SUCCUMBS:*

#### INTRODUCTION

##### 1.1 Purpose of Research

The superior quality of Carolina clays has, over the past two and a half centuries, given rise to over 500 traditional potters (Zug 1981). In simple words, North Carolina's pottery heritage is a rich and long one. The heritage of this pottery craft reflects multi-ethnic origins with new world adaptations and regional variations. Using the time-tested technologies the old world emigrants brought with them, the potters began exploitation of the abundant local resources and early pottery centers, or "jugtowns," developed. From these frontier craftsmen emerged a cottage industry which took hold in the mid-eighteenth century, experienced a fluorescence in the nineteenth century and lasted well into the twentieth century when, economic, political, and social factors yielded its decline.

In a 1993 article evolutionary guru Stephen J. Gould remarks "when vitality succumbs, we must make do with the next best evidence--the remnants and artifacts." Clearly, the vitality of these early potters has, alas, succumbed, but their products--the remnants of historical records and the artifacts of pottery production they created--provide a valuable glimpse of that early cottage industry and a very rich part of North Carolina's frontier heritage. The designed purpose of this study is to examine the processes of culture change and adaptation which occurred during the early nineteenth century when traditional potters changed from an earthenware to stoneware ceramic industry. The research methodology employed will be interdisciplinary in scope, combining relevant anthropological constructs (processes of cultural change and

adaptation) with information provided by folklorists, art historians, and geographers who document the continuity of pottery production as a folk tradition. The analysis will therefore be multi-evidential, combining archaeologically-recovered materials from two specific pottery sites with genealogical data pertaining to each potter, historical data (written and oral), and technological input from other researchers. This study will bring into focus certain temporal and spatial factors which regulated this cottage industry from its genesis to its sunset decades. Substantive archaeological, historical, architectural, and geographical data will be employed to explore, interpret, and recreate the past lifeways of these potters and the social, economic, technological and ideological factors which modeled their world.

This research is directed towards an understanding of the evolution of pottery production in the early nineteenth century frontier of rural North Carolina. More specifically the technological transition from earthenware to stoneware pottery production which occurred during the first quarter of the nineteenth century created some unique and profound changes to other integrated parts of the potters' world. This technological "shift" affected not only the potters' wares (including the ware bodies, glazes, decorative techniques, and vessel forms) but also the style of their furnaces, extractive strategies for their natural resources, and market, advertising, and distribution practices. Using primary and secondary resources, this research examines the evolutionary processes of a single cottage industry and the human behaviors which guided it. To this objective, two archaeological sites were chosen as case studies, the Daniel Seagle Pottery Site (31Ln59) located in Lincoln County, and the Solomon Loy Pottery Site (31Am191) located in what is now Alamance County. While only two were intensively investigated, others were extensively examined to provide intersite comparative data.

The Seagle Site is located in dense woods accessed by an abandoned field road near the community known as Vale in the northern end of Lincoln County. Its history and archaeological wealth lay buried beneath pine stumps, smilax, honeysuckle and thickets

until Fall 1987. The wheels in the shop had long since ceased to turn and the fires of the kiln had long since grown cold. Timber had replaced pottery as the marketable product for this farm. The current property owner had only a mild interest in what history the landscape held. No structures are located within sight of this wooded patch. As one stands on the dirt road looking south, the ground surface gradually falls away for two hundred feet and then terminates in a deep ravine now choked with more vines. The ravine, oriented east-to-west, widens out downhill (west) where it blends into the floodplain of Howard's Creek, a year-round source of fresh water for those early settlers. Today there is a certain tranquillity to the site, occupied by birds, deer, raccoons, field mice, and other fauna. The sounds of pottery being created, the roar of the kiln fire, the whir of the wheels, the accidental clunking together of pots, and the voices of the workers have faded into memory. Could the echoes of these sounds and their creators be recaptured through archaeology? This became my challenge.

Distinct from the wooded setting of the Seagle Site, the Loy Site is located within the core of a twentieth-century farmstead. Numerous nineteenth- and twentieth-century buildings surround (and partially cover) the pottery site. People are there, as well as cows, dogs, cats, and chickens. Every day human feet traverse the yard where the remains of a previous life are buried. Automobiles on the nearby paved road, modern utility lines, and a new brick house next door to the site testify to the unending changes. At a glance, most passers-by would not suspect a once dynamic pottery operation to have been located here. Only several mature black walnut trees, an aging log barn and a small square house bear witness to the pottery activities of a past century which now are vanished. As the farm's owner since 1971, Mr. Whitehead, an octogenarian, never dreamed of the significant discoveries which were to be uncovered in his yard and under the smokehouse. How could I describe to him and others the long-lost story of the Loy family and its pottery heritage? Moreover, would anyone care to know about this? My task was realized from that first moment of recognition. And now, after several years of

research I attempt to convey what I recognized on that first day of discovery. Through syntheses of anthropological, historical, geographical, and architectural information the past activities at these two sites and the behaviors of their past occupants will come into focus.

In the first analysis, these two sites appear to be very disparate in their present state, this being a factor of land reuse and rural adaptation. One became a timber farm while the other continued to be occupied and reused as a residence. These are important distinctions which reflect not only the historical aspects of regional economics but the processes that affect archaeological site formation (Schiffer 1976, Orser 1987, and South 1977). Those particulars related to site histories and their regional settings will be fully explored in the following chapter, and their importance evoked. While a general explanation of the locational developments of this cottage industry can be partially derived from the scant documentary evidence, the specifics are harder to identify. We are led to speculate as to precisely how certain events unfolded. Knowing this, we must start from the premise of admitting that the documentary evidence does not (and will not ever) clearly answer all questions about the origin and development of this industry. Therefore, syntheses of site investigations, analyses, and interpretations will be necessary to closely examine pottery production in nineteenth century North Carolina and assess its transition and continuity. The tenacity of the potters' blended cultural traditions, and the material manifestations of those traditions, provide the core of this research.

## 1.2 Plan of Presentation

The archaeological sites where the Loy and Seagle potters once operated shops and the material culture recovered from those sites serve at the basis for this study. Chapter I sets forth the purpose of this research, provides a general background for pottery site investigations within the realm of historical archaeology and background information for each site, presents the criteria used to select each site, and discusses the broad theoretical

framework for this study. Pottery site research and interpretation are examined in their relevance to specific archaeological concepts and broader anthropological questions. The anthropological issues of cultural transition and continuity are explored using this example of a cottage industry.

Chapter II outlines the historical environment of the nineteenth century in the two regions of site location; the Alamance/Chatham/Orange county area where the Solomon Loy pottery site is and the Lincoln/Catawba county area where the Daniel Seagle site is. Information about the community histories of Snow Camp (for the Loy site) and Vale (for the Seagle site) is presented. To provide a regional backdrop, a discussion of immigration routes and settlement patterns of the two areas is given. Then narrowing the focus, site specific histories follow.

The next chapter (III), based on anthropological research and technological investigations, discusses the basic components of cottage industries and correlates these to pottery production in rural settings of the past century. This begins with an examination of the natural and cultural resources required to set up a pottery shop and why these are viewed as essential ingredients. Following is a discussion of the technological aspects of pottery making, what skills the potters brought with them from elsewhere, and how they adapted or modified the local resources. Next are the economic aspects related to market, trade, and distribution of the ceramics within a nineteenth-century rural community. Not only do we wish to understand who the potters were, but also the people who became their market. Finally, in this chapter a discussion of the sociocultural aspects of pottery production is provided. This section encapsulates the kinship and genealogy of the potters' family, including immediate, extended, and affinal members, and how these relationships play a vital role in the success or failure of a cottage industry.

Chapter IV describes the archaeological investigations at each site. The structural evidence and artifacts recovered at the sites is presented. Specifics of site locations, descriptions, and excavations are recounted, beginning with the Seagle Site, then the Loy

Site, and finally other related sites encountered during the fieldwork portion of this study. The fieldwork discoveries provide contents for the next chapter (V) in which the results of artifact and structural analyses are given. Chapter V gives an in-depth look at artifact analyses of the ceramics, kiln furniture, and related materials (e.g. test trials, glaze residues, etc.), as well as an interpretation of the structural remains, including kiln foundations and building debris recovered from each site. Kiln types are interpreted and compared to other known examples, regionally and globally. Ceramics are investigated according to types, glazes, decorations, and other diagnostic criteria. Vessel forms are assessed and chronologies are postulated within broad regional frameworks.

In the final chapter (VI), a certain "conservative fidelity" (Burrison 1989:6) to inherited tradition as practiced by folk potters is examined. This conservative fidelity apparently governed the potter's desire to create, while at the same time allowed some leeway for individual variation. How this fidelity towards creation was transmitted from one generation to the next, like shared property by families, communities, and regions, is summarized in this chapter. The agents of change (as expressed by Dawson et al. 1974)--innovation, revival, and demise--are captured in the nineteenth century setting of the folk potter. Diversity and uniformity are key concepts to the interpretation of past behavioral activities of potters. The continuity of their cultural traditions as manifested through the ceramic forms the potters created, and interpreted in their sociocultural relationships, provides us the necessary anthropological fodder.

### 1.3 Theoretical Synopsis

Culture does not exist as a fixed condition, but rather as a process, the product of interaction between past and present experiences. Its strength and resiliency are determined not by a culture's ability to withstand change, which indeed may be a sign of stagnation not life, but by its ability to react creatively and responsively to the realities of a new situation (Levine 1977:5). Adaptation can be defined as "the process by which a self-

organizing system {cultural or biological} maintains continuity and balance in both its internal organization and its relationship to its environment in the face of change" (Daniels 1980:58). There exists inside each system a set of certain variables with values that must be maintained within relatively narrow limits if the system is to persist. Using Daniels' definition of adaptation in conjunction with Ashby's systems model (1956), the focus will center on the system's **essential variables**. Adaptation occurs if negative feedback regulates the system's peripheral (and more flexible) non-essential variables in a way that counteracts environmental disturbances before they affect the essential variables. Along this line of reasoning, four essential variables have been recognized for a successful pottery-operating system: (1) a craftsman equipped with the knowledge and skill of the industry; (2) a properly-designed and functional kiln; (3) the availability of extracted raw materials for the wares, glazes, and fuel for firing; and (4) a market in which to sell the goods and return capital (Clouser 1979). Alterations within any of these variables would create a change and thus, initiate the process of adaptation in order for the system of pottery production to be maintained.

Another central theoretical aspect of this study deals with ceramics (and its related industry) as a research subject. In the long course of human history, people have been learning to understand their physical environment and to make themselves at home in the world. First we learned by shaping and altering for our use and convenience the materials nature had to offer. Then, when these simple tools and utensils were discarded or abandoned (intentionally or otherwise), not only did they provide a glimpse of technological developments, but they also held an imprint of early steps towards the sciences. In this light, Shepard (1956:5) points out that "the creation of pottery and ceramics studies in general, can contribute to a common endeavor of understanding human behaviors." As archaeologists, we are forced by our certain dependence upon material remains and the consequent meagerness of these data to probe carefully and fully the interrelationships of these artifacts to their creators, and to discern their meaning

(Foster 1961). With deliberate overemphasis, folklorist John Burrison states, "the making of pottery can be viewed as the ultimate civilizing act, for by transforming amorphous clay into formed vessel, chaotic nature is given order in the controlling hands of the potter, who at the same time expresses a society's values and needs" (1989:5).

Ceramics, moreover, provide a valuable record of past lifeways because they are multi-dimensional (Brackner 1981:14). They serve a basic function of food preparation, consumption, and storage in most cultures. Often ceramics provide symbolic meaning in their usage as grave goods or grave markers (synchronically and diachronically) in most cultures. By their very nature of composition ceramics are a well-used data source; they are durable, readily identifiable, chronological markers, and are often the most ubiquitous artifacts recovered from archaeological sites (South 1977, Deetz 1977, and Miller 1991). Furthermore, the production of ceramics represents an "additive" industry (Deetz 1968) in that it is created or manufactured by the addition of materials (in contrast to lithic industries which represent mostly subtractive properties). In this way, ceramics truly represent a **process**. Brackner (1981:14) postulates that, "additive artifacts then are the most valuable in the study of traditions {especially folk} and the gradual or rapid change of ideas behind the artifact. It is then up to the social scientists to interpret the meaning and significance of these." Ceramics as examples of additive artifacts thus represent products of a process with cultural, technological, and ideomatic changes. Understanding the cultural embeddedness of these material remains, as inextricable connections to the people and their social status, ethnic origins, and individual attitudes and experiences, is paramount.

Employing an interdisciplinary approach has certain advantages as well as disadvantages. As Brown (1978:278) points out, the integration of different data sets in ethnohistorical research may not always complement each other, but in fact, may provide serious points of contradiction. To expound on this interface, an analogy is suggested. Borrowing from a biological model of evolutionary processes, disciplines (e.g.

anthropology, history, folklore, and geography) might be viewed as reproductive populations (each generating their own paradigms, methods, data, etc.), each maintaining a certain niche in the social science environment. By focusing on certain theoretical concepts and methodological principles **shared** between two or more disciplines (known as mutualisms in bio-systems research, see Rindos 1984), and also recognizing their divergences, a synergetic product can be achieved. As in most evolutionary processes, changes occur in the receptive marginal areas of niches, which result in mutualisms shared between the populations (or disciplines in this case). The following discussion encapsulates several of the key concepts and methodologies of other disciplines used in this dissertation study.

History in its generic form focuses on temporal parameters of changes in society technology, economy, and ideology. Furthermore, history is textually-oriented, idiographic, and subjective. It is also fundamental in understanding the processes of general evolution, or changes of form through time. Documentary evidence can be said to be the recorded thoughts and ideas of the past, and often the intended purpose of such documents is the preservation of the thoughts and ideas they contain (Parham 1978). Written documents used as a data set are thus qualitatively different cultural products than artifacts and should be treated accordingly (Schuyler 1978:251). South (1978:223) reiterates that historical documents can and should be used in conjunction with the archaeological record "to derive some form of control over function, status, ethnic background and time, against which archaeological patterns can be projected to explore relationships of behavioral processes and the record itself." Deetz (1977:23) agrees that the use of historical records (primary and secondary sources) are key elements in understanding the relationship of culture and cognition by preserving information about "ideology, perception, and organization" of past societies.

Cultural geography is the study of spatial distribution of cultural phenomena and their relationship with population dynamics. It is from geographers (more specifically,

demographers) that the concept of **regionality** has emerged, though it has been embraced by anthropologists and folklorists and applied to their studies of material culture.

Archaeologists, such as Willey and Phillips (1958) and South (1977), have applied spatial and temporal indicators to the occurrence or frequencies of artifact assemblages.

"Horizon" in an archaeological reference implies a broad spatial continuity represented by cultural traits and assemblages which have spread quickly. "Tradition" is used to refer to an archaeological phenomenon which is represented by persistent configurations in a single technology; or put simply, spatially limited but temporally longer.

Folklorists over the past decade have also adopted the spatial/temporal concepts and applied them to their study of folk traditions. "Tradition" in folklore refers to any cultural phenomenon which is conservative in nature and informally acquired or transmitted. European folklorists more closely resemble regional ethnographers, applying a holistic approach to all aspects of folk culture, e.g. use of the term "lore" (in music, stories, customs, dramas, etc.), and material manifestations (such as crafts, foodways, clothing, housing, etc.). Before the 1960s American folklorists, however, focused their studies solely on the verbal artifact forms (or lore). Then a major transition occurred which changed the center of American folklore studies. Influenced by cultural geographers and archaeologists, folklorists began to examine those by-products of human behaviors known as material culture. This material culture, as Zug points out (1986), is never created in a vacuum, but is a cultural response to many variables, only one of which is necessity. With Glassie's 1969 publication of Patterns in the Material Folk Culture of the Eastern United States, the discipline paradigm in folklore studies changed forever. His contributions to anthropology, geography, and history are numerous (see Glassie 1977). This theoretical shift in folklore studies paralleled another major shift which occurred in American archaeology, that being the rise of historical archaeology as a unified subdiscipline of anthropology (Deagan 1982).

Today American folklorists categorize culture into three broad distinctions, High (or elite), Popular, and Folk. Distinguishing the High or Elite culture is an ideology of progressiveness, formal training of skills, and unique expressions. Popular or Mass culture is characterized as normative in ideology, and a mixture of formal and informal learning. Material culture changes in the Popular culture occur quickly over time (namely trends, fads, etc.) and are usually spatially pervasive. Folk culture, conversely, refers to those cultural concepts and behaviors which are ideologically conservative, informally learned, and maintained in a family unit or community setting. Changes in folk culture occur across space (thus, regionality) and slower over time. In this way pottery production in nineteenth century North Carolina represents a folk cultural manifestation. As a craft, its distinct regional traditions (e.g. use of lead-glazed earthenwares, alkaline-glazed stonewares, and salt-glazed stonewares) reflect differences in ethnic origins and settlement patterns. Training of the potters occurred through informal apprenticeship or from father-to-son (Zug 1986:13). Family dynasties developed through marriages of potters' daughters to other potters which strengthened kinship bonds and community cohesion, and secured a labor force for the industry (Burrison 1979b). Clearly the anthropological implications of these factors goes beyond the scope of folklore alone.

Anthropology, as Eric Wolf (1982) tells us, is the most humanistic of all sciences and the most scientific of all humanities. Anthropology has been referred to as a "generalizing and comparative" discipline (Willey and Sabloff 1974). As such, anthropologists are interested in the study of cultural processes and behavioral correlates. Material culture, because it is a direct by-product of adaptive human behavior, provides important information regarding past and present cultural systems. Binford (1962) emphasizes that anthropologists should study material remains in their cultural contexts in order to better determine their cultural functions (e.g. technomic, social, and ideologic). Archaeologists South (1977) and Schiffer (1972) state that all human behavior is patterned and therefore, the by-products (or material culture) generated by that behavior are also patterned in the

archaeological record. It follows that archaeologists, as anthropologists, look for patterned regularity and variability reflective of cultural systems.

In essence, these ideas reflect current trends in American archaeology in understanding human cultures past and present. Through the use of cross-cultural comparisons (ethnographical, ethnoarchaeological, and ethnohistorical) patterns of human behavior can be delineated. The integration and inference of cultural processes through observation, description, and explanation form an important basis for anthropological theory. In summary, I believe all disciplines devoted to understanding humans display both scientific and humanistic tendencies. Therefore it seems that for anthropology our methods and theories originate most naturally from the social sciences while our goals result most naturally from the humanities. This study demonstrates the principles of that postulate.

#### 1.4 General Background

The informational balance of oral history, written history (ethnographic and ethnohistorical), and the archaeological record is of primary concern for archaeologists, particularly historical archaeologists. Over the past 20 years numerous studies have been published which described the history of traditional pottery manufacturing in the South in general (e.g., Guiland 1971, Greer 1981, Ramsey 1947, Sweezy 1984, and Wigginton and Bennett 1984), and several dealing with specific traditions within various states (for Alabama see Willet and Brackner 1983, and Brackner 1994; for Georgia see Burrison 1973, 1976a and b, 1979a and b, 1989, and 1993; Harper 1989; Sayers 1971; and Rinzler 1980; for Tennessee see Beasley 1971; Burbage 1971; Smith and Rogers 1979; and Smith 1984; and for South Carolina see Baldwin 1993; Castille et al. 1988; Ferrell 1976; Holcombe 1986; Horne et al. 1990; Landreth 1985; Scarborough 1986, and Vlach 1978). In North Carolina, early and more recent research (Bridges 1980; Clark 1926; Conway 1974; Crawford 1964; Eaton 1937; Outlaw 1974; Purdy 1942; Ries 1897; Schwartz 1978,

1980; and Whatley 1980) reflect an acute awareness of the state's indigeneous potters. But by far the research pioneered by folklorist Zug (1981 and 1986) has provided subsequent scholars the benefit of his extensive historical and regional syntheses. Zug identified seven historically significant pottery centers in the state, each he described as having its own distinctive stylistic attributes:

1. The Moravian potters of the eighteenth and nineteenth century located in the central piedmont region of Forsyth County;
2. The eastern piedmont region, namely Moore, Randolph, and Chatham counties, known for its salt-glazed stonewares;
3. The Catawba Valley region of Lincoln and Catawba counties, along the western piedmont, known for its alkaline-glazed stoneware, though it also had several early potters trained in lead-glazed earthenware production; and the "Lesser" traditions of
4. Union County in the southern piedmont edge;
5. Wilkes County in the northwestern piedmont;
6. Southern Alamance and northern Chatham counties in the eastern piedmont; and
7. The mountain potteries of Buncombe County, in and around Asheville.

Zug (1986) and other researchers (Bivins 1972; Outlaw 1974; Pugh 1988; Whatley 1980) have documented a major transition in earthenware to stoneware pottery manufacturing which occurred during the first quarter of the nineteenth century in North Carolina. Most of their research has been based on historical, genealogical, and oral accounts. While these provide a valuable data base from which to conduct additional research, they are lacking in archaeological corroboration. Previous systematic archaeological investigations of nineteenth century pottery sites have been minimal, limited to the highly popularized settlements of the Moravian potters in Bethabara and Old Salem and their satellite communities of Forsyth County. Stanley South, who conducted extensive research at Bethabara in the 1960s and early 1970s documented the shops, houses, and waster deposits of Gottfried Aust and Rudolph Christ and other Moravian potters, though no kiln remains were unearthed. This archaeological work was

supplemented by detailed historical text by Bivins (1972). Additional archaeological investigations were undertaken by John Clauser in 1974 at the rectangular kiln remains of the Krause-Butner pottery shop in Bethabara. An important site located 50 miles south of Old Salem, near Asheboro was discovered by local potters who assisted in the excavation led by Alain Outlaw in 1973. This site yielded the foundation of a small circular kiln, thousands of lead-glazed earthenware pottery sherds and associated kiln furniture. Known locally as the Mount Shepherd pottery site, it was later identified (Whatley 1980) as the pottery shop of Jacob Meyers, a "renegade" apprentice of Aust, the master potter of Bethabara. And though several twentieth-century kilns exist today (a few still in operation), the work by Clauser and Outlaw represented the only archaeological data regarding early kilns in North Carolina, a state which served as the home for over 500 potters in two and a quarter centuries (Zug 1986)!

### 1.5 Site Selection Criteria

Following a review of extant documentation regarding early kiln sites in North Carolina, consultations with Zug, South, and various property owners, and a preliminary field inspection of each site in Spring 1986, the search was narrowed to two premiere loci targeted for archaeological investigation. Site selection was based on knowledge that the potters who operated each site maintained the following criteria:

- the initial period of operation was begun during the first quarter of the nineteenth century;
- the potters who began the shop were predominantly trained in earthenware production and then later switched to stoneware manufacture as evidenced by surviving wares;
- a usable amount of historical and genealogical data existed for each potter and his family (though this was later greatly expanded) to augment the archaeological record;
- the potters were thought to be from differing ethnic origins and thus represented different migrations and settlement patterns into the state; and

- both potters produced more than pottery--they produced offspring who continued making wares at their father's shop but in the newer tradition of stoneware.

In addition, availability of the sites for archaeological excavation and the subsurface integrity of each site were also considered crucial variables for the success of this investigation. Thus, the Daniel Seagle pottery site (31Ln59) located near Vale, in Lincoln County, and the Solomon Loy pottery site (31Am191) located near Snow Camp in southern Alamance County, were selected for this dissertation study. In the following chapter, the sites will be considered within the regional backdrops where they are physically located. Regional and community histories will be described in an effort to recapture the nineteenth century settings. Then the scale will narrow to the site specific histories and their discovery.

**CHAPTER II**  
***IN THE AGE OF HANDS:***  
**THE HISTORICAL ENVIRONMENT**

2.1 Regional Histories of Eastern and Western North Carolina

Imagine the year is 1800, only a few miles away from what are already the established rural communities of Snow Camp in Chatham County, or Vale in Lincoln County. Perhaps these early backcountry settlements are just crossroads with post offices and coach stops. A little distance out of town, the dark cabin sits in an immense and almost unbroken forest. The whole region is sparsely settled by people of the frontier--restless souls who have hewn fairly habitable homes out of the wilderness and attained a sense of prosperity, many of them abandoning their quest to push further south or westward and seek new perils. The family lives in a house of logs extracted from the surrounding forest, but there is evidence of "improvements"--a few acres of cleared ground immediately around the house, cleared of trees and stubborn stumps. A small vegetable garden provides comestibles and the zeal for agriculture kept in check by the constraints of arduous labor required to clear more land. Crops are corn, grains, and some tobacco. Foods, including livestock, not grown and preserved on the land are supplied by sale or barter in the nearest town, the borough's seat several miles away.

The little log house, with its chimney of stones, its roof of warping shingles and its chinking of clay, has one batten door facing the dirt lane and another door opposite towards the smokehouse. One or two glazed windows located near the door offer illumination in the early morning hours. These few portals in no way reflect the

occupants' dislike of light and air, for on numerous occasions the family is seen sunning themselves on their doorstep, if heaven provides the sunshine.

As the morning light streams in across the floor the matriarch sets about to wake up the cool embers and rekindle the hearth's spirit. Preparations for the daily meal begin with removing storage containers from the larder and meting out a day's ration to boil, bake, or stew up. Dried, pickled, or fresh, the provisions often require hours to render them palatable. The earthenware crocks, bowls, colanders, funnels, and dishes are used in preparation of the meal, and the pitchers, cups, plates, and deep dishes used during consumption. Smoking pipes and candlesticks of the same fired earth are held in the sighing hours before bedtime. Should a piece chip or crack, great care would be taken to repair it or recycle it until its ultimate breakage relegates it to the trash heap in the yard or down an abandoned privy hole. Replacement ceramic containers could be bought or bartered for down the road at the potter's shop.

In the North Carolina back country earthenware was usually the first type of ware made because of the abundance of red clay found throughout the piedmont region. Where a village society emerged, the potter's craft would take hold and grow; there artisans would dwell together and specialize, each in his trade, certain of a demand for his wares. Potters competed with other craftsmen working in other media to meet all household requirements (Bivins 1972:113-116). Clay was after all, the only natural material used to make cooking pots, until iron foundries began making metal pots. Given ample resources, a maturing economy, and an expanding market, the craftman's mind would eventually turn to ways of increasing production and to invention (Guilland 1971:66-71).

During the mid-to-late eighteenth century in the Moravian communities of Bethabara and Salem, the perceived solidarity of these frontier **towns** was regulated by the Collegium (Bivins 1972, Thomas 1994, and Lewis 1995). Craftsmen and citizens alike were reviewed for their contributions to, and behaviors towards, the subsistence, religion, economy, and politics, and the "peaceful" productivity of their community. The

importation of specialists such as Gottfried Aust, Rudolph Christ, J.G. Holland, H. Schaffener, and others, provided the essential ceramic industry to the Wachovia colony. A variety of specialized earthenware forms were made (described in detail through excavations by Stanley South, John Clauser, Brad Rauschenberg, and documentation by John Bivins). Forms included goblets, tea cans, mugs, teapots, flasks, jars, chamber pots, ointment pots, platters, plates, colanders, and ham pans. Architectural elements included roof tiles, water pipes and stove tiles. Anthropomorphic pipe bowls, made in two-piece molds, became an important side-line item for the potters, and were used as principal portable trade-goods to Native American groups across the southeast. The wares of these early master craftsmen set the standard for subsequent generations of apprentices, journeymen, and master potters that survived in the Moravian communities until the mid-1800s.

But what of the other rural communities outside of Forsyth County and their non-Moravian potters? How did potters, not members of the economic cynosure of Old Salem and Bethabara, survive? Where did they go and who became their customers? As Zug has pointed out, "the thoroughly documented achievements of the Moravians tend to obscure the work of a far larger body of potters who were simultaneously producing earthenwares across the Piedmont from Orange County in the east to Lincoln in the west" (1989:486). A survey through existing literature conducted in 1989 revealed 58 non-Moravian earthenware potters and apprentices of the eighteenth and nineteenth centuries working in the North Carolina backwoods (Table 2.1). Of that total, 41 were listed as potters and 17 as apprentices, located in ten piedmont counties. Guilford, Lincoln, Randolph, and Rowan contained the greatest number of potters and reflect early village population concentrations. The age range for apprentices was five to eighteen years with an average of 11 years old, and many were listed as orphans taken into the potter's shop to learn a trade. Interestingly, two were of African-American descent, possibly freed slaves; Moses Newby apprenticed at the age of 16 in Orange County, and George Newby

**TABLE 2.1**  
**CHECKLIST OF EIGHTEENTH & NINETEENTH CENTURY NON-MORAVIAN EARTHENWARE**  
**POTTERS**

County	Name	Dates	Occupation	Research	Reference
Chatham (Alamance)	Loy, Solomon	1805-ca. 1860s	Potter	Site	Carnes 1986
	Andrews, Thomas	ca. 1739-1779	Potter	Excavated 1774 Flask	Zug 1986
Guilford	Beard, Thomas	1768-1830	Potter	1809 Record	Pugh 1988
	Beard, William	1784-	Potter	1839 Record	Pugh 1988
	Clark, Hezekiah		Potter	1825 Record	Pugh 1988
	Dicks, Cornelius	1818-1894	Potter	1850 Census	Pugh 1988
	Dicks, Nathan	1794-ca. 1883	Potter		Pugh 1988
	Dicks, Peter	ca. 1720-1796	Potter		Pugh 1988
	Dison, Elliot	1804-?	Apprentice	1810 Record	Craig 1965
	Dobson, Robert	1782-?	Potter	1850 Census	Pugh 1988
	Hockett, Himelius	1825-1913	Potter		Pugh 1988
	Hockett, Milton	1848-1902	Potter		Pugh 1988
	Hockett, Mahlon	1808-?	Potter	1850 Census	Pugh 1988
	Hoggatt, Mahlon	1772-1850	Potter		Pugh 1988
	Hoggatt, Phillip	ca. 1687-1783	Potter		Pugh 1988
	Summerz, Martin		Apprentice	1792 Record	Craig 1965
Waggoner, Barnet		Potter		Craig 1965	
Iredell	Craise, Cornelius		Apprentice	1794 Record	Craig 1965
	Davidson, Georg		Potter	1794 Record	Craig 1965
Lincoln	Holly, Daniel	1811-1899	Potter	1828 Record	Zug 1986
	Longcryor (Longanor), Christopher		Apprentice	1816 Record	Craig 1965
	Matthews, Joel	ca. 1799-?	Apprentice	1816 Record	Craig 1965
	Pope, John	ca. 1786-?	Potter	1819 Record	Craig 1965
	Pope, William	ca. 1809-?	Apprentice	1819 Record	Craig 1965
	Redman, William	1808-?	Apprentice	1818 Record	Craig 1965
	Seagle, Daniel	ca. 1805-1867	Potter	Site Excavated	Carnes 1988
	Therbury(Thornbury), Jacob		Potter	1818 Record	Craig 1965
	Yo(u)nts, Andrew		Potter	1818 Record	Craig 1965
Mecklenburg	Goodwin, William		Potter	1802 Record	Craig 1965
	Ormand, Matthen		Apprentice	1802 Record	Craig 1965
Orange (later Guilford)	Bullock, John		Potter	1798 Record	Craig 1965
	Newby, Moses	1782-?	Apprentice	1798 Record	Craig 1965

Person	Loy, Joseph	1812-1861	Potter	Site Tested	Carnes 1993 Campbell 1992
Randolph	Beeson, Isaac	1788-?	Apprentice	1806 Record	Craig 1965
	Cox, J.C.	1800s	Potter		Zug 1986
	Dennis, Thomas	1791-1839	Potter	Site Collected	Pugh 1988
	Dennis, William	1769-1847	Potter	Site Collected	Pugh 1988
	Dicks, Nathan	1855-1918	Potter	Site Collected	Pugh 1988
	Dicks, Peter	1771-1843	Potter	1806 Record	Craig 1965
	Hockett, David	1848-1926	Potter	Site Collected	Pugh 1988
	Meyers, Jacob (former Moravian)	1771-1801	Potter	Site Excavated	Outlaw 1974
	Newby, George	ca. 1801-1864+	Potter	Site Collected	Craig 1965
	Watkins, Henry	ca. 1798-?	Potter	1821 Record	Craig 1965
Watkins, Joseph	ca. 1811-?	Apprentice	1821 Record	Craig 1965	
Rowan	Adams, Johannes		Potter	1755 Record	Zug 1986
	Barroth, Henry		Potter	1777 Record	Craig 1965
	Bowen, Joseph		Apprentice	1777 Record	Craig 1965
	Freedle, George		Apprentice	1824 Record	Craig 1965
	Kelsipack, Jacob	ca. 1802-?	Apprentice	1809 Record	Craig 1965
	Morr, Michael		Potter	1765	Pugh 1988
	Mull, Benedict		Potter	1809 Record	Craig 1965
	Murr, George		Potter	1797 Record	Craig 1965
	Passinger, Thomas		Apprentice	1777 Record	Craig 1965
	Winsler, Jacob		Apprentice	1798 Record	Zug 1986
Surry	Dillard, Thomas		Apprentice	1806 Record	Craig 1965
	Jones, Seth		Potter	1806 Record	Craig 1965

apprenticed in Randolph County at the age of 12 and later became a master potter. For most of these early potters and their shops, historical research has provided all we know about most of them, but in a few years archaeological explorations have uncovered evidence of the potter's craft at eight sites (see Table 2.1). Two of these sites, one in Alamance (once a portion of Chatham) County, and the other in Lincoln County, are described below in context of their respective geographical regions.

## 2.2 Community Histories of Snow Camp and Vale, North Carolina

### Snow Camp, Alamance County, North Carolina

It is relevant to discuss the formation histories of both Alamance and Chatham counties in order to understand the social and economic milieu which sustained Solomon Loy's pottery shop (Figure 2.1). During Solomon's pottery production years his taxes were owed to Chatham County since it was not until 1897 that the northern edge became a portion of Alamance County. Civic boundaries notwithstanding, the community of Snow Camp and its environs, where the Loy family lived and modestly prospered, remained relatively unaffected by this annexation. The name Snow Camp is said to have arisen from the encampment of Cornwallis' soldiers, who pitched their tents here following the Battle of Guilford Courthouse during a heavy snowfall (Powell 1968:461). The original community was settled along the banks of Cane Creek. Today the Community of Snow Camp is situated at the intersection of State Road #1005 (Old Greensboro Road) which extends east to west, and State Road #1004 (Snow Camp Road) which crosses north to south. The region's first grist mill, owned and built by Quaker Simon Dixon in 1753 on Cane Creek, was an early landscape feature, portions of which survive today along with several early domestic structures (Lounsbury 1980:36).

That portion of North Carolina's piedmont which became Alamance and Chatham counties was originally inhabited by Native Americans as evidenced at archaeological sites

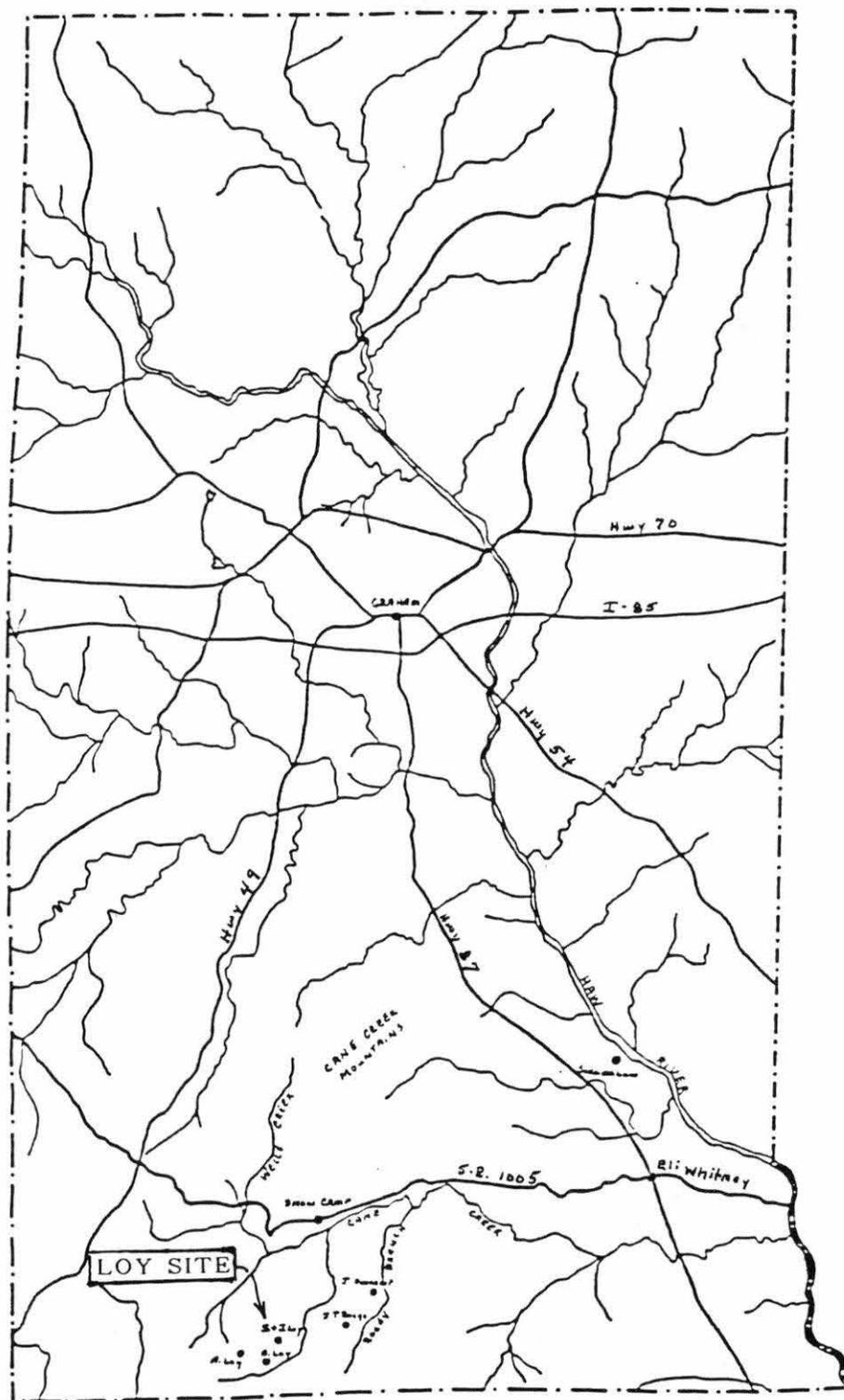


Figure 2.1 Map of Alamance County with Loy Site Location.

dating from Early Archaic period into the time of European Contact in the 1500s. More specifically, the period from AD. 1500 to 1600 is referred to as the Protohistoric period, after explorers had reached the New World but had not made direct contact with the Indians in this area. This period is marked by regional variability in aboriginal technology, reflected in their ceramics, stone and bone tools, ornaments, and pipes, as well as in their settlement patterning, village layout, burial customs, and refuse disposal (McManus and Long 1986:20). Contact with European traders began in this area of the piedmont during the seventeenth century. Parties of traders from Virginia and South Carolina moved through the area via well-established Indian trading paths, some probably centuries old. The European merchants brought manufactured goods from their homeland and the colonies to be traded for deerskins harvested by the Indians. One of the largest paths, known as the Great Trading Path, extended from Fort Henry, Virginia and crossed the Haw River near the present town of Swepsonville. There it split, with the upper trail crossing the Great and Little Alamance creeks to the west (McManus and Long 1986:21). The southern trail extended southwest into Catawba County.

Excavations at contact period sites in Alamance, Chatham and Orange counties reflect an increase in type and quality of European trade goods from Early Contact (1620s) to Late Contact (1720s) periods. John Lawson, colonial period naturalist, surveyor, and founder of Bath, North Carolina, traveled extensively throughout this region of the piedmont and recorded (in 1701) his encounters with local Native American groups, mostly Siouan speakers. He identified the Sissipahaw (or Saxapahaw) along the Haw River drainage (Simpkins 1985:50-51). Others nearby were members of the Occaneechi, Saponi, Adshusheer, Eno, and Shoccoree tribes. Intrusion of the Europeans into the piedmont (and most of the New World, for that matter), had extreme effects on Native American cultures. Social, political, and economic upheaval of individual tribes and larger nations were the result. Contact period Indian populations suffered physical stress brought on by warfare, long-distance hunting, food deprivations, and European diseases

from which they had no natural immunities. Subsequently, by the time of colonial period settlement, remnants of the once autonomous piedmont Indian groups had either out-migrated to the south to join other groups or fled to Fort Christiana in Virginia (McManus and Long 1986:25).

By the 1720s when the first major wave of Euro-American settlers arrived in the piedmont, there were no longer Indians practicing their native culture in Alamance or Chatham counties. Remnants of Siouan Indian groups, the Occaneechi, Saponi, Keyuawee, and Sissipahaw, may have remained in the area following the 1711 Tuscarora War and encountered the first of these white settlers. Ethnohistorical evidence and genealogical research conducted by descendants of these Indian groups suggests that in the Hillsborough and Pleasant Grove communities, Indians intermarried with white settlers and traders. These mixed ethnic families established early farmsteads in the frontier region (Osborn and Selden-Sturgill 1991, McManus and Long 1986:24). By the 1740s the northwestern corner of what later became known as Chatham County was being settled by Scots-Irish, German, and English who filtered down from the Valley of Virginia along the Great Wagon Road. Other parts of the county were being settled from migrations of people moving up from the coastal plain regions. Pennsylvania Quakers (chiefly of English origin), settled near the present community of Snow Camp; to the east and north of the Haw River were Scots-Irish Presbyterians; and in the western portion of Alamance and Chatham counties were the Lutheran and Reformed pioneers (Whitaker 1949:14).

Chatham County was officially formed in 1770/71 out of the southern parts of Orange County following the Regulator Movement of 1768, a dissident clash which pitted the backcountry populations against the planter aristocracy. Common complaints were that the county officials had to travel great distances to conduct legal business, and this resulted in under-representation of western regions of the state. Thus, one result of this sectionalist conflict was the formation of new counties from the oversized Orange County (Figure 2.2). Originally this territory was all a part of the Granville District, a proprietary

ORANGE COUNTY, N. C.  
1752

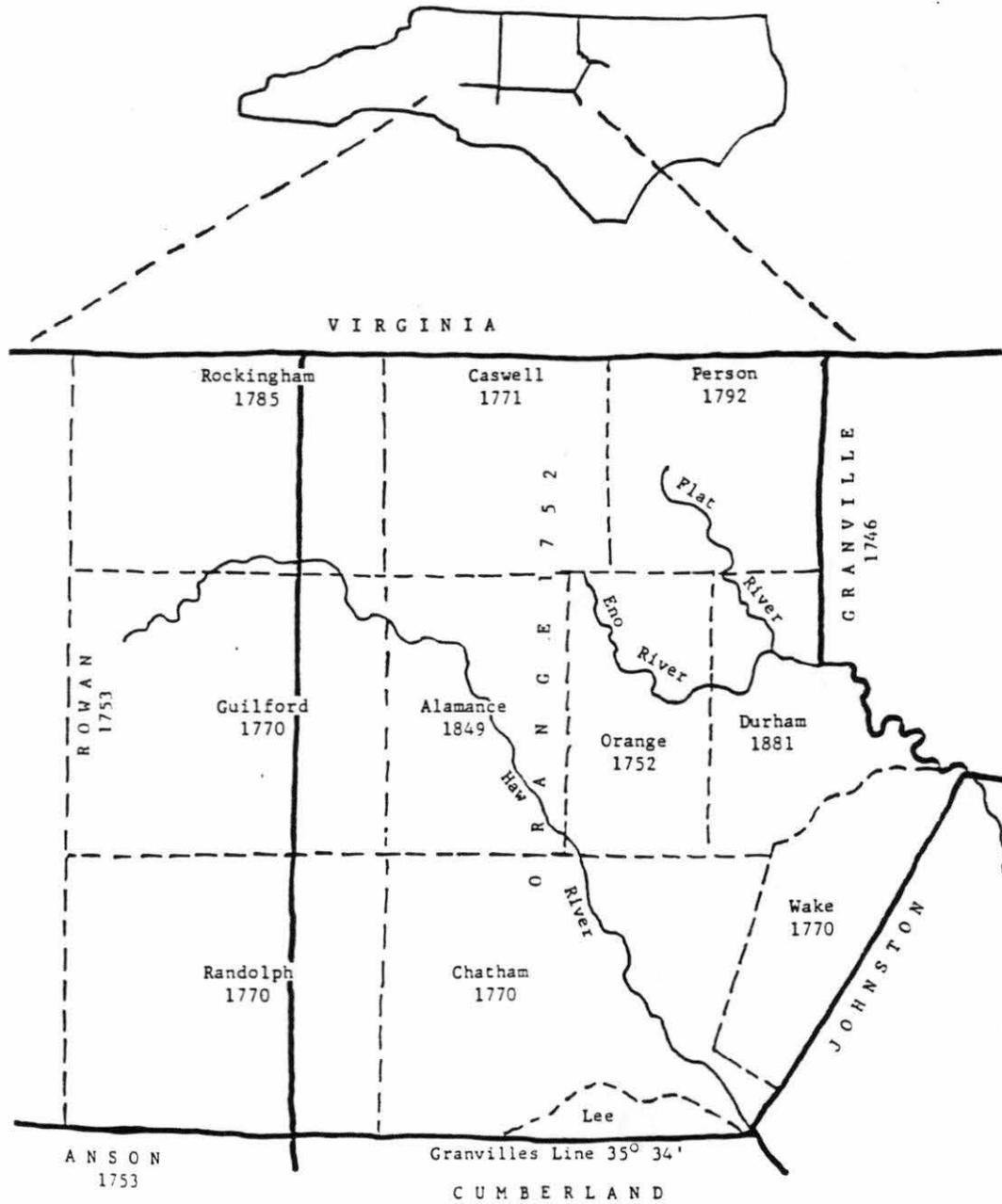


Figure 2.2 Historical Formation of Chatham and Alamance Counties.

land grant whose southern boundary extended to the Haw River in 1746 and on to the Rocky River (Iredell County) in 1766 (Osborn and Selden-Sturgill 1991). Named in honor of William Pitt, Earl of Chatham, who defended the American cause to the English Parliament during the Revolution, the county occupied a central location in the state. The county seat of Pittsboro was established in 1787 (Corbitt 1950:61). The creation of Chatham County occurred just before the War of the Regulation ended in the defeat for the dissidents. This defeat took place at the Battle of Alamance in 1771, near the community of Snow Camp. The battlefield is now located in southern Alamance County.

Alamance County, to the north of Chatham, was formed in 1849, also from portions of Orange County. Its name was derived from a Siouan word meaning "blue clay," most notably those deposits located along the banks of Alamance Creek (Corbitt 1950:1). Recognized by Native Americans as a unique natural resource, this same blue clay would later foster a viable Euro-American cottage industry--stoneware pottery production. The county seat of Graham was established in 1851, and the dividing line between Chatham and Alamance counties became fixed in 1855.

Early farmsteads were settled near springs, waterways, and early transportation routes, including trading paths in use since aboriginal times. Family farmsteads became the primary landscape feature, and clusters of buildings appeared near incorporated transportation intersections (such as crossroads or river fords). The development period of 1740 to mid-1830s saw the first settlers establish an agricultural economy well-suited by its many small streams and few large rivers. Early farms were oriented on south-facing slopes to optimize the warming winter sun. Often the rough log or frame houses faced the major thoroughfare or roadway in order to monitor passers-by. This obsession with "frontality" was more pronounced among the affluent farmers of the growing agricultural region (Osborn and Selden-Sturgill 1991). It was, however, also true for the Loy log cabin at the Solomon Loy kiln site. It faced south and fronted a primary east-west

roadway which provided both easy access for travelers and customers to the shop and greater visibility of the wares being produced there.

Early settlements along primary watercourses also helped to establish a firm relationship with water-powered industries such as grist and saw mills, ferries, and later potteries. In Alamance County, the proliferation of textile mills added to the local industry. Mill villages were scattered along most river valleys. In 1849, over 40 grist mills and 24 saw mills were operating from water power in Alamance County (Whitaker 1949:87). The number of grist and saw mills in Chatham County in the 1830s was estimated at 100, and by the 1840s there were 116 (including 12 flouring mills) (Osborn and Selden-Sturgill 1991:12). Most were small seasonal enterprises, much like pottery manufacturing, which farmers operated in conjunction with their agricultural pursuits. The establishment of small cottage industries began to take place across the state and in Chatham County. In 1814, it was noted that 1,100 weaving looms were in existence, along with one fulling mill, and at least 80 distillers used to process surplus grain and fruits into liquor. One noted potter appears on business gazettes of this period though many others were already established (Hadley, et al. 1976). The potter mentioned on the records was Palatine Jacob Fox (1775-1851), whose shop was later operated by his son, Nicholas, and grandson, Himer, until the 1880s (Zug 1986:55). Early trade networks also took advantage of the river connections to large (for the time) population centers to the south, such as Cross Creek (later known as Fayetteville) and Wilmington. To no surprise, attempts to improve river navigation along the major rivers (Haw, Deep, and Cape Fear) was initiated as early as 1790 (Osborn and Selden-Sturgill 1991).

In addition to the multitude of land and water transportation corridors, the next most important inducement to settlers was the availability of inexpensive land coupled with low taxes. The yeoman farmers of the piedmont tended to own larger acreage farms than many of their more affluent counterparts in the coastal plain region, though their lifestyles and buildings appeared "rougher" by comparison. Rich bottom lands along rivers and

creeks were favored farm sites. Land grants of 500 acres or more were not uncommon. In the northwest corner of Chatham County, the English Quakers and the Germans tended to remain clustered, while others (namely Scots-Irish and Highland Scots) settled further south and eastward. Improvements and a second wave of migration into Chatham and Alamance counties began to occur about 1826 and carried well into the next decade. During this time the population in the central piedmont increased 21%, while across the state the total population increase was only 2% (Hadley, et al. 1976). Easterners and those with mercantile interests were drawn to the profitable piedmont by abundant lands and exploitation of natural resources (e.g. water power, timber, clays, fertile farmlands, and some ores). By 1835 a primitive but fairly extensive road network connected most of the two counties with developing commercial centers, such as Pittsboro, Hillsborough, Guilford, Fayetteville (Cross Creek), and Salisbury.

The place where Solomon Loy and his brother William set up a pottery shop is physically located south of the community of Snow Camp and east of the Quaker settlement known as Cane Creek (Figure 2.3), in what was until 1895 Chatham County but is now Alamance County. This region of Alamance County (namely the Newlin and Patterson townships) consisted of a two and three-quarter miles-wide strip of Chatham County that became annexed in 1895. A region which maintained its strong Quaker character (Hinshaw and Hinshaw 1972:118), as well as a "distinctive, self-contained tradition" of pottery manufacturing (Zug 1986:30). This pottery region, which comprised family farmsteads in Snow Camp and Cane Creek, was home to Quakers who migrated from the northeastern colonies, namely Pennsylvania. But because clay resources were the prominent factor for this cottage industry and not political boundaries such as county lines, a portion of this pottery-producing region overlaps into north Chatham County. During an archaeological survey conducted in 1986, and bolstered by superb historical research previously conducted by Zug (1986), the location and identification of seven pottery sites were attested (Carnes 1986:115), five in Alamance and two in northern

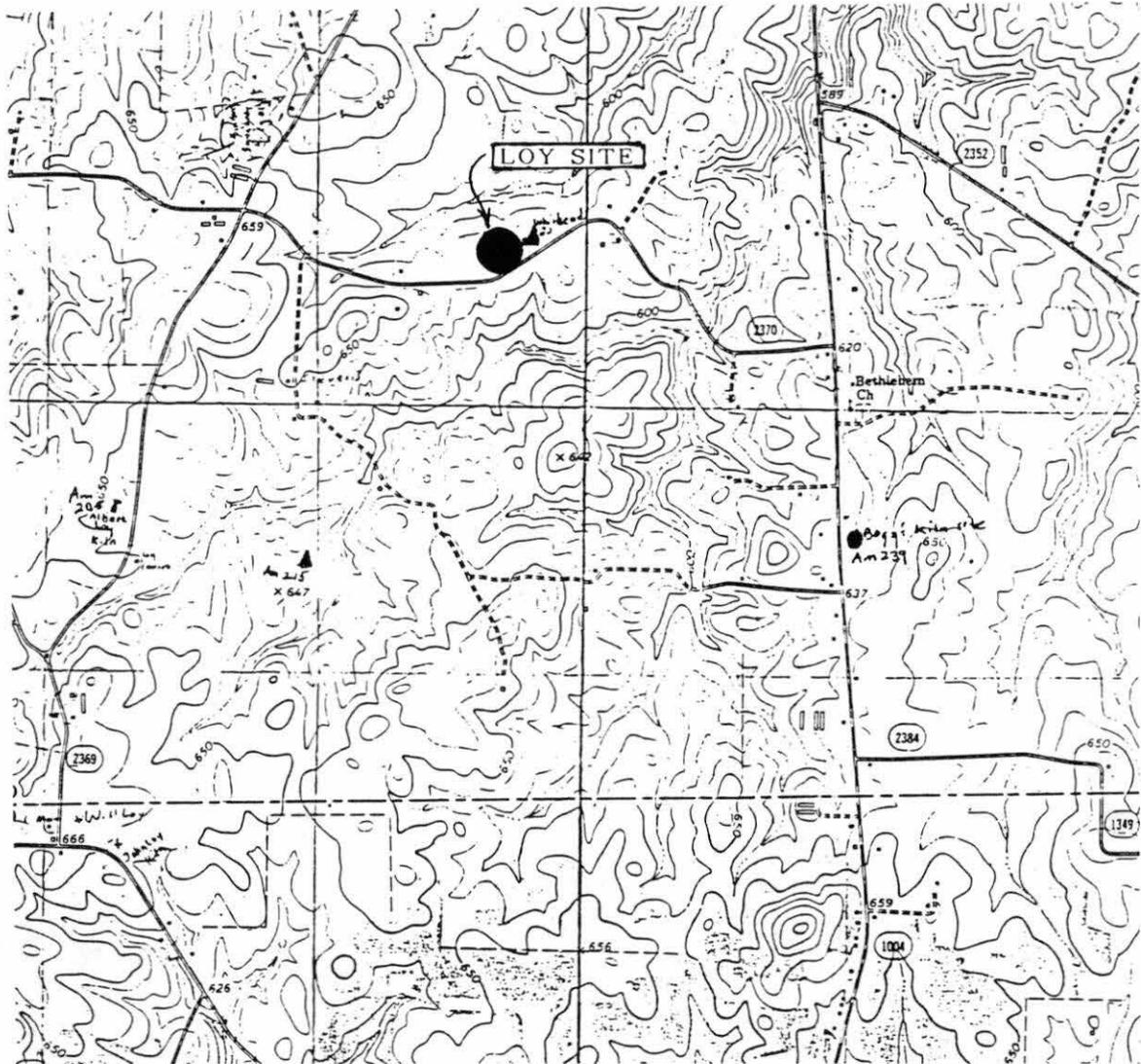


Figure 2.3 Contour Map of Alamance and Chatham Counties with Loy Site Locations.

Chatham County. It was during this survey and field reconnaissance effort that the Solomon Loy pottery site (31Am191) first became known. Other pottery sites, some of which contained relict kilns, were the John Thomas and Timothy Boggs pottery site (31Am199), the Albert Loy (Solomon's grandson) pottery site (31Am182), the William H. Loy (also Solomon's grandson), the John Loy site (believed to be either Solomon's son, John M.'s second shop, or Solomon's brother John, also known as a potter), an earlier Solomon Loy pottery kiln located on Ross Stephens' farm (31Am192), the Mabe (Mebane) Loy (Solomon's nephew) kiln site, and the Joseph Vincent (and sons, Cesco and Turner) pottery site. These kiln sites reflect the density of a once-thriving pottery industry during the late eighteenth century and into the twentieth century in the Snow Camp and Cane Creek communities of the central piedmont. More site specific information regarding these sites and their association with the Solomon Loy pottery site will follow.

#### Vale, Lincoln County, North Carolina

The community of Vale, North Carolina is located in the northwestern corner of Lincoln County. For the most part, it is bisected east to west by State Road #1113, also known as the Reepsville Road. The small hamlet known as Vale is important to this dissertation research mainly because it forms the southern end of a unique region once home to over one hundred earthenware and stoneware potters. Zug (1980:11) identified this compact area as the manufacturing hearth of alkaline-glazed stoneware in North Carolina. Referred to as the Catawba Valley region, it straddled the common border between Lincoln and Catawba counties and extended generally eight miles in length (Figure 2.4). At its northeast end were located the small communities of Blackburn and Propst Crossroads, clustered along State Road #10. Included along the highway were the settlements of Banoak and Corinth and then to Wray's Crossroads, from there south to Henry (just south of the county line), then modern-day Cat's Square and east along Reepsville Road to Vale. Potters, mostly of German ancestry, "plied their trade for nearly

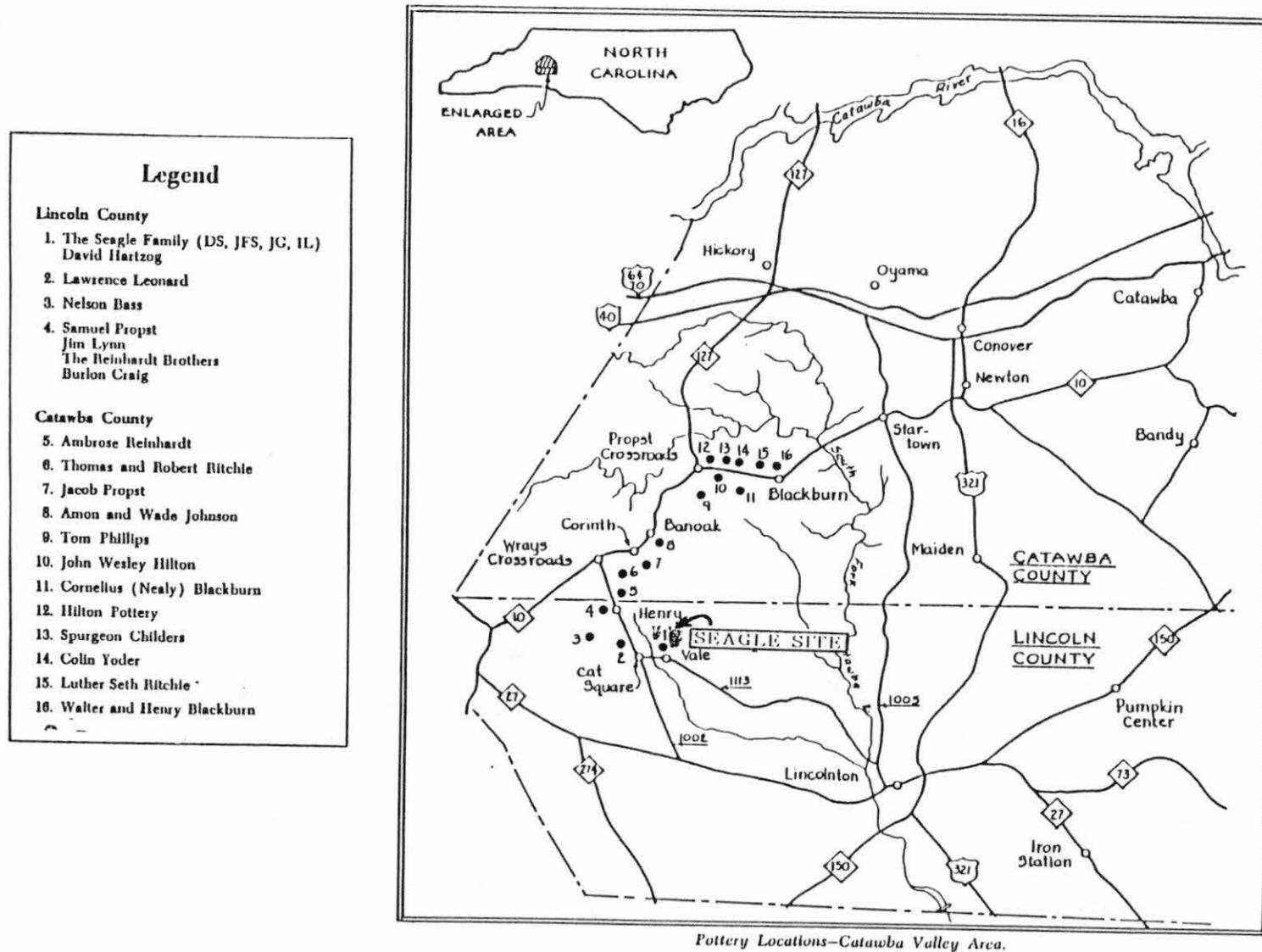


Figure 2.4 Zug's Map of the Catawba Valley Pottery Site Locations.

two centuries, producing traditional utilitarian forms such as jugs, churns, pitchers, jars and milk crocks" (Zug 1980:11). Family names such as Hartzog, Hilton, Leonard, Propst, Reinhardt, Ritchie, Rudisill, Shurford, Weaver and Seagle inhabited this valley and contributed to its 1874 name of "Jugtown" (footnote of Jugtown Post Office established in 1974).

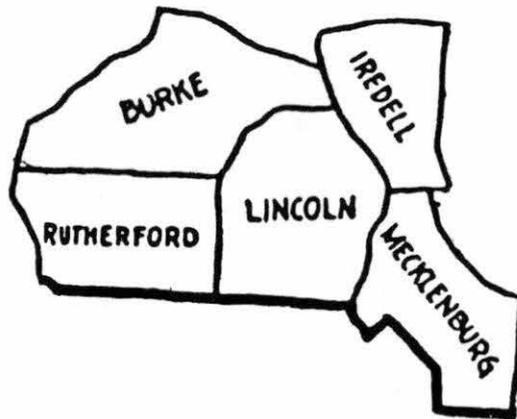
Zug, in his research (1980:12), described the Catawba Valley settlement of potters in three distinct clusters which reflected three separate periods of development. The southern end near Trinity Lutheran Church, between Vale and Cat's Square, was occupied earliest by members of the Seagle, Hartzog, Ritchie, Stamey and Goodman families during the late eighteenth century and early nineteenth century. By the mid-to-late nineteenth century, pottery making activity had migrated northward up Highway 1002 towards Henry. There, the Reinhardt, Bass, Leonard, and Propst families set up shops and kilns.

The second oldest cluster of potteries in the valley occurred near Banoak, in Bandy's Township of Catawba County, where Amon Johnson established a shop in the mid 1800s and later became the first postmaster of Jugtown. Amon, together with his son Wade, ran the Jugtown post office from 1875 until 1897. Wade, and his brothers, Joseph, Harvey and cousin Eli also produced pottery in Jugtown (Zug 1986:87). Joseph and Harvey later set up a shop in South Carolina, and Eli moved to Virginia. Members of the Hartzog (Hartsoe), Ritchie and Propst pottery families also occupied this central portion of the valley.

In the northeast end of the valley the third and most recent cluster of pottery shops was established from Propst Crossroads east to Blackburn. Here, the clay dynasty of the Hilton family ruled the local pottery production. Headed by John Wesley Hilton (1846-1923), and continued by his sons, grandson, cousins, and nephews, the Hilton pottery shops produced wares well into the mid-1900s. Other prominent pottery shops in this area of the valley were established by members of the Blackburn, Yoder, Phillips, Childers, and Ritchie families (Zug 1980:12, 1986:82-94). But how did these German

immigrants arrive in this portion of the piedmont known as the Catawba Valley? What factors drew them to this backcountry region? What variables allowed them to stay, to live and to die in Catawba Valley? And what remains of them and their clay dynasties today? Though archaeology differs from eye-witness accounts, the data it gathers provides some answers to these questions while answers to others are found in the historical record.

The region of the North Carolina piedmont known as Lincoln County has undergone significant social and economic changes since its formation in 1779, yet like most landscapes, familiar landmarks and the built environment still connect the present with its past (Crumley and Marquardt 1987). Large, productive farms remind the observer of the county's long-standing agricultural base (York 1986:244). Much of the county's infrastructures, educational, religious and civic, still reflect previous periods of wealth and prosperity enjoyed throughout its long existence. Indeed, before its partitioning in the 1840s, Lincoln County was one of the largest, wealthiest and most populated counties in the state (Corbitt 1950:137-139, Powell 1968:510, and York 1986:244). Natural resources yielded iron furnaces, cotton fields in turn supplied large textile industries, and abundant timber allowed the lumber and furniture businesses to thrive. But as Corbitt pointed out (1950:137-139), repeated division of the county (see Figure 2.5), due in part to rapid and persistent population increases, extracted prime farmlands and important factory sites from its holdings and gave way to Cleveland County in 1841, Catawba County in 1842, and Gaston County in 1846 (Corbitt 1950:137-139, York 1986:244). In the decades following the Civil War, the stagnant economy which plunged the entire South into economic depression, silenced the iron furnaces and once again, agriculture became the main occupation. Pottery production as a cottage industry was intricately related to this agricultural base and responded to the seasonal rhythms of plowing, planting and harvesting. Zug has described this bilateral occupational existence in his



**Lincoln County  
At the Beginning of 1840**



**Lincoln County  
At the Beginning of 1850**

In 1840 Lincoln was one of North Carolina's largest and most populous counties, with over 1,800 square miles. By 1850 it had shrunk to 300 square miles.

Figure 2.5 York's Map of Catawba Valley Counties Formation.

model of the farmer-potter (1986). More discussion of this will be included in Chapter III's closer examination of pottery production as a cottage industry.

Situated in the southwestern part of the piedmont, Lincoln County stretches into a long rectangle comprised of 305 square miles. On the eastern edge flows the Catawba River, a vital source of early transportation, power, and fertile tributaries. Cleveland County borders on the west, Catawba County to the north and Gaston County on the south. The terrain consists of a rolling landscape with a series of sudden ridges and moderately wide vales. Beneath its fertile soils are deposits of iron ore (both magnetite and hematite), limestone, gold and tin (USGS Soil Conservation and Mineral Resource maps). In addition and as part of its geophysical, Lincoln and Catawba counties also contained rich deposits of stoneware clays (specifically the Rhodes Clayhole located on the South Fork of the Catawba River, four miles southwest of Lincolnton (see Chapter III discussion on environmental aspects of pottery manufacturing). All of these resources have affected the county's social and economic development, but historians agree, it was the land that attracted the first settlers.

Throughout most of North Carolina Native Americans were first on the land. Anthropologists and archaeologists have documented their existence from excavation of sites within Lincoln County and the Catawba Valley (Coe 1952; Levy, May, and Moore 1990; Ward 1983:53; and May 1989:23). Occupation by Indian groups began at least 10,000 years ago and continues today in the settlements of the Catawba tribe along its namesake river (Coe 1952, May 1989). Scant archaeological evidence from hunting grounds, campsites, and expanded village sites provide our only clues of the county's earliest inhabitants. Later, Spanish chroniclers, traveling in large entourages headed by Hernando de Soto, Juan Pardo and others, provide another glimpse of cultural contact between the indigenous natives and the European explorers. In 1528 and again in 1568, a few Indian villages were visited by the Spanish in what is now Lincoln and Gaston counties (Levy, May, and Moore 1990). The mosaic effects of this cultural contact are

still being investigated by David Moore, Robin Beck, and Alan May, archaeologists from western North Carolina (personal communication 1994-1996).

A century and a half later, the English travelers were latecomers to the scene. The naturalist and land surveyor extraordinaire, John Lawson, recorded his impressions and adventures into North Carolina's piedmont in 1701 (Lawson 1701 and 1937). First and second generation European immigrants arrived in this portion of the North Carolina backcountry by way of the Great Wagon Road during the 1740s and 1750s (York 1986:246, Lewis 1995, Lefler and Newsome 1973, Merrens 1964, and Robinson 1979:103). Beginning near the Schuylkill River at Philadelphia, the road transected southern Pennsylvania through York, then along the Monocacy River in Maryland and westward over the Catoctin Mountains and crossing the Potomac at Williams Ferry (Williamsport) (Figure 2.6). From there it continued south through the Shenandoah Valley, southwest through present-day Winchester, Staunton, and on to Roanoke. Past Roanoke it turned east in order to cross over the mountains at Staunton River Gap. Continuing south it led directly across the Dan River valley and into the piedmont region of North Carolina then on into its southern sister state (Robinson 1979:147).

This wave of German and Scots-Irish settlers, primarily from Pennsylvania, Maryland, New Jersey and Virginia, were joined by other English settlers directly from England, South Carolina, or older eastern counties in North Carolina. In fact, genealogical research of the Seagle and Loy families revealed a common connection in their migrations from Pennsylvania to North Carolina in the early 1700s (see Chapter III discussion on kinship and genealogy). During this heralded "age of hands," most who came were farmers, but some were artisans, drawn to the backcountry by relatively inexpensive land and descriptions of abounding resources (Lewis 1995). These early homesteaders encountered members of the Catawba and Cherokee tribes, and attacks and deaths occurred over land disputes. By 1761, British military forces from North and South Carolina and Virginia succeeded in pushing the Cherokee natives westward and upward



Figure 2.6 Map of the Great Wagon Road by Robinson (1979).

into the Blue Ridge Mountains (York 1986:246). Catawba Indians, on the other hand, avowed allegiance to King George III in 1763 and claimed him as their "Great White Father." Survivors of this once great Indian nation agreed to remain on a small reservation south of "Charlottestown" (Lefler and Newsome 1973:170-171).

In 1779 Lincoln County was created from what was formerly Tryon County (named for Royal Governor William Tryon) by an act of the General Assembly. The new county was named for Benjamin Lincoln, a southern general in the Continental Army (Corbitt 1950:138) and originally consisted of 1800 square miles. A site for the new county seat of Lincolnton was ratified in 1785 and a town was girded out on land appropriated from Philip Kancellor and Christian Reinhardt (York 1986: 246). The first session of County Court was held in Lincolnton in 1786.

The early farmer class of Lincoln County raised crops formerly cultivated by the Native American, such as corn, potatoes, beans and peas. By the late 1700s, wheat had become an important crop giving rise to a number of grist and flour mills, powered by the abundant hydraulic resources. Saw mills, tan yards, cotton gins, and distilleries were also common landscape features. One popular mill built by Derrick Ramsour prior to 1771 later became the site of a Revolutionary War battle, located near Lincolnton (York 1986:247). Some of the first farmers owned beef cattle, hogs, horses, and chickens. A few (less than 13%) of the German settlers owned slaves in 1790. Interestingly, Daniel Seagle was listed as a slave owner in the 1850 census record (one female age 19). Most owned fewer than five, and only twenty owned ten or more by the 1790 census (Nixon 1937:308). French botanist Andre Michaux recorded his observations on his travels through piedmont North Carolina in 1802 and commented on the favorable nature of the Germans' plantations, their apple orchards (as well as their cider), care for their crops, livestock, and even their slaves (Thwaites 1904:292,301).

Transportation routes were few in this part of the backcountry. Collet's map of 1770 indicates no roads in the Lincoln County vicinity (Figure 2.7). By 1775, Mouzon's map of



the state shows one road across the Lincoln County region, which extends to South Carolina near Kings Mountain and north into Howard's Creek valley (Figure 2.8). Significant changes in the county's infrastructure did not take place until after the American Revolutionary War, which generated a series of famous battles fought on local soils (e.g. King's Mountain and Ramsour's Mill) (Lefler and Newsome 1973, Nixon 1937). With the establishment of Lincolnton in 1785, cultural developments, improvements in transportation and effective use of its natural resources such as water power, mineral springs, soil and minerals garnered considerable prosperity for the county in the period prior to the 1850s (York 1986:248, Lefler and Newsome 1973, and Nixon 1937). As transportation corridors improved and populations and industry increased, local mail services were established. Though the post office in Vale was set up in 1924, it subsumed the Reepsville and Henry mail services which had been in operation since the 1880s.

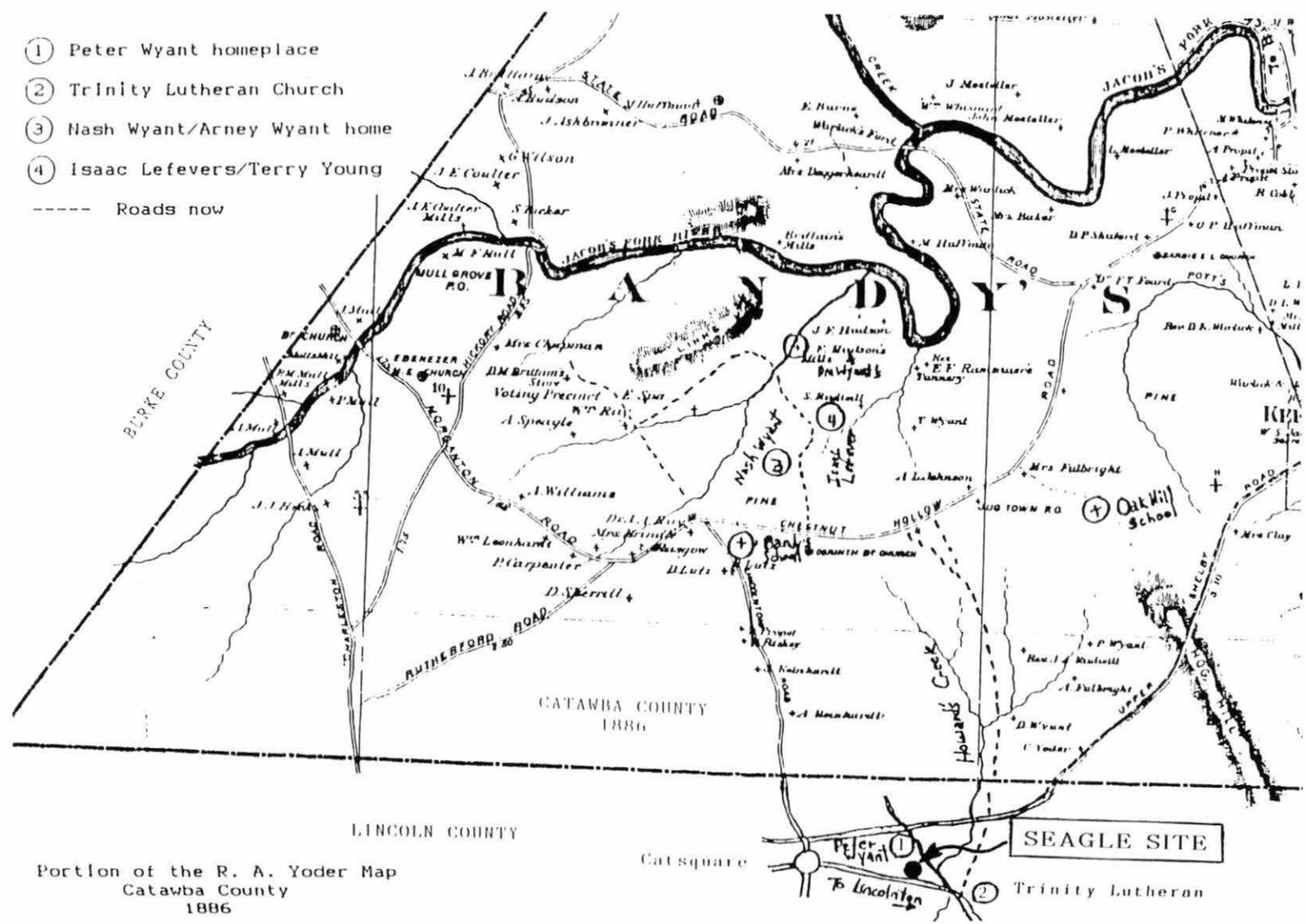
Much like the cohesive religious communities in the eastern piedmont, early German and Scots-Irish settlers adhered to their customs and beliefs brought with them from their countries of origin. In the German-dominated communities, Moravian, Lutheran, and Reformed churches and schools were established. The Scots-Irish founded Presbyterian churches and schools in their communities. As in most rural or backcountry environments, churches and often schools became cultural focal points for the settlements. In the hamlet of Vale, the founding of Trinity Lutheran Church in 1822 provided the congregation with a meeting place and a burial place (Figure 2.9 from Young 1986:9). Located less than one-quarter mile east of the Seagle pottery (and home?) site, the church cemetery contains the marked graves of Daniel's parents, Adam and Eve, as well as numerous relatives, and possibly even his own unmarked burial. Early synodical records indicate Daniel, and his father Adam, were important members of Trinity Lutheran Church. It seems logical, therefore, his grave is in the church cemetery in Vale.

In addition to pottery making, other industries such as iron manufacturing had its early beginnings in the county, mainly due to its abundant natural resources. As early as



Figure 2.8 Mouzon's Map of 1775 with Seagle and Loy Site Locations.

- ① Peter Wyant homeplace
- ② Trinity Lutheran Church
- ③ Nash Wyant/Arney Wyant home
- ④ Isaac Lefevers/Terry Young
- Roads now



Portion of the R. A. Yoder Map  
Catawba County  
1886

Figure 2.9 Yoder's Map of Catawba Valley Settlements from Young (1986).

1770 iron furnaces and forges were built (York 1986:258) and with them came specialists such as blacksmiths, hammerers, miners, bloomers, refiners, and carpenters. Slaves provided labors for some of these tasks (York 1986:259). By 1820, there were 32 hammermen making bar iron, 25 colliers producing charcoal, three founders occupied in "blowing" furnaces, and 156 blacksmiths in Lincoln County (Capon 1932:332-336). Other manufacturing enterprises listed in the 1820 county census records included 66 wagonmakers, six wheelwrights, eight chair makers, six cabinet makers, 10 coopers, 48 carpenters, six stone- or brickmasons, 14 tailors, 14 saddlers, 19 shoe and bootmakers, two clock and watchmakers, 12 gunsmiths, 17 hatters, three painters, one silversmith, two sleighmakers, and five coppersmiths who crafted stills for the county's 246 distilleries! These distilleries brewed fruit brandies and corn whiskey, and the Catawba Valley potters provided the ceramic containers to sell and distribute these precious liquids. By the 1840 census schedule the number of distilleries had increased county-wide to 356, while the number of people who worked as hatters dropped to five. (Who wants to put a hat on a throbbing head?). The decade of 1840 also, by no coincidence, witnessed the rise of stoneware vessel production (jugs to be sure) by the local potters (Zug 1986:302-303).

During the mid-nineteenth century Lincoln County's industrial enterprises plateaued, but on the eve of the Civil War, the demand for iron sustained the economic well-being for the county. By the 1880s when economic reconstruction reached a zenith following the 1860s war years, the production of cotton, corn and tobacco excelled. The size of farms diminished however, as tenant farming increased with a greater quantity of smaller land holdings. The introduction of railways into the county fostered additional, though limited, industrial developments, specifically that of textile factories. For the pottery industry, the 1930s and 1940s saw the decline of a once-thriving craft. Crucial changes in the state's economy, the advent of electrification in the homes, the reduction of home food processing (dairying, canning, and distilling), an increase in availability of glass and metal

storage containers, and mechanization of craft manufacturing, all contributed to the decline of traditional pottery production (see following discussion in Chapter VI).

### 2.3 Site Specific Histories

As preface to this section I offer the following caveat.

While a general explanation of the local development of the pottery industry was derived from the scant documentary evidence, the specifics were harder to pin down and thus have naturally led to some speculation as to precisely how events unfolded.

Therefore, I must start from the basis of admitting that the documentary evidence did not ever clearly answer all my questions.

#### Solomon Loy Pottery Site, 31Am191

The 22-acre tract of land (known as Lot #2) on which the Solomon Loy Pottery Site is located today belongs to Mr. Eugene "Pete" Whitehead who has resided on the property for over 40 years (Figure 2.10). He purchased it from his father Adolphus Whitehead, who is said to have purchased it from a Loy. An adjacent tract (known as Lot #13) was owned by Mr. Whitehead's uncle, Eugene "Bud" Teague. Geographically the site is located on the north side of Old Dam Road (State Road 2370) and .9 mile east of Snow Camp Road (State Highway 1004), in Patterson Township. Unlike the Daniel Seagle Pottery Site, this site has been continuously occupied since the time of Loy's pottery operation. Extant structures on the property include a mid-1940s bungalow, a ca. 1880s log house (converted to a workshop), an undated (but possibly earlier) log barn, a newer frame barn, a smokehouse/workshop, two garage buildings, numerous sheds, and a modern trailer.

Oral testimony obtained from the current owner, now in his eighth decade, provided a chain of ownership dating back to the early 1900s (Eugene Whitehead, personal communication, 1988). Mr. Whitehead grew up just east of his current residence, in the

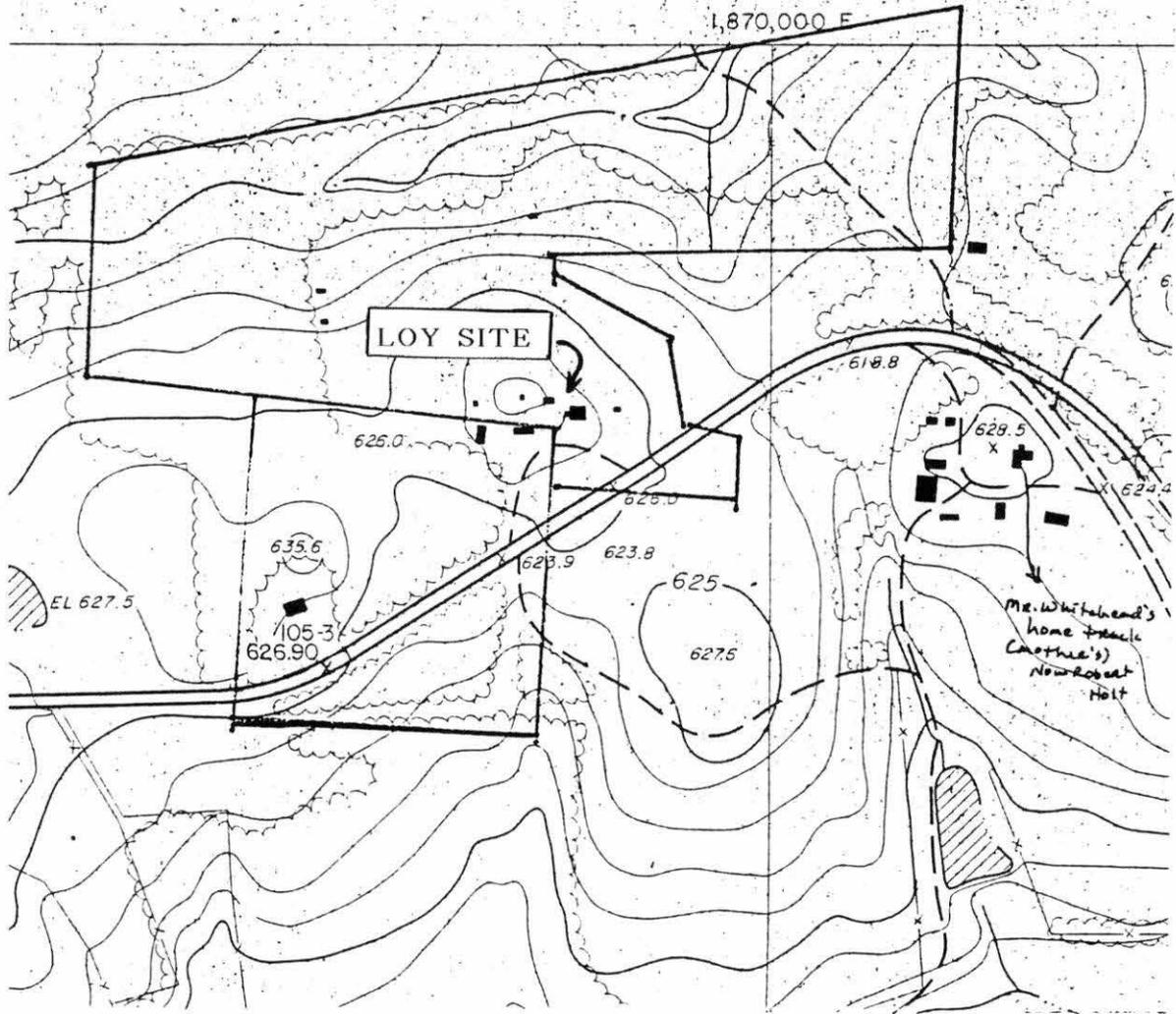


Figure 2.10 Area of Loy Site with Outline of Property Tracts.

large white house once owned by his mother, Izora Whitehead (sister to Eugene Teague), now known as the Robert Holt house located on the south side of Old Dam Road (Lot #13). It was learned that his current house (the 1940s bungalow) was actually built by his niece, Betty Joe Holt and her husband Robert. Because her family was increasing and the two elderly Whitehead's wanted a smaller, more suitable home, the two families simply swapped houses some thirty-five years ago. This arrangement also insured that the old homeplace (Lot #13) would be kept in the family. Mrs. Holt, when interviewed in 1988, remembered that a man named Jim Moody lived in the log house on the property.

The extant log house, perhaps a witness to earlier pottery operations at the site, deserves a brief description (Figure 2.11). The structure and homeplace were examined by architectural historian Carl Lounsbury in 1980 as part of a county-wide survey effort. He referred to the building as the "Teague/Loy" log house (1980:130) and postulated a construction date of 1880, though an earlier date of mid-nineteenth century would not be unreasonable based on subsequent information. Locally, the old log house was known as the Will (or Bill) Loy cabin (Howard Hinshaw, personal communication, 1986). Lounsbury described it as a simple one-room floor plan with an enclosed corner stairway rising from one corner to the second-story garret, remodeled windows with a four-over-four pane arrangement, v-notched log joints, a board and batten front door, a one-story shed kitchen grafted onto the rear, a "new" (fifty years old!) tin roof and an externally placed stone and brick chimney. The log barn on the property is constructed of hand-hewn logs with square-notched rather than v-notched joints (Figure 2.12). This style of log construction is usually associated with an early twentieth century date.

Speaking on the results of his survey, Lounsbury went on to state, "Log construction followed the patterns established in the late eighteenth century. It remained perhaps the most prevalent building form in the county until the end of the Civil War. Over one hundred and twenty log houses have been surveyed, and when we add to this the barns, outbuildings, and kitchens of log construction, the number of surviving log buildings is



Figure 2.11. Original log cabin recently converted to a workshop at the Solomon Loy pottery kiln site.

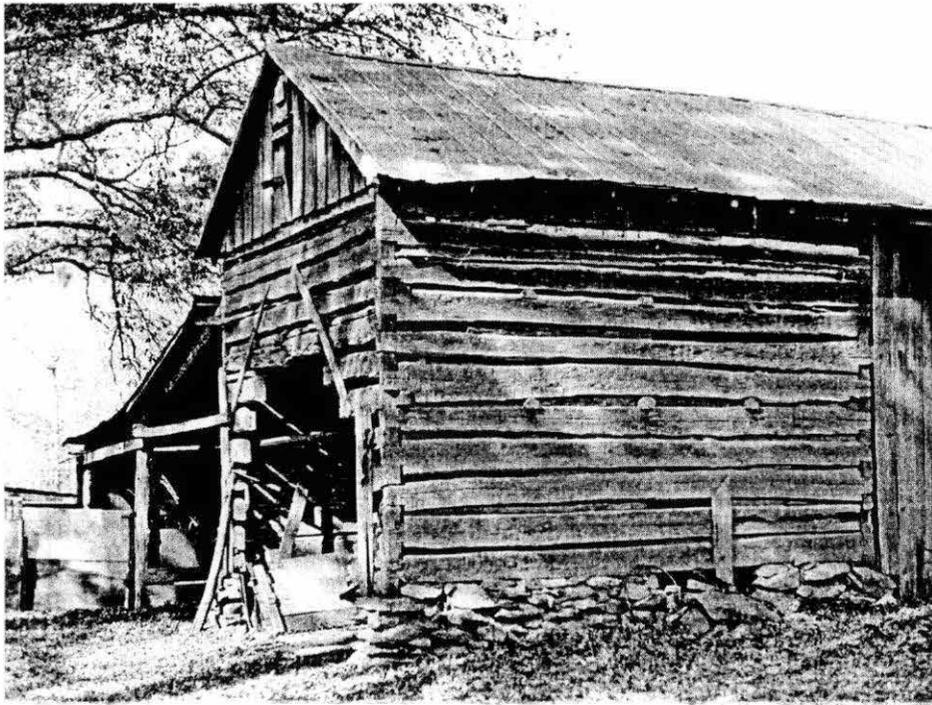


Figure 2.12 Log barn located at the Solomon Loy pottery kiln site.

well over two hundred. **Because of the difficulty in dating log buildings, the approximate age of most of these can only be surmised**" (1980:16)(emphasis mine).

The stone and brick chimney also suggested a construction date of pre-1880. Lounsbury's survey revealed that local field stone was often used for chimney bases on rural houses in ante-bellum farmsteads. In log houses where the original chimney fabric survives, over eighty-five percent of the chimneys were stone and very few log houses had exclusively brick chimneys (1980:22). Clearly a correlation to brick chimneys on sawn lumber house construction vs. stone chimneys on log house construction reflected the socio-economic status of the owner-builder in early Alamance County. Upon closer inspection it was also noted that the some of the brick used in the chimney's upper stack at the Loy cabin exhibited thick deposits of salt-glazed on the exterior. These bricks may in fact be recycled or salvaged when the stoneware kiln was torn down.

Mr. Whitehead acknowledged his remodeling when the log house was converted to a workshop; such as the installation of larger windows, the addition of an enclosed front porch and the addition of electricity. Interestingly, he shared with me a pewter pipe mold he discovered in the clay chinking during window installation. It was later learned that this same mold matched clay pipe head fragments recovered during archaeological excavations of the nearby kilns (more on this discovery in Chapter V). This finding would also indicate that the pipe mold may have been intentionally placed (or hidden?) in the clay chinking between the logs when the site occupants changed or left, after Loy pottery production ceased at this location.

Careful research into deed records of Alamance and Chatham counties did not produce direct evidence of any land transaction between the Loy family and Adolph Whitehead, although connections between the Loy, Teague, Dixon, and Stephens families proved significant. One of the earliest references to Loy property ownership came from Orange County deed records dated 1826 (p.446-447). In this court-ordered estate sale, a portion of the Holt family estate was purchased by Solomon Loy and William Albright.

Solomon Loy, the potter, would have been twenty-one years old at the sale, whereas his uncle, Solomon Loy, would have been age fifty-three. While it was not clear which Solomon bought this tract, it was determined that this portion of Alamance County was then Orange County (see Figure 2.2 in Chapter II). The estate was part of Mary Holt Loy's (wife of Revolutionary soldier John Loy) property given to her by her father John Holt. When Mary died in 1801, a portion of her estate was sold.

A second more direct contact was found in an 1839 Chatham County deed (Book A-H: 366), in which Joseph Dixon and Temple Unthank sold to William Loy a track of land containing thirty-six and one-half acres for three hundred dollars. The sale was witnessed by Solomon Loy (William's brother) and William Boggs (member of a neighboring pottery family). The tract was described as being "on the northside of the south fork of Cane Creek" and included all appurtenances therein. This sale was later challenged in the Chatham County Court of Pleas and Quarters in 1850 (May term), but the deed of title held. This strongly suggested that William, not Solomon, owned the tract of land now the property of Eugene Whitehead, and where members of the Loy family made their pottery. Thus, the name associated with the log cabin on the site and recorded by Lounsbury in 1980 (the Will or Bill Loy cabin) made sense.

Another interesting land transaction was brought to my attention by Ross Stephens, a neighbor of Mr. Whitehead's, during field investigations. As previously mentioned another kiln site (31Am192) was discovered and tested on Mr. Stephens' property during the 1986 survey (Figure 2.13). The site, located on the south side of Old Dam Road, and south of Stephen's homeplace, was situated on a small hill in the middle of a cow pasture. To his credit, Stephens suspected this mound could be the remains of a kiln, but he had no knowledge of a potter ever working or living on this property (Ross Stephens, personal communication, 1986). The last known owner was a Robert Overman, whose log cabin ruins were visible about one thousand feet west of the kiln mound. Unknowingly, two

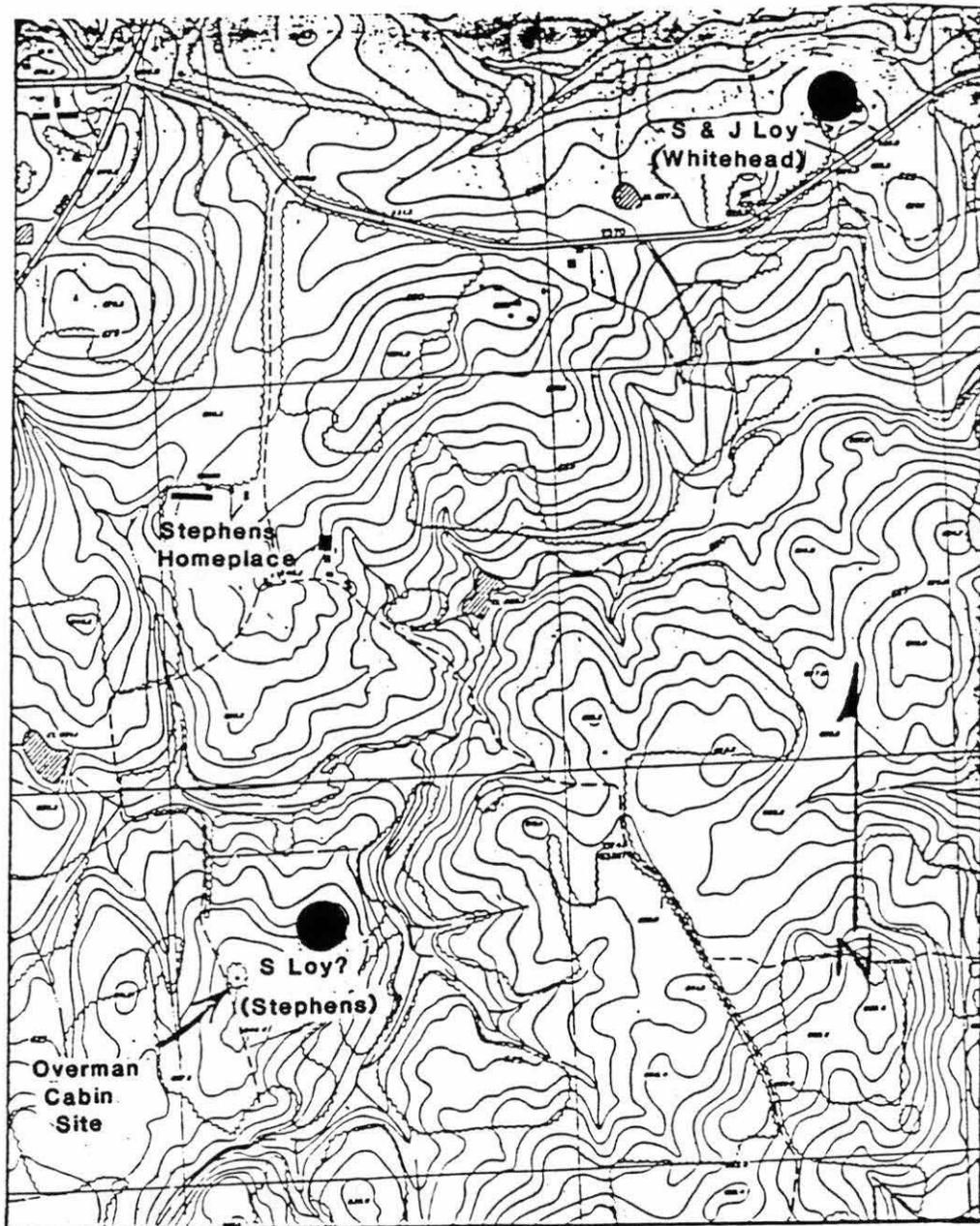


Figure 2.13 Map with Kiln Site Locations on Whitehead's and Stephen's Land.

modern potters (Mark Hewitt and Waymon Cole) had recently visited the Stephens farm to dig stoneware clays, but were unaware of the nearby kiln site.

Upon field inspection, a large circular mound of rocks covered with trees was surveyed. The mound measured approximately 21 feet in diameter and four feet higher than surrounding terrain. Two test trenches (three feet wide by four feet in length) were cut into the mound. Large fieldstones were encountered though none appeared to be in-situ. One handmade brick was recovered along with numerous lead-glazed and unglazed earthenware vessel sherds along with various pieces of kiln furniture. Ribbed, extruded handles, one heavily-glazed slab, and rims and bases of straight-sided unglazed earthenware crocks were found. The lead-glazed sherds exhibited a variety of colors and five sherds were slip-trail decorated plate rims. These artifacts when compared to those recovered from the two kiln sites on Mr. Whitehead's land proved to be virtually identical in construction and decoration. Of special interest, however, was the fact that no stoneware sherds or related kiln furniture was found 31Am192 site. The evidence thus suggested that this kiln site pre-dated the discovery of stoneware production and may have been Solomon's first kiln or that of his father's, Henry Loy. To strengthen this hypothesis, Ross Stephens presented a property deed for his land on the south side of Old Dam Road. The deed of sale, dated 1857, described the land tract and was signed by initial "S" then "Loy". Ross inherited the land from his father Passmore Stephens (Deed Book 120:43), who obtained it from his father Simon Stephens, who in turn received it from his father John Stephens (Ross Stephens, personal communication, 1986). John Stephens was said to have purchased the tract in an 1865 land auction (100 acres for \$150, signed and witnessed by Mebane Loy and William Thompson). Further research into the Ross Stephens deed, portions of which date to 1843, revealed Hugh Dixon purchased 295 acres of the tract who in turn, deeded a portion to Joseph Dixon. It is this portion of the original Dixon tract which comprises Stephens' tract and Whitehead's tract today.

In the same 1865 land auction John M. Loy (Solomon's son), age 33, purchased (as last and highest bidder) two separate tracts; he paid \$18.30 for a twenty-one acre tract and \$85.20 for a one hundred and twenty-one acre tract on the Rocky River (Deed Book BP:359). Two assumptions were drawn from this finding; first, that Solomon was now deceased and second, that John M. wished to move away from their kiln site and set up his own shop. During the 1986 survey of the potters in Alamance County, three additional Loy kiln sites were confirmed (namely, Albert Loy's, Will Loy's and John Loy's) (see Carnes 1986:122-126) (Figure 2.14). The one identified as the John Loy kiln site was located on the north side of Flint Ridge Road (State Road 1351). Site integrity was poor but two partially intact brick walls of the kiln were observed, enough to determine that it was a "side-loading" groundhog type. In addition, a few stoneware sherds were recovered which exhibited thick salt-glaze deposit. Similarities in vessel forms represented at this site and those from the 31AM191 site strongly suggested that this was John M. Loy's second kiln site (instead of John Loy's, Solomon's brother), possibly built after 1865, when the tract was purchased in a land auction.

Nearby, just northwest of this site were the ruins of Will Loy's kiln, situated in a field north of the intersection of Flint Ridge Road and Sylvan Road (State Road 2369), on the Clayton Moon property. This was the site of William H. Loy's, John M.'s son, pottery shop. It had been completely graded away and the debris piled up in the field. A descendant and local informant remembered the kiln as being a rectangular groundhog type structure (Roscoe Loy, personal communication, 1986). A Chatham County deed dated 1873 (Book BN:252) related to this kiln site. In it John M. Loy and his wife Eliza W. sold fifty acres for twenty-five dollars to their second son William H. Loy, age eighteen and already listed as a potter. This same tract was mentioned once again in an 1882 deed (Book BK:226) in which William H. and his wife Sallie join in partnership with William A. Lineberry by selling him one-half of the property and "potter shop and furnace."

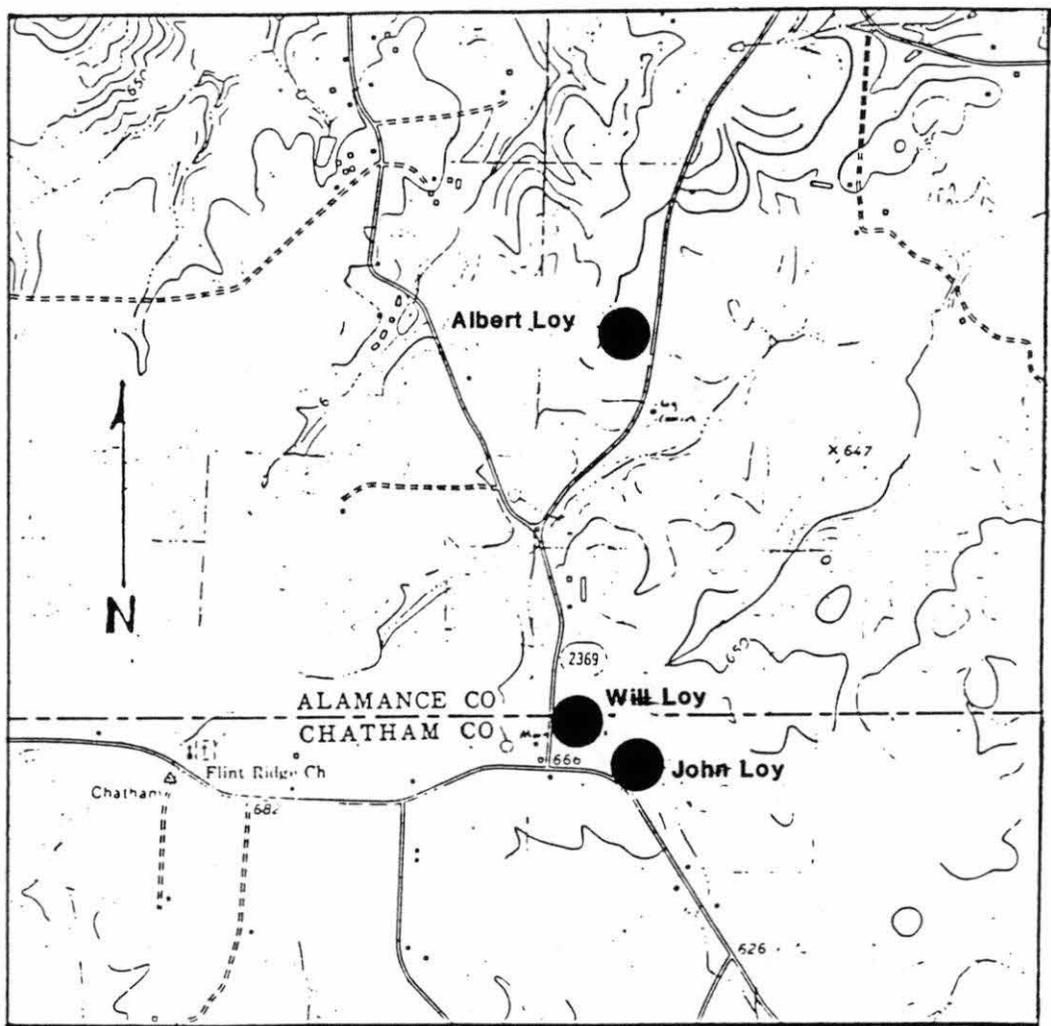


Figure 2.14 Location Map for Kiln Sites of Three Loy Potters.

The kiln site of John M. and Eliza's youngest son, Albert F. Loy, was identified in 1986 (Carnes 1986:126) though no deed records were traced for this property, still owned by his descendants (Roscoe Loy, personal communication, 1986). The kiln was located on the west side of Sylvan Road in a wooded area. Enough remained to determine that it was a side-loading rectangular groundhog type structure. The slightly subterranean walls were constructed of local field stone while a remnant of the vault arch was made of brick (some with thick salt-glaze deposits). Pottery production ceased at this kiln site in the early 1950s.

In sum, these deed references and multiple kiln site discoveries near the Solomon Loy pottery site provide valuable data regarding early community history as well as a sense of "jugtown" development (discussed further in Chapter III). They provide us a pattern of settlement for the early nineteenth-century craftsmen and a continuity of community for the later twentieth century potters of Alamance County. Their restricted dispersion across the landscape allowed them access to local natural resources for their pottery production while at the same time gave them land enough to cultivate for viable farmsteads.

#### Daniel Seagle Pottery Site, 31Ln59

Unlike the Solomon Loy pottery site which is situated on an occupied homestead, the Daniel Seagle pottery site is located deep in the woods only accessible by a rutted out farm road. Geographically it is located on the north side of State Road 1113, also known as the Reepsville Road, and the west side of Howards Creek (Figure 2.15). Immediately to the west is the small community known as Cat Square and to the east is another small hamlet known as Vale. The property is owned by William H. Hoyle and his wife Grace, who live in a farmhouse adjacent to the gravel road which leads to the site.

Information provided by Mr. Hoyle (personal communication, 1988), presented the most recent history of the site and helped to rediscover it during field investigations. The kiln remains and related artifacts lay buried hidden beneath a thick vegetation cover

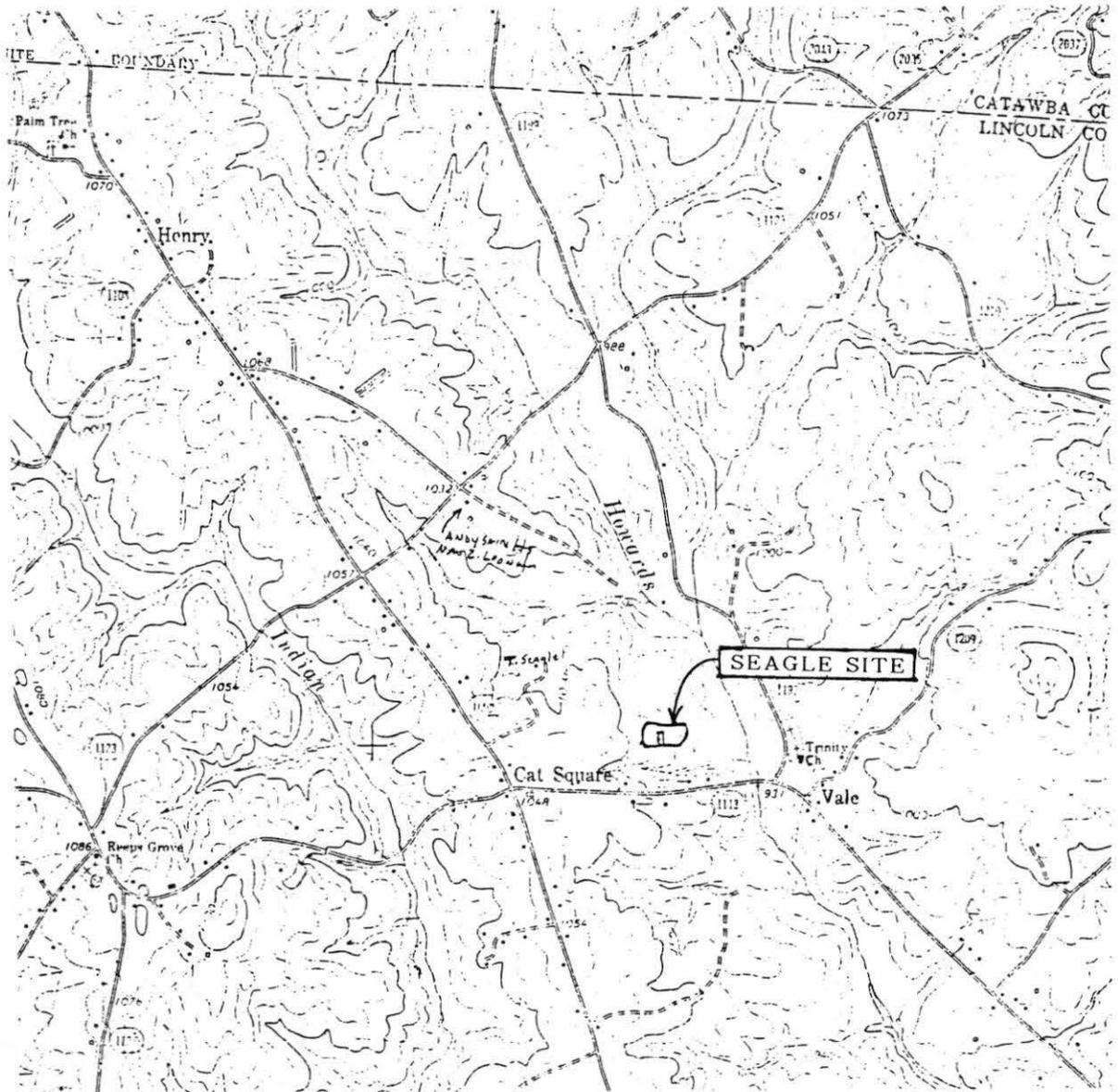


Figure 2.15 Location Map for 31Ln59, The Daniel Seagle Kiln Site.

supported by tree stumps and debris, the result of 1983 logging activities. Upon initial inspection, no portion of the site was visible and its whereabouts remained uncertain. A few clues offered hope. First several sherds of alkaline-glazed stoneware, two with maker's initials, were found in the dirt roadbed. Second, Mr. Hoyle recalled the general location of "an old low brick chimney" that his father had pushed over (and downhill) in the 1960s. This location was further verified by Burlon Craig, a traditional potter, who grew up in the community and once knew of the Seagle site. This location was further verified by deed research and description and ultimately archaeological excavations.

The chain of ownership for the tract of land where the Daniel Seagle pottery site is located appeared to be a bit more straightforward than it was for the Solomon Loy site. Again, thanks to Mr. Hoyle and his family.

Lincoln County Deed Book 366 (page 315) proved that William and Grace Hoyle purchased two adjoining tracts of land in the Howards Creek Township on December 12, 1960 from E. B. Hoyle (widower). Both tracts combined total almost fifty acres. E.B. Hoyle and his wife Bertha purchased the property on March 18, 1930 from J.D. and M.E. Hoyle (Deed Book 175:205). J.D. and M.E. Hoyle earlier acquired a small section of the land from a direct Seagle descendant, T.C. and Prue Seagle on December 14, 1922 (Deed Book 134:n.p.). The larger section of land was owned by Elsie and T.E. Sain who obtained it the 1930 sale by J.D. Hoyle (Deed Book 175:205). Frontage property along the north side of Reepsville Road was also sold to Harold and Johnny Heavner and T.E. Sain, both families occupy the modern houses immediately south of the site.

The earliest reference to lands along the west bank of Howards Creek were found in genealogical records of Peter Wyant (1782-1855), Lincoln County pioneer and later neighbor to Adam and Eve Seagle (Young 1986:8), Daniel's parents. Land records indicated that Peter Wyant and Adam Seagle were involved in a joint purchase (along with David Link, Phil Henkel, and John Hoke) of property along Howards Creek. Two-thirds of the tract was to be divided between Adam and Peter, while the remaining one-third

went to David Link (Lincoln County Deed Book 41:432). Exact acreage was not indicated. A deed of purchase was recorded by Adam Seagle on October 25, 1822. Further research in the joint venture following the death of Peter in 1855, revealed that the land settlement was never completed. In 1857 Peter's sons David and Daniel were appointed guardians of his widow Rebecca and executors of the estate (Lincoln County Deed Book 46:103). Among the allowances given to Rebecca were large rations of foodstuffs, livestock, household furnishings, "her choice of ware on hand," "crocks," and other kitchen goods (Court Of Pleas and Quarter Session for Lincoln County, January 1856:230). As a return on the estate of Peter Wyant a tract of land, one hundred and fifty six acres, was sold to Daniel Seagle of Lincoln County for two hundred and two dollars (Deed Book 46:102). A brief description for the property referred to lands on the west side of Howards Creek and "up the creek as it meanders to the beginnings." Though this general description appeared to include the kiln site location, it could not be confirmed with certainty.

The most **direct** reference to the kiln site location was found in Adam Seagle's will filed in April 1834, following his death on March 21. In this document he bequeaths his oldest surviving son, George, the family "plantation," less the fifty acres given to his youngest son, Daniel. It read, "I give and bequeath to my well loved son, Daniel, the tract of land he now lives on, containing fifty acres . . . which borders an unnamed creek, on the **east** bank of Howards Creek" (emphasis mine--this reference to the east bank of Howards Creek is assumed in error in light of other substantive data). This unnamed creek probably referred to the spring-fed stream which runs just south of the kiln ruins within a deep gully. This same tract of land, described as "said homestead track which the said Daniel Seagle lives on containing fifty acres," appeared in an 1845 deed of land sold by Jacob and Daniel Ramsour to Thomas B. Hoover, Daniel's brother-in-law (Catawba County Deed Book 1:526). Perhaps, Thomas helped to expand Daniel's land holdings in a time of economic adjustment. Later records indicated that Thomas Hoover moved to

Mississippi and subsequently sold this same tract in 1855 to Daniel Seagle. This tract was further described as "adjacent to the lines of Daniel Holly and David Hartsoe" (Catawba County Deed Book 1:526).

When Daniel died in 1867, apparently intestate, his personal belongings were sold at public auction on May 30 and 31, 1867. His son, James F. Seagle, daughter, Barbara and her husband, John Goodman served as administrators of the estate (Court of Pleas and Quarter Sessions, Spring Term, 1867). Specifics of this sale are later discussed in Chapter III, but his widow, Sarah (nee Hoover) petitioned and received allowances as well as livestock, household goods, and food stuffs. Negotiations and appraisals for Daniel's land holdings continued for several years to come. Finally, on May 24, 1870, James Franklin Seagle bought back the original fifty acre tract once belonging to Daniel, as bequeathed by Adam, on which his pottery shop had continued to operate (Lincoln County Deed Book 46). In March 1873, records reveal that most land had been sold to recumber debts and losses. Upon J.F. Seagle's death in 1892 the kiln tract remained in the hands of his heirs until the Hoyle family purchase.

Thus concludes this aspect of the site specific history of the Daniel Seagle Pottery Site (31Ln59) and its immediate surroundings, components of a western "jugtown." The documentary evidence of deed records, personal wills, and court accounts, augmented by oral testimony have offered a glimpse into the past occupants and activities of this site. Deeper views are revealed in the subsequent chapters of this study.

**CHAPTER III**  
***BLOODLINES AND CLAYLINES:***  
**POTTERY PRODUCTION AS A COTTAGE INDUSTRY**

The social, economic, technological and environmental contexts in which pottery production took place in North Carolina during the nineteenth century is largely consistent with specific models of production defined by economic historians and anthropologists as "handicrafts" or "cottage industries" (Burrison 1983, Pace and Gardner 1985, and Prentice 1983). "Craft-scale industry" is the term used by archaeologist Suzanne Spencer-Wood in her edited volume titled *Consumer Choice in Historical Archaeology* (1987:19). In a review of her definition, however, the description of a cottage industry is consistent with my usage in this context. Therefore, I chose to use the more common term "cottage industry" throughout this study. Considered as a sequential development in the evolution of economies, cottage industries are distinguished primarily by the mode of distribution, relying predominately on face to face encounters between the producer and the consumer within local market contexts. In a more generalized definition, cottage industry can simply refer to any form of part-time home production for market exchange.

When perceived as a stage of economic development, cottage industries can be further defined as points along a continuum leading from a purely subsistence level economy to increasingly complex forms of economic differentiation where markets and moneys play a predominate role (Smelser 1967:34). Forms of household (hence the term "cottage") production represent alternative economic differentiation wherein a compromise is made between a traditional pattern of economic organization and full integration into a more differentiated industrial-urban economy (Smelser 1967:35). For

this reason, cottage industries have been most frequently recognized and studied in situations where relatively rapid economic transitions are taking place, such as in the colonization or industrialization of previously rural areas (for a useful study which clearly demonstrates this principle see Pace and Gardner's 1985 research on moonshine production in Tennessee, *Tennessee Anthropologist, Volume X, No. 1*). In such cases, the local population may benefit by participating in the expanding economy, but must also contend with external social, economic, and political pressures which may impinge upon the traditional organization of labor, value, kinship, and belief systems. In cottage industries production of goods can be perceived as an economic strategy that permits its practitioners to adapt to the pressures of market economy, thus participating in that economy without sacrificing their traditional forms of social and economic organization (Spencer-Wood 1987:10-11).

In cash-poor rural economies, cottage industries share certain characteristics. In particular, they are defined as activities which are supplementary to a traditional mode of production (such as pottery production, blacksmithing, or moonshining) and are typically associated with self-supporting agriculturalists (such as the farmer-potter model, where both occupations are derived directly from the earth) (Pace and Gardner 1985:6, and Prentice 1983). Often, as was likely the case in cash-poor rural settings such as in Lincoln and Chatham counties in the early nineteenth century, the production output of the farmer-potter was variable based on the supply of requisite materials (clay, wood for fuel, glazing solutions, etc.). In addition, because most cottage industries are geared to the immediate needs of the household rather than the demand of the market, variable output or production is common. Production, however, can also be affected by fluctuating conditions in local or external markets, an example being the Federal Prohibition Act which dramatically affected the production of moonshine in the Southeastern United States, as well as the production of stoneware jugs (used to store the precious liquid) among the rural potters (Burrison 1983:38, and Zug 1986:304).

As previously implied production in a cottage industry may take on a seasonal aspect, practiced only during that part of the year when farming or other employment is not pressing, or, alternately during the periods when unexpected reversals occur (such as absence of cash employment or crop failures). Thus, small scale production, low overhead costs, and narrow margins of profitability typify a cottage industry (Prentice 1983). Traditional aspects of handicraft production may be identified with reference to the product and with regard to production techniques and organization of labor, often **kin-based**. Emphasis is placed on the production of traditional (or "folk", if you will) handicraft items or on production techniques with which the producer is already familiar, and for which (s)he has a requisite supply of raw materials.

The above-stated characteristics of cottage industries appear to be entirely consistent with the ethnohistory of folk pottery production in the Southeastern United States (Baldwin 1993, Brackner 1994, Burrison 1983, 1993, Carnes-McNaughton 1995, Castille et al. 1988, Drucker, et al. 1993, Eaton 1937, Greer 1981, Pugh 1988, Sayers 1971, Smith 1972, Smith and Rogers 1979, Swezey 1984, Willet and Brackner 1983, and Zug 1977, 1980a, and 1986). These characteristics may in fact be rephrased as **expectations** against which the material culture remains of pottery-making activities can be evaluated.

### 3.1 Technological Aspects: Processes

Noted ceramic historians Prudence Rice (1984 and 1987) and Anna Shepard (1956) have written at great length to remind us that pottery is made by humans, and each time a human executes a particular action, whether it is turning a pot, writing a letter, or interacting with another human, choices are made at every step which affect the shape of the outcome. Moreover, the competency of the actor, and the environment in which the act is performed (or particular circumstances) also affect the outcome of an activity.

Uniquely this concept applies to all things human, though for now the focus of this study is how this concept applies to making pottery during the nineteenth century. Briefly and

generally, then, let us consider the processes of pottery production, while keeping in mind that these processes may differ slightly, or seriously, between earthenware and stoneware ceramics.

In order to reconstruct the technology involved with pottery production during the nineteenth century at the Loy and Seagle kiln sites, information was garnered from available historical records, the archaeological data, and geographical studies, in addition to previous research conducted by ceramic historians, folklorists, and ethnographers. Clearly, certain key environmental factors must be present in an area before a pottery operation can be established; and these are discussed below. Certain socio-economic variables must also be evident for production to continue and respond to local markets. These variables are presented below. When all factors are combined, however, pottery production can be distilled to nine basic steps. Briefly these are:

- locating, digging, and hauling the clay
- cleaning, pugging (or mixing), and processing clay for use
- shaping or turning the clay ball into vessel form
- decorating or stamping, before or after drying
- glazing if required (except for salt-glazing)
- loading the kiln, by stacking or single layering
- firing the kiln, assuming fuel is stockpiled
- cooling of kiln and unloading
- selling wares or hauling to market

Assuming that a person has already received the necessary training to actually turn (or throw) a vessel, and construct a kiln (crossdraft, updraft, or downdraft), workshop, drying area, and all equipment is in place, the potter must first locate or obtain the proper clay for pot and ingredients for the glaze. The clay, whether obtained locally or imported, is often pugged or mixed, and then moistened to a desired consistency for handling during ware production. If tempering of the clay was required (sometimes

combining two or more mixtures), it would be done at this stage. Clays were also combined to create greater plasticity and strength to the mixture, and to raise or lower the firing range of the body. Tempering the clay aids in the firing process by allowing pockets for moisture to be released from the expanding clay (Carnes 1981:84). Tempering also adds to the strength of the clay vessel. So, with the clay properly processed and on hand, tried and true for the purpose, a potter first centers a ball of clay (weighted out for the vessel) on the wheel head. Thus before the wheel even begins to turn the potter has made dozens of decisions that have inexorably led to this point, knowing that if any one of those choices was faulty, the result could be disastrous. The potter, then, has specifically chosen his raw materials to use for the pot (s)he wishes to make.

As the wheel begins to rotate and the potter presses down a lever which opens the ball of clay (often called the ball opener), (s)he shapes the wall and base of the pot, and with every action controls the form. If the base is wide, the body will have to be wide, if it is too narrow, the vessel form may be too thin to stand up, unless the potter adapts and shapes a precisely balanced body. If the base is left too thick or too thin, it will affect the ultimate height and shape of the vessel, and can result in basal cracking. Some potters, particularly studio-trained potters, use height gauges to control the size of their pots. More traditional or folk potters typically used less formal means of measuring, such as eyeballing or guesstimating the height. Often a measuring gauge would be nothing more than a notch cut out of the wooden window sill or a twig stuck up in the mud. In case where more uniform shapes, such as straight-sided cylindrical wall vessels, templates are be used. Horizontal lines incised around the shoulders of some vessels represent template controls. These templates are typically held against the top of the vessel while it turns on the wheel, thus producing a desired size and shape. The use of templates for rims results in an exactness time after time, unless the competency of the actor or mitigating circumstances intervene. Handles, if required, are applied after turning and left to leather-

harden (a stage of natural drying). If decoration is applied to a vessel, whether it is slip-trailed or painted on, it usually occurs when the pot is leather-hardened. With every finishing detail the exigencies of the moment cause subtle variations, but variations which still occur within certain parameters, statistically.

Once the vessel has been formed and appendages added (if required), the potter removes it from the wheel head by using either a taut looped wire pulled through the base as the wheel slowly spins, or it is cut off. This action results in particular marks visible on the base, either straight or concentric grooves (Greer 1981:67-69). Next, the pot is then lifted off of the wheel head by either the use of bare hands or with a set of specially constructed wooden or metal lifters. For the traditional potter, two types of lifters were known to be used. One type resembled large calipers, hinged at the joint. The other type consisted of two separate pieces with handles, specially carved with beveled edges, which could be pushed together (like a tray) underneath the pot (Zug 1986:162). Once removed, the vessel is set on a board and placed in a drying area.

To increase the impermeability of stoneware and earthenware vessels, glazing in some manner is necessary. The exact formulation of the glaze is variable, depending upon the known recipes and the materials available; moreover, the method of glazing is variable. In some cases, the interior and exterior of the vessel is glazed, while in others only one surface may be glazed. Application of the glaze depends on the type of glaze. Sometimes pots are dipped into a solution, sometimes the glaze is poured over the vessel, or in the case of salt-glaze, it occurs in the kiln during firing when salt (NaCl) is thrown into the fire ports. As the salt vaporizes, sodium chloride reacts with the water vapor to produce a soda glass coating on all interior surfaces of the kiln and the exposed wares. Interior surfaces of small mouthed vessels or vessels stacked up would thus not be exposed to the salt glazing vapors. In some pottery traditions salt-glazed stonewares also were coated with a slip-glaze (e.g. Albany or Bristol slips) on the interior prior to firing. No interior coating of this type was typically found on North Carolina salt-glazed stonewares.

Rhodes (1959:185) points out that it was desirable to protect slip glazes from the salt fumes in order to let the slip glaze melt smoothly on the vessel surface.

For the nineteenth century potters, lead glaze was commonly used on earthenwares, while a wider variety of glazes were used on stonewares, some regionally and temporally specific. Alkaline glaze, a formulated glaze was used in the western region of North Carolina, while salt-glazing was the common coating in the eastern region (Zug 1986). Slip glazes were also developed in the last quarter of the nineteenth century and used by most potters. By definition, a slip is a clay held in liquid suspension and can be applied to the vessel in various ways (dipped or swabbed). When pots are dipped or submerged into a vat of solution, they are then inverted and allowed to drain off excess slip. Potters often wipe excess glaze off of the top or rim of a pot as well as the base. This prevents sticking together during firing. Still other potters use separators when stacking in the kiln and the rims remain glazed.

Loading the wares into the kiln was the most critical part of preparing the kiln for firing. This procedure involved placing unfired wares in the kiln as tightly as possible and stabilizing the stacks of wares to prevent collapsing and breakage. In single-shot firing, such as in a groundhog kiln, unstacked wares are placed directly on the floor to make sure all pieces get as even a firing as possible is critical. To allow for air circulation in the salt-glazing kiln, some space is left between the pots and stacks of pots so that salt fumes will reach each pot. Specialized kiln furniture, used to separate the wares, stack the wares, and stabilize the stacks (or bungs), is required. Often special shapes of kiln furniture are prefired and used multiple times, while other, more expedient pieces of kiln furniture, are created on the spot as the kiln is loaded and tend to be cruder in form. In a salt-glazing kiln difficulties arise in setting the wares on the sand or crushed-quartz floors where thick deposits of glazing residue from previous firing create an uneven surface (Carnes 1981:85, and Schulte 1974:135). Therefore, a variety of leveling props and other kiln furniture is used to secure the wares before firing. Shelves, or thick flat slabs are used

to separate lead-glazed earthenwares during firing. Many of these were found at the Solomon Loy site and will be described in Chapter V. The use of jug saggars was a specialized form used by folk potters in the nineteenth century (Burrison 1983:94, Greer 1981: 218, Smith and Rogers 1979:144, and Zug 1986:215). These are mold-made types of kiln furniture intended for use in multiple firings. Basically, it is a dish-shaped form with a central hole in the base, inward slanting walls, and a larger formed orifice in the top. A v-shaped cutout on one side of the slanting wall fit over the jug handle. The sagger is placed over the neck of the jug, resting on the shoulder and handle. The inverted base (or top) of the sagger provides a platform for stacking the next piece of ware (either another jug or flat bottom form). Bowl or dish forms are generally stacked upside down and stacked on top of each other, separated by spacing or setting props. Evidence of improper or unsuccessful stacking is often mirrored in the archaeological record by vessel fragments which have collapsed or fused together. Chapter V will discuss the types of kiln furniture, and kiln accidents recovered at the Loy site where two round kilns (one updraft and one downdraft) were excavated. Minimal evidence of kiln furniture was found at the Seagle site (groundhog type kiln) though kiln accidents were noted.

When vessels are fired another complete set of humanly influenced factors takes over which affects the appearance of the vessels and subsequent sherds archaeologists recover. Today, gas and electric kilns provide relatively constant heat without introducing impurities into the kiln's atmosphere. For Solomon Loy and Daniel Seagle, these methods were not available during their potting days. They relied on wood for fuel. Wood had to be harvested and cut into usable slabs just the right length and thickness to fit into the fire ports (or boxes, also referred to as "eyes" by some folk potters). Some nineteenth-century potters used coal to fire their kilns if they had access to it (Carnes 1981:86 research at the Weaver Pottery Site in Knoxville, Tennessee).

Wood and charcoal work well as fuel sources but require careful attention to maintain and increase internal temperatures, and the constant stoking creates variations in the

atmosphere of the kiln. Increased oxidation inside the kiln produces lighter colored bodies, while reduced oxidation yields darker bodied ceramics. The final appearance of the finished pottery is directly related to the atmosphere inside the kiln. Constant opening and closing of the kiln apertures results in temperature fluctuations and atmospheric changes (drafts) which can produce mottled or unevenly colored wares. Wood ash from the fire boxes also tends to swirl around in the kiln when drafts are created. Fly ash, as it is called, lands on the pots and sticks, thus creating extra texture and coloring.

Temperatures required for earthenware bodies to mature, range from 1800 to 2000 degrees F, while those required for mature stonewares are 2100 to 2400 degrees F. Slip glaze (including alkaline glaze) also matures on stoneware bodies at these temperatures. Lead glaze melts at lower temperature suitable for earthenware bodies. Salt glaze is produced in the kiln as the stoneware body vitrifies. Temperatures and glazing conditions inside the kiln were tested by nineteenth-century folk potters by means of draw trials (specialized kiln furniture often made from cut pieces of previously turned pots, pierced through the center with a hole in order to extract from the kiln with a long rod) (Carnes 1981:79-80, Carnes-McNaughton 1995:40) (further discussion of kiln furniture including draw trials in Chapter V). The potter or helper responsible for stoking the kiln would take this task very seriously; as over-stoking or under-stoking could result in disaster. For the nineteenth century potters, no pyrometric cones or clocks were involved in timing the burn or gauging the temperature. Aside from draw trials, testing was intuitive and visual, and based on experience and experiment.

Finally, cooling down the kiln is just as critical as heating it up. If the kiln is cooled too quickly the wares inside will crack. But cooling down too slowly can be time consuming and thus costly. Trial and error at this stage resulted in sizable waster piles at nineteenth century kiln sites: broken, cracked, and warped sherds of stonewares and earthenwares, an archaeologist's dream. Once the kiln is cooled down, the doorway(s) are unblocked for further cooling. Then unstacking (if required) and unloading the finished

products takes place. Lastly, the pots are cleaned of any rough spots or adhering kiln props or floor debris. Some break during this activity. Selling the wares, or in some cases bartering for other goods or services, is the final step of pottery production. If the wares are not sold on the premises, getting them to market requires a transportation mode and access. Distribution and trade of nineteenth-century potters is addressed in section 3.3.

In essence then, pottery as the final product of a creative process is affected at all levels by certain human choices, the right clay, the wheel, the kiln, the fuel, the weather, and the competency of the potter. And along the way all the actions taken are shaped by culture and the environment. Potters are able to make each separate vessel slightly different because of an infinite number of factors chosen and/or given, yet each vessel is fundamentally the same, within measurable parameters, enough to be recognized as a jar, cup, bowl, jug, churn, etc. Each individual potter, therefore, does things in his own way, but within the variables or guidelines imposed by the market. **Transitions** in traditional methods of pottery production for the nineteenth century potters, and the **continuity** of their craft from one generation to the next drive the reasoning behind this study.

### 3.2 Environmental Aspects: Resources

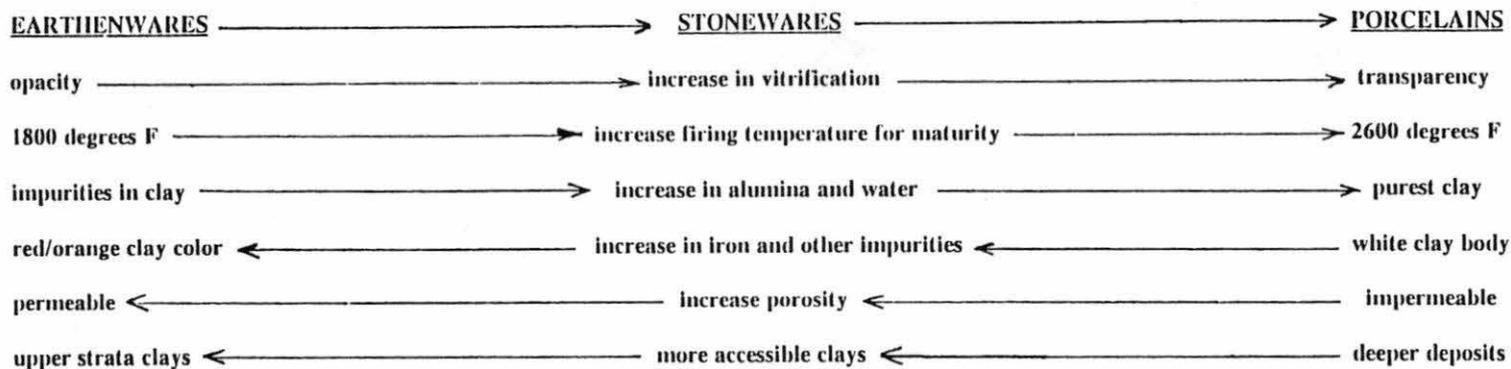
Ceramic historians tell us that pottery was the first synthetic material created by humans and as such combined the four basic elements identified by the Greeks: earth, water, fire, and air (Rice 1982:3). Indeed, the term "ceramic" originated from the Greek word "keramos" which means "burned stuff" or "earthenware" (Rice 1982:3). The process of pottery creation thus cannot occur if any one of these basic ingredients is missing. Knowing this, all are given an equal weight of importance, though the "portability" of earth (or clay) and water require special consideration. These two key environmental factors would need to be accessible and dependable in an area before pottery making can be undertaken. Therefore the following discussion is devoted to understanding the particular soil types (specifically clays), water courses, timber

resources, and general geomorphology for Loy and Seagle pottery sites. Historical data regarding known clay pits used by each potter is given as well as sources for their materials used in various glazing compounds. Non-local resources such as lead for lead-glazing and salt for salt-glazing are mentioned here but also discussed in section 3.3 because of their import and trade value. But first a necessary description of clay types used in the production of earthenware, stoneware, and porcelain ceramics is essential.

All clays contain, in varying quantities, silica, aluminum, and water, along with a number of other minerals and impurities (such as oxides of iron, magnesium, calcium, sodium, potassium, and titanium). Zug has pointed out that, based on chemical analyses, clays used in earthenware production differ very little in composition from ordinary earth (1986:108-109). Clays used in stoneware and porcelain production, however, differ proportionately in an increase in silica and a decrease in impurities. These two variables directly affect the vitrification of the ceramic body, with porcelain being the most "pure" body and most vitreous of the three types. For the purpose of analysis and to minimize confusion regarding nomenclature, I prefer to think of the three ceramic bodies as points along a continuum. To clarify what I mean I summarized the physical properties of the three clay body types, as seen in Table 3.1. I found this analytical approach to be of vital importance particularly when confronted with waster pile sherds from pottery sites where all the "mistakes" (such as underfired, overfired, bloated, crazed, warped, etc.) are recovered alongside the properly fired pieces. Moreover, in documenting the transition from earthenware to stoneware ceramic types at each kiln site it was important to be able to recognize experimental as well as successful finished products.

While Table 3.1 provides summary of descriptive data regarding the composition and comparative characteristics of the ceramic types, the physical properties of the clays should be considered important. To evaluate a certain clay's properties, a potter would pay attention to its plasticity, strength, shrinkage rate, color, and fusibility (Stuckey 1965: 371). According to Zug's interviews with living folk potters, the plasticity and strength of

TABLE 3.1  
**PROPERTIES  
 OF VARIOUS CERAMICS**



**GLAZES  
 OF VARIOUS CERAMICS**

EARTHENWARES

lead-glaze (coarse & refined)

enamel or painted glaze (coarse & refined)

clay slips (coarse & refined)

STONEWARES

no glaze required

salt-glaze (coarse & refined)

clay slips (albany, bristol, etc on coarse)

alkaline glaze (coarse)

PORCELAINS

no glaze required

enamel or painted

metal gilt

chart compiled by  
 Linda F. Carnes-McNaughton

the clay body were their primary concerns (1986:109). Certain vernacular terms were used by these potters to describe the qualities of their clays; among these terms were "fat" which referred to fine-grained, more plastic clays, and conversely, "lean" which referred to more coarse-grained clays with sand or flint inclusions (Zug 1986:109). These terms will be employed for artifact discussions in Chapter V.

Once again, in reference to Table 3.1, earthenwares comprise one end of the ceramic spectrum, porcelains reach the other extreme, and stonewares fall somewhere in the interim. Geomorphologically, earthenware clays originate from upper soil strata and contain higher percentages of impurities such as iron which often produce a red to orange to yellow body. Earthenwares are less vitrified and thus permeable, so they must be glazed in order to hold liquids. Earthenwares are fired at low temperatures in the kiln, typically 1800 degrees F. The resulting body is porous and will stick to the tongue when tested. The earthenware body is opaque when held to a light source and tested for diaphaneity. Stoneware, the mid-range ceramic type, contains more alumina and water than earthenwares, and is more vitreous. It does not need to be glazed in order to store liquids, but among traditional potters, it was often glazed. The stoneware sherd will not stick to one's tongue when tested for porosity. Typically stoneware clays are found in lower stratigraphic layers, sometimes near bottomlands, near streams or river drainages. Extraction of lower beds of clay required some knowledge of subsurface mining and extra labor. Colors for stoneware bodies can range from reds to blue-grays. Despite color variations, stoneware bodies mature at approximately 2300 degrees F, consequently any glazing compounds used on these bodies would need to be compatible with this higher temperature range. In his 1986 survey of North Carolina potters, Zug noted a difference between the stoneware clays found in the Catawba Valley region and those found in the eastern piedmont region of the state. Further, he noted the high quality of the Edgefield, South Carolina, stonewares which exhibited greater percentages of sedimentary kaolin and were lighter in color and more vitreous. Porcelains, at the other end of the ceramic

spectrum, contain the greatest percentage of kaolin (pure clay) and are most often white in color. This white color testifies to fewer impurities and the porcelain body is transparent when tested for diaphaneity. Most porcelains require a firing temperature of 2600 degrees F. The body is impermeable and need not be coated to hold liquids. Geologically, major kaolin (or kaolinite) deposits occur in Cornwall (England), Georgia, South Carolina and Florida (smaller deposits in North Carolina), and in Germany and France (Dodd:1967:57). Historically, it has been documented that Native Americans in western North Carolina mined and used kaolin for decorative purposes and on their low-fired earthenware pots as a slip (Ruth Wetmore 1995, personal communication, and Zug 1986:108). The Cherokee word for kaolin is *unaker*, a term familiar to the premiere English ceramic entrepreneur, Josiah Wedgwood, who negotiated for shipment of the valuable clay back to his factory in 1767. Wedgwood's emissary, Thomas Griffiths, managed to bargain for five tons of kaolin to be returned to England, but despite its purported high quality, this endeavor proved too costly and was never repeated (Finer and Savage 1965:63). Based on archaeological evidence, Solomon Loy used kaolin clays only for his decorative slip-trail motifs on earthenware vessels. No evidence of kaolin residue was recovered at the Daniel Seagle site.

As previously stated, accessibility to and extraction of the different types of clay from their natural geological strata required a certain knowledge, and ultimately, labor. Where clays are found is directly related to how they are formed. For example, geologically kaolin is considered a residual or primary clay, formed in situ from decomposing bedrock. In North Carolina, kaolin deposits are found mostly in the western mountain region. By comparison, earthenware and stoneware clays are formed by sedimentary action as a result of constant erosion and water flow. As they travel downstream to their final deposition, they collect considerable impurities along the way which thus become incorporated into the clay matrix. As mentioned above, these impurities affect several qualities of the clay, namely color, strength, plasticity, and fusibility.

For the first potter traveling into a new frontier, recognition and accessibility of natural clay deposits suitable for pottery manufacture were a primary concern, such as it must have been for Solomon Loy and Daniel Seagle, or, perhaps their fathers. Subsequent potters, looking for a place to settle and establish production, were often drawn to an area already known for its usable clay resources. Having once located and tested one or more reliable sources of clay, the folk potter made periodic visits to the local clayholes to maintain an ample stock. Typically, in the southern piedmont region, earthenware clays occurred at or near the ground surface and were easily accessible. Stoneware clays, on the other hand, occurred in lower strata usually in bottomlands. Extraction of these resources required some skill and much labor. In established pottery communities, locating a new vein of valuable stoneware clay was also considered "classified data." Historically, potters were known to purchase new adjacent lands in order to secure their business, and in some cases, potters married daughters of landowners with known clay deposits, thus **wedding bloodlines to claylines** (Burrison 1979b:70, Carnes-McNaughton 1995:53, and Zug 1986:118).

Without direct evidence from Mr. Loy and Mr. Seagle as to where they mined their clays, we must rely on the existing body of traditional lore. Information gathered from oral testimonies with descendants of the potters or long-time residents within the communities provided the only clues thus far. It was learned that Solomon and John Loy probably obtained their stoneware clay from a nearby farm owned by Sim Pace (Notes by J. Howard Hinshaw 1971 from Zug 1986). Hinshaw, whose family has lived just south of the Loy kiln site, were neighbors to the Boggs family, also known potters in the area. Juanita Euliss, in her book *A History of Snow Camp* (1967: 43), states that the Boggs family potters dug their clay from the Pine Hill area, and further adds that they hauled their wares to Durham and Mebane for sale. Hinshaw's notes indicate that the Loys, Boggs, and Vincent potters (who were eventually all related by marriage) obtained their clay from the same place. Unfortunately the exact location of this clayhole on the Sim

Pace farm was never conclusively determined. Based on the paste similarities between the stoneware sherds recovered at the Loy site and those found at the Boggs kiln site on the east side of State Road 1004, it would appear the clay source was identical for both pottery shops. Also, as previously mentioned, today two modern potters (Mark Hewitt and Waymon Cole) mine stoneware clay on Ross Stephen's farm, just south of 31Am191 and near the suspected original Solomon Loy kiln site, 31Am192. This finding would certainly verify that there may have been (and still are) suitable stoneware clay deposits in the immediate area.

More information is locally known about stoneware clay deposits near the Daniel Seagle kiln site in Lincoln County. Though no direct connection can be made between the nineteenth century Seagle potters and the Rhodes claypit, information gathered by Zug from twentieth century potters such as Burlon Craig and Ernest Hilton suggested that this source "was very old and dated back to at least the middle of the nineteenth century" (1986:110). They further describe the Rhodes clay, located just west of Lincolnton, as the "potter's ideal" because it required no additional clays to render it "plastic." Veins of suitable stoneware clay would range in depth from three to eight feet, and often required removal of extensive overburden. Zug points out that all the potters of the Catawba Valley obtained their stoneware clay from this deposit until as late as the 1930s (1986:110). It is not surprising then that the clay pit has been likened to "a battlefield, pockmarked with craters and ridges" from decades of digging. Once the clay was dug it had to be hauled by wagons, or carts, north along Reepsville Road back to the pottery shops. There it would be pugged and processed to use in vessel manufacture.

Resources needed for glazes also had to be obtained by the rural potters. Lead ore used for lead-glazing on earthenwares did not naturally occur in Alamance County nor Lincoln County. Therefore it had to be obtained through purchase or barter from another source, often a source some distance away. The same situation was true for salt, used by Solomon and John Loy to glaze their stonewares. The sourcing of these two resources,

not found in natural deposits, is discussed in the next section describing economic factors. How far did these potters have to travel to trade for these ingredients? And at what cost were they gotten? How did accessibility of these trade-related items affect their final pottery product? Questions worthy of pursuit.

For Daniel Seagle he would also have purchased or bartered for lead to glaze his earthenwares, but for his stonewares a particular formulated liquid was created known as alkaline glaze. Alkaline glazes occur only on stoneware bodies and are unique in the southeastern United States on nineteenth- and twentieth-century pottery (Baldwin 1993, Brackner 1994, Burrison 1975 and 1983, Carnes-McNaughton 1995, Castille, et al. 1988, Drucker et al. 1993, Greer 1970, 1977, and 1981, Smith and Rogers 1979, South 1971, Steen 1994, Vlach 1978, Wigginton and Bennett 1984, Willet and Brackner 1983, and Zug 1979, 1980, 1981, and 1986). Considerable discussion and speculation has been devoted to the origin of the alkaline glazes used in the South, but no verifiable explanation has been reached. Greer (1970) began the speculation that William Cookworthy, a Bristol pharmacist who invented hard paste porcelain in England, joined partnership with Richard Champion, a London business, and the two brought the formula to America in the 1750s. She believes Cookworthy discovered the glaze formula in Du Halde's 1738 *General History of China*. Folklorist John Burrison also considers the Du Halde connection since ash glaze (a variety of alkaline glaze) recipes were supposedly published in Charleston newspapers, and thus available to early literate colonists, particularly those interested in pottery production (1983:61). Cinda Baldwin's research a decade later accepts this line of reasoning (1993). Recent research into the origins of alkaline glaze among the South Carolina stoneware potters in the Edgefield District gives credence to the theory that the formula for this glaze was adopted from a Chinese or Asian recipe (Steen 1994). Precisely how this glaze recipe arrived in Edgefield cannot be documented specifically, but Steen's research suggests that it was adopted as a replacement for lead glazes (1994:100). According to his research, "all evidence points to Abner Landrum and his brothers, John

and Amos, as the pivotal figures in [alkaline glaze's] introduction and elaboration" in the South Carolina pottery-making enterprise (Steen 1994:100). Abner Landrum was a well-educated man who experimented in science, technology, and learning new pottery formulas along with his brothers. Historical evidence indicates that they set up pottery production around the early 1800s and produced utilitarian wares by 1815 (Steen 1994:18).

The question of how the glaze came into use in the Catawba Valley region of North Carolina has been explored by Zug (1986:72-73). Primarily Zug postulates two alternatives to the creation of alkaline glaze in the early nineteenth century. First, he agrees that literate potters seeking substitutes to the lead glaze because of its recognized toxicity, looked for reasonable, economic alternatives. Using various combinations of ingredients, such as powdered glass, sand or limestone, borax, sodium, and kaolin, New England potters experimented with glass-like coatings. Interestingly, as Zug points out, most of these ingredients are those same ones used in the local variety of an alkaline glaze. Early published accounts of these experiments done by New England potters could have been available to someone specifically seeking economic glaze substitutes. Zug's second theory on the origin of alkaline glazes in North Carolina is tied in to another traditional industry, glassmaking (1986:73). During the late eighteenth and early nineteenth century German immigrants in Northeast had established glasshouses, a trade undoubtedly brought with them from their homeland. Like the Loy and Seagle families, many potters began their journey south down the Great Wagon Road from points in the northeastern United States. Zug suggests that "the early potters [may have] observed or worked at a glasshouse before heading south." The processes of glassmaking and indeed, the ingredients (sand, ashes, lime, and broken glass) mirror the creation of alkaline glazes as well. "Conceivably, then, there could have been a German connection as well as an English one in North Carolina, with the related craft of glassmaking as the source of inspiration for the new glazing techniques" (Zug 1986:74).

The adjective "alkaline" refers to the use of calcined lime or wood ash as fluxing agents to lower the melting point of the glaze. Calcined lime contains calcium, while wood ash contains sodium, potassium, as well as calcium (Zug 1981:32). Alkaline glaze also includes silica, sources of which are sand, clay, quartz, feldspar, iron cinders, or crushed glass. To process the glaze, water and clay slips are added to keep the ingredients in suspension for coating the pots. All North Carolina potters appeared to have used wood ashes (rather than lime, commonly used in alkaline glazes found in Georgia and South Carolina) as a fluxing agent for their glazes (Zug 1981:32). Wood ash and lime were economical and readily available sources which contained compounds of calcium, sodium, and potassium. For the potters of the Catawba Valley (and Buncombe County--see Carnes-McNaughton 1995), crushed iron ore (or cinders where available) and glass were the preferred silica sources. As mentioned in section 2.1 of this thesis, iron ore extraction and iron furnaces to process that ore were thriving industries by the mid-nineteenth century in the Catawba Valley region. Zug, in his research, documented through historical records and oral testimonies, that iron cinders from these furnaces were collected and used by the local potters as a silica additive for their alkaline glazes (1986:180). In regions where iron furnace debris was not available, such as Buncombe County, natural iron ore deposits were exploited. The iron ore was crushed and substituted for iron cinders (Carnes-McNaughton 1995:84). Crushed glass, the other silica additive used by alkaline-glazing potters, was collected from any source nearby, such as local builders, hardware stores, old houses, etc. Smith and Rogers (1979:47) documented early advertisements by potters for crushed glass. One of particular interest was from a potter named Sam Smith who operated in Knoxville, Tennessee. As early as 1826, Smith offered to "give two cents a pound in stoneware for any quantity of broken glass delivered at my stone ware factory." Indeed, the fact that glass chips were used by Daniel Seagle, his neighbor David Hartzog and other regional potters, for decoration on their stoneware pots (which produced melted glass streaks on the handles and rims)

suggests that glass was known as a usable glaze ingredient (Zug 1986:183). Beyond decoration, melted glass may also have served as a "glue" or reinforcement for handle terminals, recognized by potters as a structurally-weak area.

In color most alkaline glazes range from light greens to dark browns and form glass-like lustrous coatings on the stoneware vessels, often streaked or runny in appearance. The crushed iron cinders or ore glaze typically produced a dark brown to almost blackish color and was highly vitreous. The crushed glass variety tended to be clearer, lighter green and smoother in texture. Rutile (titanium dioxide), which occurs naturally in the clays of this region, resulted in bluish, whitish streaks visible within the glaze coating. Both varieties of alkaline glaze were found on stoneware sherds at the Daniel Seagle pottery site (more discussion regarding the frequencies of these two types is presented in Chapter V). Preferences for one type or the other, or possible chronology for each type, should be considered along with all the many other variables which affect the coloration of alkaline glazes. Various combinations of glaze ingredients, placement of the wares in the kiln, oxidation or reduction atmosphere in the kiln, paste color of the stoneware, as well as consistency of the glaze mixture when applied (top of the barrel versus bottom sediments) affect the outcome of the glaze.

Availability and access to water sources were critical to the potter, not only for his pottery operation but for household purposes as well. At the Solomon Loy site, a well still exists on the site which appears to have been original in the mid-nineteenth century. Mr. Whitehead has capped it and added a pump but this water source has served previous occupants of the farm. For an open water source, the site is located approximately 200 yards south of a small unnamed branch of Cane Creek. According to Mr. Whitehead, water flow is constant year-round, with only small periodic overflow in the Spring. He uses it as the main water source for his cattle pastured in the surrounding fields. Upon site inspection, not only did this creek provide potential water source to the early potters, but its clay resources located along its bank may also have provided good quality clays.

Exposed layers of blue-gray stoneware quality clays were visible in this streambed. Geomorphologically, the site is situated 632 feet above mean sea level, on well-drained silty-loam soils. According to the *USGS Soil Conservation Survey of Alamance County*, soil types for the following sites were recorded: for 31Am191 (Solomon and John Loy kiln site) on Mr. Whitehead's property the soil type was alamance series silt-loam on gently sloping phase, for 31Am192 (possibly Solomon Loy's first kiln site) on Ross Stephens' property the soil type was herndon silt-loam on eroded gently sloping phase, and for the nearby site 31Am199 (the Boggs kiln site) the soil type was orange and worsham silt-loam with gently sloping and moderately well-drained phase. Keep in mind that these soil types typically refer to agricultural-based usage and would therefore not preclude the occurrence or presence of substrata clays used for pottery making.

Water sources near the Daniel Seagle pottery site consisted a spring-fed stream to the immediate south which drained east into Howards Creek, about 153 yards away. The spring-fed stream lies in the bottom of the large gully which bounds the site on the south. Local informants testify that its flow level was much greater prior to the timber harvesting which took place in the 1980s and clogged the ravine (Mark Heavner and William Hoyle, personal communication, 1988). Howards Creek has always figured prominently in the settlement history of this valley (as indicated by deed descriptions), and today continues to provide water resources for a large drainage area. Not surprisingly, no evidence of a well was found associated with this site, and probably was not needed with two viable water sources so near at hand. Geomorphologically, the site is situated on a natural terrace at 990 feet above mean sea level. The south-facing slope is about 20 percent and probably played a critical role in kiln site selection. It has been noted that rectangular groundhog kilns, such as the one excavated at the Daniel Seagle site, functions more efficiently when positioned on a slight slope, with the chimney end uphill and the stoke or firebox end downhill, very much like a horizontally placed chimney (see discussion in section 5.2 for details in structural interpretation of this crossdraft kiln). Natural soils

on the site consists of sandy clay loam of the Pacolet Series (Lincoln County Soil Survey 1901). Timber resources used for fueling the kiln were probably harvested nearby as most of the region is still covered in mixed deciduous forests and some pines in secondary stands. Trees would have been cut, trimmed, and sectioned into "slabs" of suitable length and thickness to fit into the firebox stoke holes. Pines (in the western piedmont) or hardwoods (in the eastern piedmont) were used predominantly for starting the kiln burn, slowly at first to drive off clay body moisture, then after eight or ten hours of building heat, the potter would "blast" the kiln for two to three more hours, constantly feeding it pine slabs into order to maintain a white-hot heat (Wigginton and Bennett 1984:251). Burlon Craig, one of the last traditional potters in the state, who until fairly recently fired a groundhog kiln almost the same size as Daniel Seagle's (based on archaeological interpretation), estimated that one burn consumed almost two and a half cords of wood (Zug 1986:204).

In addition to the necessary environmental factors needed for pottery production, a cooperative labor force was needed to extract, transport, and process these resources. If a potter did not dig and haul his own clay, he had to hire workers to do it. If he did not harvest and cut his own wood, he had to find someone to sell him some. The same scenario applies to all essential resources, from crushed glass and iron cinders to lead and salt. In cottage industries of the nineteenth century where exchange of products for goods and services was more immediate, bartering became the predominate marketing method.

### 3.3 Economic Aspects: Distribution and Trade

The economic factors related to the pottery production of Solomon Loy and Daniel Seagle were somewhat more difficult to obtain than the physical evidence of their craft archaeologically recovered. Unlike the master potters of the Moravian communities of Old Salem and Bethabara whose accounts books became a matter of public record (Lewis 1995), other backcountry potters were not held accountable to anyone but themselves for

their production yield. The profit or debit margin of Loy's or Seagle's pottery business remains unrecorded. Indeed, it would seem unlikely that these two farmer-potters even **kept** account books for their customers. Therefore in order to better understand the economic milieu of the backcountry communities of Snow Camp and Vale, we must rely on secondary sources such as state census records, social histories, estate papers, personal wills, and agricultural reports. History tells us that no document can speak to us *a capella*. Each requires a supporting chorus of other materials for contrast and comparison. For this reason, we will need to step back and take a broader view at the national and global economies of the early nineteenth century to refine our picture of rural Chatham and Lincoln counties. To what extent global and national economic factors influenced North Carolina's rural folk potters is a matter of interpretation and some speculation.

Ceramic historians indicate that the American pottery industry underwent a transformation between decades following the Revolution and prior to 1840 (Barber 1970, Guiland 1971, Myers 1984, Ramsey 1947, and Spargo 1926). In the period just after the revolution most American potters continued, as they had from the late seventeenth century, in a master craftsman fashion producing lead-glazed red earthenwares for household consumption. Most often these craftsmen operated singly or with an apprentice or relative. The general economic depression following the end of the Revolution and an excess of imported goods temporarily created an unfavorable atmosphere for indigenous market expansion. This situation was more true along the eastern seaboard region of the United States. In North Carolina, colonial period settlements in the coastal plain region not only became dependent on intercontinental and intercoastal trade, but lacked the suitable clays necessary for local pottery making (Steen 1989 and 1994, and Zug 1986:31-32). By the early 1800s the first non-Moravian pottery shops, among them Gurdon Robins and Company, were producing salt-glazed stonewares in Fayetteville in Cumberland County. Gurdon Robins and Company was

founded in 1818 but failed by 1823. The three potters who operated this shop were Edward, Chester, and Timothy Webster who migrated from Hartford, Connecticut, into the lower piedmont of North Carolina (Scarborough 1986:87). E. A. Poe, a later nineteenth-century potter, also operated a shop in Fayetteville (Zug 1986:34). Though earthenware clays were recognized by John Lawson and other colonial-period explorers, only brick manufacturing seems to have occurred in most of the coastal region of the state. This again would speak to the economic dependence of the coastal plain settlers on goods received from Europe or the northeastern United States. Only the Moravian potters, located in the central piedmont, appeared to be successful in overland transportation of their wares to the eastern colonial period settlements. Archaeological and historical records verify that Moravian ceramics, along with a variety of other goods, reached Brunswick Town, New Bern, Edenton, Halifax, and Bath in the 1760s and 1770s.

By the 1790s, following America's involvement in the Napoleonic Wars, economic conditions improved and signs of renewed interest in the ceramics industry increased (Myers 1984:191). This interest in clay industries was felt in the Edgefield District of South Carolina and undoubtedly trickled into the "shoptalk" of the backcountry potter in North Carolina, who was both producer and merchandiser of his earthenwares. Early tariffs, intended to produce revenue rather than to protect nascent industries, had the opposite result. Instead of producing increased revenue, these tariffs aided the development of domestic manufactures and stimulated economic and political interdependence. The period leading up to the War of 1812 was one where reliance on domestic goods took on new life, with non-importation movements growing just as they had before the American Revolution (Steen 1989). The United States had up to this point maintained neutrality, and even profited by providing neutral shipping for the warring nations. In 1807, however, President Jefferson imposed an embargo prohibiting the buying or selling of goods from England, France, or any other European nations involved in the Napoleonic wars. The Nonintercourse Act of 1809 led to the United

States' involvement in the War of 1812, and "diminished imports led to rises in the price of manufactured goods, and many businessmen shifted their capital from shipping to developing American industries" (Myers 1984: 191). As a result of this shift in capital, American manufacturing began a period of expansion that lasted until the end of the war in 1815. What affect did these economic changes have on the rural potters in the eastern and western piedmont regions of North Carolina? We should not assume that these potters, though geographically remote, were politically or intellectually "remote" as well. Developments in pottery manufacturing and clay extraction paralleled developments in other sister cottage industries within each region, such as textile manufacturing in the eastern piedmont and iron ore extraction in the western piedmont. Though pottery making began in a folk tradition "growing naturally from roots hidden by time," it also responded to growing changes in a budding capitalist market which supported indigenous manufacturers (Steen 1989, Myers 1984).

Transportation corridors played a vital role in the settlement history of each region and in the distribution of manufactured wares generated at each shop. Early roads (some formed from prehistoric trading paths) and waterways (rivers, creeks, and canals) would have been used by the eighteenth- and early nineteenth-century potters. Railroad transportation was probably not used by most rural potters even when it became available (on a limited basis, however) in the 1830s and flourished in the 1880s, because most wares were distributed locally (within forty to fifty mile maximum radius of the shop) in animal-drawn carts or wagons. Transportation corridors connected the backcountry settlers to the thriving market centers of the period. During the late 1700s some of these market centers were Cross Creek (later renamed Fayetteville) to the south, Salisbury in the lower central region, and Old Salem in the upper central region of the state. In the west, Morganton and Lincolnton were established market centers by 1780s. In the east, Guilford, Hillsborough, and Pittsboro were trading hubs for the east-west and north-south merchants and travelers. A network of plank roads, also known as the "farmers

railroads," was built throughout Alamance and Chatham counties from the 1830s to 1850s. Construction of these roads was state-subsidized and extended from western Chatham County to the market areas of Fayetteville and Wilmington. Formation of navigation companies, such as the Cape Fear/Deep River Navigation Company, established a series of locks, dams, and canals along local major waterways to improve boat transport of produce and goods (Osborn and Selden-Sturgill 1991:6-8). The navigation company was short-lived, but the plank roads company lasted long enough to build several valuable roadways in the piedmont region of the state. One important historical resource which provided insight into the roadways of the period comes from a description of postal routes throughout the state (*Postal Routes in North Carolina, 1842*). One well-used route probably used by local wagoneers extended "from Greensborough, by Shaw's Mill, Clapp's, Holt's Store, Hartshaw, Rock Creek, Snow Camp, Sandy Grove, Mudlick, Hickory Mountain, Cane Creek, Hadley's Mill, and Rock Rest to Pittsboro 68 miles and back once a week" (1842:101). Mudlick post office served a small community in the extreme northwest corner of Chatham County and southwest of Snow Camp, near where the Will Loy and second John Loy kiln sites were located. The 1860 United States Census record for Chatham County listed Solomon Loy, his son John, and his daughter Frances at the Mud Lick Post Office community. His brother William was listed at the Graham Post Office in Alamance County, along with George Loy (his uncle or cousin?). William's son, Mabin (or Mebane), a potter, was listed at the St. Lawrence Post Office in northwest Chatham County. An 1896 map of postal routes showed a stop called LOY just northeast of Snow Camp, and between Graham and Cane Creek communities. This is believed to be the site of a later pottery shop known as (Albert ) Loy and Wood, the ruins of which have been identified (see state site file 31Am327). In the western regions of the state, a coach road used by the postal service ran from "Lincolnton by Si[sic]egle's Store, Warlick's Store, and Mull Grove, to Morganton 40 miles and back once a week in a two-horse coach" (1842:118). This access to local and

distant markets heightened social contacts and created pathways for future roads. Toll houses were established along these roads, normally one every seven miles, and these in turn fostered additional small satellite settlements. By 1861 the plank road companies were outdated mainly due to prohibitive costs in maintaining wooden planking in the humid South.

Narrowing the focus to site-specific background, county deed records and local histories provided useful information. Answers for questions related to legal ownership the pottery shop and its surrounding property were sought. Other questions related to the potters who trained and worked at this shop, under the guidance of Solomon Loy, were answered from the same sources. While it has been noted that William owned the land and pottery site, no evidence was found to indicate he was a potter. William's son, Mebane, became a potter (1860 and 1880 census records listed him as such), and probably trained at his uncle Solomon's shop. Solomon and **three other brothers** were known to be potters. **John**, whose kiln site was recorded in Alamance County, was listed as a potter on the 1850 and 1870 census files. Alamance County deed records indicated that John died in 1869 and his estate was assessed for sale (Book 4:64-65, filed January 19). Listed among his personal property items were "a clay mill and lathe" valued at five dollars. His nephew, John H. Loy, was also listed in conjunction with this estate settlement as the purchaser of one acre (for \$50) "adjoining the lands of John Loy, and where he now resides." John H., the son of **Joseph A.** Loy, Solomon's fourth brother, worked in Person County as a glazer for his father's pottery shop (1860 federal census record). The pottery kiln site operated by Joseph Loy, and his son George Haywood, where John H. also worked, was located north of Hurdle Mills. It was field recorded and archaeologically tested in 1993 by the author (see state site form 31Pr59), and descendants of George Haywood Loy. The results of this field work will be discussed in Chapter IV. Joseph A. was listed as a potter on the 1850 census files for Person County. A fifth brother, **Jeremiah** was also known to turn wares and was listed as a potter in

Alamance County in 1850, 1870, and 1880 census files. Unfortunately his kiln site, if he in fact owned his own shop, has yet to be located. Based on historical records and supplemented by genealogical research, I was able to verify twelve practicing potters in the Loy lineage extending through five generations (see chart in section 3.4). In addition to sons, nephews, and brothers working in the pottery shops, non-family apprentices show up in historical records. The 1850 census records showed a male child of eight years, named John R. Glenn, living in the household of Solomon Loy. By the next decade John Glenn was listed as a potter. Perhaps not by coincidence, the 1850 census files for Chatham also listed a woman of 27 years old in the household of William Loy, Solomon's brother who must have lived nearby. This woman's name was Temperance Glenn, possibly the mother of young John. Unfortunately the records are silent on where this child came from and where he eventually ended up, or if he set up his own pottery business elsewhere. But clearly he was an integral part of the labor force at the Solomon Loy pottery operation during its climactic period.

For Solomon Loy an exhaustive search for primary documentation about his pottery shop, personal property holdings, and final notice of death and burial proved disappointing. Information related to his family and descendants, however, provided important clues from which to draw inferences about his vitality and imprint on the cultural landscape of North Carolina. As discussed in Chapter II, it appears that his brother William owned the property where Solomon last turned pots and where his son John M. took over the business. This would suggest that Solomon lacked the capital to purchase his own shop, and the business arrangement between him and his brother can only be speculated. Deed records also suggested that Solomon **did** own the portion of the Stephens' land where his earlier (first?) kiln site was found (31Am192), before it was sold in 1857. Since no will has been discovered for Solomon Loy, we can only guess at the time or year of his death and who received what remained of his personal holdings. Solomon's name and residence appeared on the 1860 census file, but only his son's name,

John M. Loy, appeared on the 1870 records in the same location, thus indicating that Solomon died during the previous decade. An 1865 deed record which showed John M. purchased his own tract of land (121 acres) could signify the death of his father (and partner) Solomon, and the beginning of a new kiln for himself. Where Solomon is buried remains a mystery, though other Loy family members are known to have been buried in nearby church cemeteries (see discussion of family burial records in next section). Family records indicate that the Loys were a pottery family who migrated from Pennsylvania down the Great Wagon Road into the piedmont heartland. Solomon and three other brothers were known to be potters and it would also seem reasonable to assume that Henry, the father, was a potter as well (though no direct evidence from census records or marked pieces can verify this hypothesis). Their knowledge of pottery making traveled with them from the north down through the great valley and into North Carolina. Solomon's decision to set up a pottery shop in the Snow Camp community was based on certain economic and social factors; the land and natural resources were available, and family members provided financial support, labor and a ready market.

Occasionally during research of this type, when all of the obvious resources have been exhausted and one's enthusiasm for the topic begins to dampen, a "lucky find" happens. This was the case for me when I ventured into the Snow Camp community one evening to give a talk about my research on Solomon Loy to the local Rotarian Club. On previous talks in the community and at local museums, I had gathered valuable genealogical data from the many Loy descendants anxious to contribute what they could to learn more about what I found (the detailed genealogical chart in section 3.4 is a result of this contributive effort). On this night at the Rotary meeting, a descendant of the Allen family presented me with copies of a series of letters written in 1829. The Allens were one of the earliest Quaker families to settle in Snow Camp in the 1760s. John Allen, the clan patriarch, a native of Chester County, Pennsylvania, settled in Cane Creek on a 600 acre royal chartered landgrant (Lounsbury 1980:4). His log cabin built in 1762 still survives

in its relocated home on Alamance Battleground. The Allen descendants were prominent landowners and merchants and stalwart Quakers. These personal letters exchanged between two Allen brothers, William, in what was then Orange County, and Joel who resided in Fayetteville. These primary documents contained a more interesting, unfiltered picture of life in the backcountry during early 1800s than any account contrived by hypothesizing historians or frustrated archaeologists. More importantly, however, they contained some discussion about Solomon Loy and his wares (Appendix 1).

The first letter was dated January 9, 1829 and sent from Joel to his brother William. A situation had occurred where Solomon Loy, against his "contract," had taken the liberty to deliver a load of wares to William instead of Joel and in turn received a supply of coffee as partial payment. He goes on to say that "if he [Loy] wants to be contrary about the ware, just go and receive ware to the amount of the lead . . . and quit him rather than have any fuss." Joel sends a message via William to tell Loy that "I would like to have the amount of ware and it would be the means of his selling a large quantity of ware in town [Fayetteville]." After three weeks another letter was sent to William from Joel, in which he wrote, "if thee has not got the erthing[sic] ware of Loy, dont get it all just git what the lead comes to and I will sadisfy [reimburse] you for it." Apparently Joel had extended his credit in town on other ventures and now that Loy had taken his payment for a load of wares in coffee stock, and Joel had intended to sell the extra wares in Fayetteville. Loy had also worked in a swap for lead, undoubtedly for use on future glazing of pots. By July 18, 1829, Joel wrote his brother once more to relate bad news of illness and his two-month old daughter's death. But this letter also reported on a new tin shop and blacksmith shop he had built. He promised to send along "every spare cent" to his brother and implored his brother to respond in writing as soon as the letter was received because he was holding "one hundred wate [weight] of lead" which he intended to "give to Loy when he gets out of hart [heart]." And he reported that "the ware is all sold at Sheriff Sale to pay Blake" apparently referring to Loy's shipment of earthenwares.

The last letter in the series dated September 12, (no year) was written by Margaret Allen, Joel's wife, to her brother-in-law, William. She wrote to tell him of her husband's plague with yellow fever, and signs off, "nomore at preasant[sic] but remaining yours until Death."

The information contained in these letters is important in many ways. First we learn that indeed bartering as an exchange system was thriving in the late 1820s. Lead, earthenwares, and coffee were swappable commodities in market centers like Fayetteville, and locally in Snow Camp. Trade and distribution networks between larger markets and backcountry markets were well-established. Next, we learn that Solomon Loy was still producing lead-glazed earthenwares and in large enough quantities for remote distribution. It is also possible that he may have already been experimenting with his stoneware production by this time, but to Joel Allen and his brother, all wares may have been referred to as earthenwares. Loy as his own producer and merchandiser may not have perfected his stoneware line to his own satisfaction and thus was hesitant to advertise or promote these new items. Finally, we learn something about Mr. Loy's personality, that he had the ability to be "contrary" and someone to reckon with when he "got out of hart." These characteristics of the potter, innocently issued by one of his contemporaries, do in some way serve to make him more real than the thousands of pottery sherds recovered from his pottery site, except perhaps for those sherds textured with his fingerprints.

Primary documents related to the pottery operation of Daniel Seagle and his son James Franklin, were more obtainable than those for Solomon Loy. In addition to deed records, federal census files, estate sales and personal wills for the family, genealogical data was also gathered from descendants in the community. From deed records, it was determined that Daniel owned the 50 acre tract (plus some) he inherited from his father Adam and where he produced his pottery. Like Solomon Loy, Daniel was probably trained by his father to be a potter. And like the Loys, the Seagle family migrated from

the north, in fact Pennsylvania, down through the Shenandoah Valley and into the (western) piedmont where land for homesteading was reasonably priced. Daniel settled and stayed in a community where family support (in capital and labor) were available and natural resources for pottery making were found. And like Solomon Loy, Daniel had a son, James Franklin, whom he trained in the business and who eventually subsumed ownership. Prior to his son's birth, however, Daniel also trained apprentices. Daniel Holly, age 16 at the time, was apprenticed in Lincoln County to Daniel Seagle "to the earthenware maker's trade" in November 26, 1827 (Craig 1965:88-93). Nash (1980:16) and Zug (1986:14-16) postulate that because Daniel was 23 years old at that time, his shop and business may have been relatively new, established in 1823 or so.

It was previously confirmed that Daniel owned the land where he built his groundhog kiln and where he trained his son and an apprentice in the pottery business. Moreover, historical records indicated that Daniel's son-in-law, John Goodman, and a neighbor's son, Isaac Lefevers were also trained and worked at this shop (1850 census files for Lincoln County). His second son, Thomas, also worked in the shop but apparently (as local tradition has it) helped in general labor chores and operated as a wagoneer to haul the wares to other markets. No mention was made of Daniel Holly still working at the site in 1850. His labor was replaced by Seagle's two sons, son-in-law, and neighbor, for a total of five workers at the shop. Real estate value was also extracted from the 1850 census records on. For example, in 1850 Daniel Seagle's property was valued at \$825 for 327 acres of land, 65 acres of it "improved." As a farmer, he raised crops and livestock on these improved acres valued at \$240. Among his personal property holdings was also listed a black female slave, aged 19. When compared to the estate value of his eastern contemporary Solomon Loy, whose 1850 property value totaled only \$75, it could be argued that Daniel Seagle was a wealthier potter than most. The Census of Manufactures, which records capital investments and annual yield for businesses, showed that in 1850 Daniel had a capital investment of \$400 in his pottery business and an annual

production of 6000 gallons of ware by four employees. When Daniel died in 1867 intestate, his property and personal belongings were assessed and sold at public auction on May 30 and 31 of the same year. The administrators of his estate were James Franklin (Frank) Seagle, and Barbara (Seagle) and John Goodman. It is safe to say that Frank and John maintained property holdings related to the pottery business, which they continued with for two more decades. In addition to an annual allowance provided to his widow Sarah, other items listed in Daniel's estate were "all the pottery on hand" valued at \$2.50, meaning the everyday crockery used by his household. Also sold at auction were "one still and worm" valued at \$38.00, used for distilling special liquids (for medicinal purposes?), "one lot of stoneware," valued at \$.20 and another valued at \$.36, "one crout cutter," valued at \$.50, "one molasses boiler," valued at \$1.25, and many household and farm items (Court of Pleas and Quarter Session 1867). And though Frank and John kept the business going, deed records showed that it was three years later when the 50-acre tract of land which contained the homeplace of Daniel Seagle was finally purchased outright by his son (Lincoln County Deed Book 46).

The subsequent generation of potters at the Seagle shop continued to prosper in the post-war reconstruction era. The Census of Manufactures for Lincoln County indicated that Frank and John ran a local merchandise store, known as Seagle's Store, from 1867 until the late 1890s. The 1880 records documented a capital investment at the pottery shop of \$1000 with an annual yield of \$900. By this point, the pottery shop operated more like a factory than a cottage industry with full-time turning year-round with as many as ten employees (Zug 1986:85). Many local potters were probably trained to turn wares and made their living at this shop, influenced by the high standards of quality and craftsmanship of its founder, Daniel. When James Franklin died on October 15, 1892, the Seagle pottery making era came to a close. Frank's personal property and estate were sold on November 12 and 14, the same year (Lincoln County Estate Record). The 12-page document which listed items for sale included a wide variety of general household

and farm items, but of particular interest were the pottery-trade articles which sold to local potters in the neighborhood. Daniel Thomas (Thomas), his son, purchased the clay mill for \$.30; the "turning lathe" was sold to Kelly Ritchie for \$.50; a load of "raw ware" sold to Nelson Bass for \$.45; while several pieces of household stoneware (crocks, churns, pitchers, and basins) were sold to neighbors.

Ironically, like Solomon Loy, the burial place of Daniel Seagle has never been confirmed, as no markers or records have ever been found. It would be reasonable to assume that he is buried in the nearby cemetery at Trinity Lutheran Church, were his parents (Adam and Eve), his son (James Franklin) and other members of his family are also buried.

As mentioned in the beginning of this chapter, one important aspect of any cottage industry is the use of family and community as local labor resources. The importance of kinship ties and genealogical connections, previously discussed, revealed how Solomon Loy and Daniel Seagle depended on their families for capital, labor, and survival. They worked with their family members, lived with them, died with them and were buried with them. The sociocultural importance of these connections is explored further.

### 3.4 Sociocultural Aspects: Kinship and Genealogy

As implied this section deals with the creation of clay clans or dynasties which controlled access to certain local resources needed for pottery production, as well as maintenance of certain "trade secrets" of the craft. Inter-marriage of pottery families was very common and served a variety of purposes, not the least of which was community solidarity. These clay clans form the **bloodlines and claylines** of this cottage industry in nineteenth-century North Carolina. This section traces out the origin of the two ethnically distinct ethnic families into different regions of the state. The transitions they endured, and the continuity of their heritage present on a modern landscape provide many clues about the past potters. Detailed genealogical charts and records form the core of this

discussion. As we gain a better understanding of who these potters were and where they lived and died, we are ready to look at the remains of their craft archaeologically recovered (in Chapter IV).

Who was this traditional craftsman? In the abstract he can be described as workman who possessed specialized skills that set him apart from the common laborer in a pre-industrial society (Quimby 1984: 5). His skills may have been his most valuable possession, for they provided him a certain degree of independence, mobility, and status. In the archaic language of apprenticeship bonds, the craft skills to be learned were referred to as "the art and mystery"-- no matter the craft being taught. Here, as Quimby pointed out, the term "art" was used to imply a sense of practicing technical skills with the aid of magic (1984:5). "Mystery" in this way referred to more than something unknown or a problem to be solved; it suggested the spiritual element, the essential knowledge without which the artisan would be a mere automaton (Quimby 1984: 5). Mystery, here, also implied secret rites, and included the process of apprenticeship as one long rite of passage which in turn produced a special privilege in society. Apprenticeships formed a continuity of technical skills passed on from one generation to the next and thus served important educational purposes as well. But apprenticeships upheld the ideal, which in the face of changing economic reform of the Industrial Revolution, began to disintegrate (as expressed in research regarding the apprenticeship system of the Moravian potters, see Bivins 1972, Lewis 1995, and Thomas 1994). Full-term apprenticeships became hard to enforce due to chronic labor shortages, particularly true in the northeastern United States. The lure of available land to the south became irresistible to some, such as the Seagle and Loy families. As the power structure of the master craftsman wavered over the apprentice, notions of individual freedoms assumed greater importance and took precedence over the bonds of voluntary servitude (Quimby 1984:6). By the 1830s a new breed of apprentices emerged in the form of paid employees who lived elsewhere but worked with the master craftsman. Whereas the previous apprentice was willing to

subordinate himself for a certain period of time for a certain purpose, in anticipation of one day being a master himself, now he was expecting payment for his labors and respect for his potential. Moreover, he expected responsibility proportioned to his authority. Times they were a-changing. Quimby adds, "though some social historians refer to this period as the period of social decay, I would point out that one man's definition of social decay may be another's prescription for opportunity" (1984:10). The emphasis on specific crafts, pottery making in this case, should reaffirm the necessity for understanding the peculiarities existing in each craft which obviously became industrialized at different times, different rates, and in different ways. As the class of apprentices changed with the industrial revolution so did the class of journeymen, whose numbers tripled in the decade from 1820 to 1830. These journeymen usually did not own property and thus became the most peripatetic of the craftsmen. In the pottery making craft these journeymen became the itinerant potters who traveled between various shops learning new techniques and sharing others learned elsewhere, producing a certain infusion of knowledge from one region to another. It is possible that itinerant potters moving between the Edgefield District of South Carolina and the Catawba Valley of North Carolina did their part in the proliferation of alkaline-glazed stonewares. Moreover, it could have been another set of itinerant potters who spread some of the creative motifs used on Solomon Loy's highly decorated slip-trailed earthenwares to other pottery shops in the eastern piedmont.

John Burrison, folklorist and author of *Brothers in Clay* (1983), a study of traditional potters in Georgia, noted the critical role kinship played in the family operated pottery shops of the nineteenth century. He pointed out, "these folk potters guarded their family lines as carefully as they did their craft traditions, consolidating huge pottery dynasties and absorbing outside competition" (1979:70). Clay clans, or dynasties in rural pottery centers served several important social, political, and economic functions.

Clans served to:

- guard the family secrets of their crafts, often passed down from previous generations, thus, either eliminating or absorbing outside competition,
- secure a reliable labor force, including sons, daughters, sons-in-laws, cousins, nieces, nephews etc.,
- secure the necessary natural resources required for production, often by marrying a daughter or son to the owner of a clay deposit, or woodlands, or water source, and
- instill a sense of community solidarity in times of need when bartering field labor for food or a load of wares was not uncommon.

For the traditional folk potter of the nineteenth century in the rural backcountry the dynastic regeneration of the craft was chosen over the more urban system of formal apprenticeship such as the Moravians practiced (Bivins 1972, Lewis 1995, and Thomas 1994). As was often the case for the traditional potter, if they were not born into a pottery family then they married into one. The resulting marriage not only unified the two pottery families but the neighborhood in turn, forming a "bonded residence pattern" (Kenzer 1987:26-27). The consolidation of clay clans was expressed in the kinship systems of Solomon Loy and Daniel Seagle.

#### The Family of Solomon Loy

The patriarch of the Loy family who first immigrated to the New World was believed to be Martin Loy (alternately spelled Laye or Lay) (Figure 3.1). The Loy family, originally of French Protestant descent, fled into the Palatinate region in 1685 following the revocation of the edict of Nantes by King Louis XIV (Burgert n.d.:25 and Peters 1953). The Loy family appears to have settled in the Hasslock and Bohl regions of central Germany (Burgert n.d.:25). Martin was the son of Johannes Laye of Muspach (Mussbach) and Anna Margaretha Fechter, daughter of Martin Fechter of Assenheim (Assenheim). Other family records indicate Martin married Catherenny Faust in Germany in 1730 (Offman 1975:9). The young couple departed the Palatine for America in 1741



on the *St. Marks*, and arrived in Philadelphia on September 26 of that year (passenger lists S-H 297, 298, 300, Philadelphia). The family was listed among eighteenth century Pennsylvania emigrants from the Palatine, who settled in Berks County. The first record we have of Martin in North Carolina was a land grant purchase in 1755 in Orange County (which at that time included portions of Chatham and Alamance counties). His first son John was born on April 1, 1747, before they left Berks County, Pennsylvania. So the young couple brought with them one child, and possibly a second (the birth date of Henry is unknown), on their journey down the Great Wagon Road and into the Carolina piedmont. In North Carolina, two other children, George and Mary, were born. Their exact birth dates also remain undetermined. Martin's death was recorded in Orange County in 1777 (his will was filed in Orange County in 1779), but his widow, Catherine Loy was still living in the county in 1800 (federal census schedule, page 518). The 1790 federal census records from the Hillsborough District of Orange County listed George, John, and Henry as heads of household. Of Martin's four children, John remained in the area (and in the records fortunately) and married Mary Holt in 1767. Mary was born in Virginia in 1750 to John and Mary Holt who resided in St. Mark's Parish in Orange County, Virginia (Offman 1975:8). The Holt family relocated to North Carolina and became wealthy landowners involved in the colonial period textile industries of Alamance County. The records are silent as to whether or not Martin Loy was an earthenware potter when he moved to North Carolina, but two factors could bolster the assumption that he was. One is that the region in Germany where his family lived for several decades before he left for America was known for its highly-decorated slip-trail and sgraffito lead-glazed earthenwares (Kaufmann 1979, and Wondrausch 1986:77-79). Hasslock is located southwest of the Frankfurt -Wiesbaden area near Neustadt. The second factor which strongly suggests that Martin Loy and his family were involved with the pottery craft was their occupation in Berks County, Pennsylvania. Like its Old World prototype, the Berks County region was alive with German emigrants and lead-glazed redware

pottery, many of which have been recorded by ceramic historians (Barber 1903, Cullity 1991, Ketchum 1991, Lansansky 1990, Swank 1983 and Watkins 1950). It would therefore, be reasonable to assume that Martin Loy brought, along with his wife and children, the knowledge and skills to continue his craft in the Carolina heartland.

John and Mary Loy produced ten children, all born in Orange County, between the years 1768 and 1792. They had seven sons and three daughters. The Loy genealogical chart provides information regarding the birth, death, and marriage dates for several members of this generation as well as their marriage partners. Their sixth son, Henry, was born the same year his grandfather Martin died in 1777. Henry grew up to marry Sophia Albright on September 6, 1796 in Orange County (Holcombe 1983:186). Sophia was the daughter of Jacob Albright and Sally Wolf. The Albrights, like the Holts, were prominent land owners in the new frontier. Historical records revealed that the Albrights later relocated further west to Missouri (McClain 1984). It was actually research into the Albright family records which revealed missing clues regarding the Loy kinship ties. John Loy and several of his sons were listed in the 1810 census files, but Mary had died by 1801. Living in close proximity to each other in Orange County were Jacob, George, Henry, John, Sn. (the father), and Martin.

Eight children were born to Henry and Sophia Loy, six boys and two girls. William, the first child was born in 1803, and Solomon followed two years later in 1805. It would appear that Solomon was named in honor of his uncle Solomon, and brother to Henry. Many names in the Loy family were repeated through subsequent generations, great for heritage and continuity, not-so-great for weary researchers. Of Henry's six sons, four were known to be potters, while William, the oldest, was a kiln site owner and obviously partner in his brother Solomon's pottery operation. I have also indicated on this chart (Figure 3.1) that Henry was a potter. Again, this reasonable assumption is bolstered by local tradition and the fact that four of his sons became involved in the business. Henry, who died in 1832, apparently lived long enough to see his sons set up their own shops.

While William, Solomon, John, and Jeremiah (or Jerry) stayed in the area, now formed as Chatham County, Joseph (or Joe) moved further north to Person County to set up his shop.

Joseph married Sarah Tapley Phillips in 1838, and they settled in Person County on land obtained through the Phillips family (Hugh Campbell, personal communication, 1992). The 1820 Person County Census (p.454) indicated that John Phillips, Sarah father, and three persons were engaged in some form of manufacturing. Joe and Sarah had five children, two of which became stoneware potters, John H. and George Haywood (Haywood). George's twin, William M., was not shown to be a potter. George was also born in the same year his great-grandfather John Loy died, in 1840. As previously mentioned, the pottery kiln site of Joseph and his son Haywood was located and archaeologically tested in 1992 (see site file 31Pr59). Interestingly, archaeological reconnaissance at this site yielded **only** lead-glazed earthenware sherds, many of which were slip-trailed, and kiln furniture. (Similarities of these sherds to those recovered at the Solomon Loy kiln in Alamance County will be discussed in Chapter V.) No stoneware sherds were found, which suggested this kiln site was abandoned prior to the advent of the later ceramic type. This finding also indicated that George Haywood may have relocated and built a stoneware kiln in another area of the property or community (several intact salt-glazed stoneware vessels have been recorded with George Haywood's mark on them). Family records indicated that this land was conveyed to Haywood by his mother Sarah in 1866. He later sold the property in 1888, upon the death of his mother, to Thomas Blackard. Haywood and his wife, Virginia Green, left eight children and many grandchildren, the descendants of whom have been valuable resources regarding kinship records (Hugh and Allen Campbell, personal communication, 1992). John H., listed as a glazer in the 1860 Person County census files, may have worked at this father and/or brother's shop. It would appear, however, that John H. relocated to Alamance County because he was listed in a land sale of 1869 when he purchased "one acre for \$50.00,

**where he now resides**, adjoining the lands of John Loy", his uncle and a potter (Alamance County Deed Book 4:64-65).

Jeremiah married into the Holt family, just as his grandfather had done. Though he was listed as a potter in Alamance County in the 1850, 1870, and 1880 census records, the location of his kiln has never been confirmed. It is also possible that he worked at one of his brothers' shops (Solomon or John) and never had his own place of business. John's kiln site was located during the 1986 Alamance County survey (see discussion in section 2.3) and census records confirmed he operated as a potter prior to 1850 and probably up to 1869. An Alamance County deed (cited above) revealed that John's estate was inspected and appraised for sale in January 1869. Among his personal property was a "clay mill and lathe" valued at \$5.00. His land consisted of 126 and a half acres was valued at \$400.

William Loy, the eldest son of Henry and Sophia, married Martha Boggs, a sister and daughter of the neighboring pottery family. The Boggs kiln site (31Am199), located on the east side of Snow Camp Road (State Road 1004) and approximately one mile from the Solomon Loy site, was archaeologically tested in 1988. Historical records revealed the shop and groundhog type kiln were built by John Thomas Boggs and later operated by his son Timothy (Carnes 1986:115-122, and Zug 1986:58, 354, and 437). Timothy Boggs was later assisted by Joseph Vincent, who became his brother-in-law. When Tim died of tuberculosis, Joe took over the shop and ran it with help from his sons, Cesco and Turner until it ceased in 1910 (Carnes 1986:120). It is also likely that John Thomas Boggs received his training at the Solomon and John M. Loy site. John M. and John Thomas (only ten years older) would have been contemporaries, and as such first generation stoneware potters. The Boggs were a prolific and peripatetic pottery family. The prevalence and dispersion of the Boggs potters has been documented throughout the South; Boggs are found as potters in South Carolina (Baldwin 1993), Tennessee (Smith

and Rogers 1979:16), Georgia (Burrison 1983:310-311), and Alabama (Willett and Brackner 1983:37).

As previously mentioned, William apparently owned the property where Solomon had his last kiln, site 31Am191. William may have obtained this piece from his father Henry in an 1830 deed (Orange County Deed Book 25:18), but this could not be confirmed. John may also have received some land from his father Henry in 1830 (Deed Book 25:7), but again no confirmation was available. William and Martha's son, Mebane (born in 1838), probably also trained alongside his cousin John M., and neighbor, J.T. Boggs, at his uncle Solomon's pot shop. Mebane (or Mabe) later moved on to set up his own pottery business located in the northern corner of Chatham County. (The Mabe Loy kiln site was visited during the 1986 field survey but was not archaeologically tested and thus awaits a state-assigned site number.) Mabe Loy was known to produce salt-glazed stonewares, some of which exhibit his name stamp.

Solomon Loy married Nancy Morris, daughter of Henry Morris. The Morris and Loy families must have been personally close if not geographically close, because Henry Loy was listed as the executor of Henry Morris' estate when he died (Chiarito n.d.:194-195). Solomon as we know from deed and manufacture census records was not a wealthy man in terms of property, but he was a skilled craftsman with superb decorative abilities. And he was literate, as evidenced in the many signed and dated earthenware and stoneware vessels he created. Solomon and Nancy had four children, including John M., the oldest child, who followed in his father's muddy footsteps into the pottery business. John was born in 1832, the same year his grandfather Henry died. In the 1850 Chatham County census, John M. then age 17 was listed at home, while his three sisters were shown "at school". Eight year old John Glenn was also shown in Solomon's house at this time. No death date was found in the records search, but deed records for John M. suggested that by 1865 Solomon had died and his son was purchasing land for a new shop (see discussion in section 2.3).

John M. married Eliza Stoner and produced seven children of which the oldest and the youngest became potters. William H. Loy (or Will), born in 1855 married Sallie Wood and remained in Chatham County (later to become Alamance County), where he was listed as a potter in 1880. Will's kiln site was located during the 1986 survey near the intersection of Flint Ridge Road and Sylvan Road. Only salt-glazed stoneware sherds were found, but the kiln was destroyed. A local informant, his nephew actually, described Will's kiln as a rectangular groundhog type. A few intact marked (stamped) pieces of stoneware are known to exist in private collections. Will was apparently a skilled potter but ultimately did not make his living at it. He died in 1894, several years before his father John who passed away in 1911. John M. Loy and his wife were buried in Flint Ridge Cemetery, as were William H. Loy and his wife. Other members of the Loy family were buried at the nearby Mr. Herman Methodist Church cemetery, established in 1834.

The youngest son of John and Eliza was Albert F. Loy, born in 1874. Albert married Ila Workman and settled into potting near his family. His kiln site, which remains fairly intact, was recorded in the 1986 survey on the west side of Sylvan Road, north of his brother's place. Albert's rectangular side-loading groundhog kiln strongly resembles the old Boggs kiln which could have served as a prototype for construction (see Carnes 1986 report for details). Albert became a prolific potter and many of his lead-glazed dirt dishes, and salt-glazed and slip-glazed stoneware vessels survive in family and museum collections. Albert also marked many of his pieces, usually with an impressed stamp. Zug pointed out that Albert was one of the last lead-glaze earthenware potters to survive and practice in the region, even as late as the 1940s (1986:319). Family records indicate that Ila's brother, Albert's brother-in-law, also turned pots at his shop, though no marked pieces survive (Roscoe Loy, personal communication, 1988). Being an enterprising sort, Albert became partners with Boy Wood and set up another pottery shop near Graham, North Carolina. Several marked stoneware vessels from this joint venture survive in private collections ("LOY & WOOD/ GRAHAM, NC"), and the pottery kiln ruins were

located in 1991 (see state site file 31Am327). Another connection to the Wood family may have been through William H.'s wife, Sallie Wood. Zug recorded some stoneware vessels marked "WOOD/SNOW CAMP" and others "BOGGS & WOOD/SNOW CAMP/NC" which could connect these three pottery families (1986:433). With the death of Albert in 1955 came the end of four, or possibly six, generations of Loy family potters in the New World.

### The Daniel Seagle Family

For the Seagle family their American experience began with Johannes Segel's arrival in Philadelphia on October 19, 1736 aboard the *Brig John*. He was 20 years old when he left Wuertemburg, Germany, to sail away to America. His first home on the continent may have been York County, Pennsylvania, according to family tradition, but this remains undocumented (Rolland 1991, and Bill Beam, personal communication 1990 and 1996). Historical records provide he had a son named Johannes Seagle, Jr., whose birth date is unknown, but whose death was given as 1796. Johannes Segel died on April 4, 1780. Johannes Jr. married Margaret Whisnant, daughter of Johann Adam Whisnant (from Germany) and Barbara Eaker. Margaret's birth was given as circa 1740 and her death recorded in late 1791 (Rolland 1991). Five children were born to Johannes, Jr. and Margaret Seagle; Johannes (III) in 1765, Susannah in 1766, Adam in 1767 (September 9), and George's and Barbara's unknown (Figure 3.2). The Seagles must have lived in Pennsylvania for a time before moving south into Carolina. Their five children appear to have been born in the north and may have reached adulthood before making the journey. Adam and his brother George married two sisters, Eve and Elizabeth, respectively, both born in Pennsylvania. Eve and Elizabeth were the daughters of Valentine and Eva (Winkler) Lohr. Zug's research suggests Adam and his bride did not arrive in Lincoln County until 1790 (1986:85). He does not appear on county census records until 1820, but a John Seagle appears the previous decade in 1810. Adam's oldest brother, Johannes

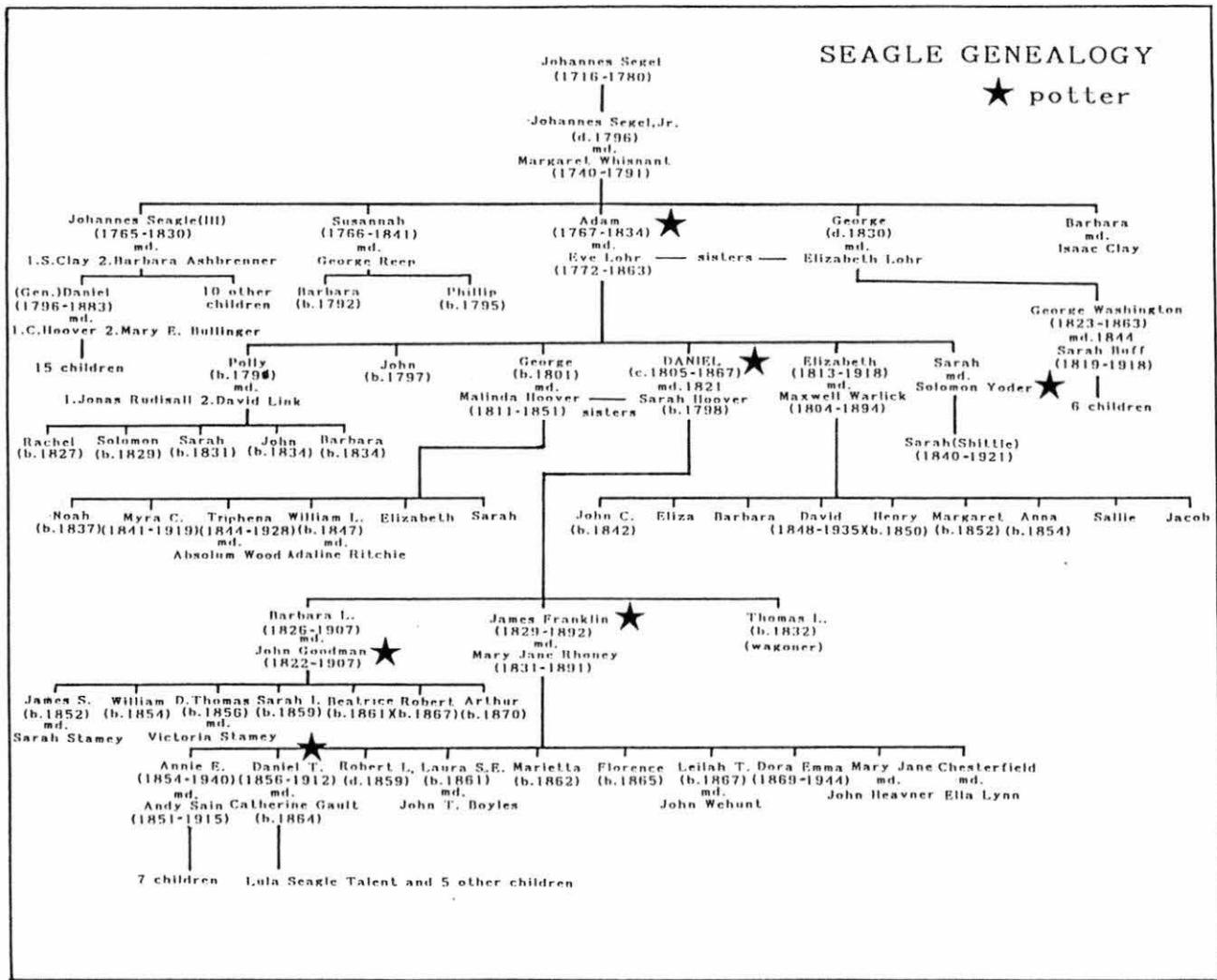


Figure 3.2 Seagle Family Genealogical Chart.

III married twice; first to Susannah Clay (or Klee) of Tryon County in 1792, and next to Barbara Ashbrenner, daughter of Urban Ashbrenner. Johannes III and Barbara produced 11 children, the oldest of which was also named Daniel Seagle. This Daniel Seagle, born in 1796, became very active in the State Militia by which he acquired the title General. He married twice and had 15 children; the sons he named after prominent statesmen or political leaders of his day, such as Thomas Jefferson, George Washington, James Madison, Andrew Jackson, Monroe, Nathaniel Macon, Dallas Polk, Benjamin Franklin, and Martin Van Buren. General Daniel Seagle became wealthy landowner and his homeplace, inherited by his son Andrew, survives today as a National Register Site in Lincoln County. I mention this diversion to provide a background for the confusion which arises from county and state records pertaining to the two (or more) Daniel Seagles of Lincoln County. The contrast of their lives would be another interesting diversion. Repetition of certain family first names was also very frequent in the Seagle lineage, and while it represented historical continuity, it added considerably to the obfuscation of data.

Adam and Eve settled in Lincoln County near the Trinity Lutheran Church along Howards Creek drainage (see deed data in section 2.3). Their neighbors were almost all of German ancestry, either first, second, or third generations. Many had relocated from Pennsylvania down the Shenandoah Valley road and into the western piedmont region of North Carolina (Young 1986). I have indicated Adam as a potter based on my research, Zug's earlier research, local tradition, and surviving lead-glazed earthenware vessels. In addition, the area of Pennsylvania where they lived for a while was also known for its lead-glazed redware production (Barber 1903, Cullity 1991, Ramsey 1939, Spargo 1926, Swank 1983, and Watkins 1950). The Seagle family was surely exposed to this cottage industry, if they were not, in fact, an integral part of it.

Six children came from the union of Adam and Eve; the oldest was Polly born in 1796, followed by John in 1797, George in 1801, Daniel in 1805, Elizabeth in 1813, and Sarah ca. 1815. Polly joined another local pottery clan with her marriage to Jonas

Rudisall (Zug 1986:445). Elizabeth married Maxwell Warlick, prominent landowners in the area. And the youngest daughter, Sarah, also became part of another clay clan with her marriage to Solomon Yoder. No additional information was found regarding the oldest son John, who may have died before adulthood. The two middle brothers, however, like their father and uncle, ended up marrying a pair of sisters. George married Malinda Hoover, and Daniel married Sarah Hoover. George and Malinda had six children, including a son, William, who married Adaline Ritchie, a daughter from another pottery family. When George died in 1856, Daniel was appointed guardian of his nieces and nephews, those of minor ages at the time (Lincoln County Probate Records). Adam died in 1834, but his widow lived until 1863. They lie side-by-side in the graveyard at Trinity Lutheran Church overlooking the Howards Creek vale that was once their home.

Daniel and Sarah married in 1821 and had three children; Barbara, born in 1826, James Franklin (Frank), born in 1829, and Thomas L., born in 1832. In 1821, Daniel would only have been 16 years old, according to his birth date of 1805 deduced from early census records. For this reason, some researchers feel that his birth date should be placed back to 1803 or earlier, and thus making him 18 at the time of marriage (Ann Dellinger, personal communication 1988). Other than his marriage bond, no other records suggest or confirm an earlier date of birth. Still, Daniel and Sarah were married five years before the birth of their first child. Barbara married John Goodman who worked at his father-in-law's pottery shop along his brother-in-law, Frank. John Goodman was born in Cabarrus County, North Carolina in 1822. He moved to Lincoln County in 1842 (Rolland 1991). They had seven children, and eventually many grandchildren. Barbara and John died in the same year 1907. Both are buried in Trinity Lutheran Church, along with several of their children and Barbara's parents. Not much is known about Thomas, the youngest son, except that he joined in the pottery business as a wagoner. Frank married Mary Jane Rhoney and produced a large family of seven girls and three boys. One of their sons, Daniel Thomas, born 1856, married Catherine Gault and was believed to be the last of the

Seagle line to try pottery making (interview information from Lula Seagle Talent, his daughter). Daniel, Sr., died in 1867 without a will and a known burial place, but the products of his craft could never pass away so unacknowledged.

In summary, it appears that the Seagle family turned out through four, possibly five, generations, with six potters in their Lincoln County, North Carolina location. But Daniel's influence in the pottery community went beyond his apprentices, such as Daniel Holly, and later workers such as Isaac LeFevers, John Goodman, and his son James Franklin. He was recognized as a master craftsman and certainly produced standards for vessel forms and glazes which remain to this day unsurpassed in quality. Thus, through family records, historical accounts, state and federal registers, and other artifacts of local history (including whole pots), a picture of the pottery making industry at the Daniel Seagle kiln site and the Solomon Loy kiln site emerged. The similarities and differences between the two pottery families, when summarized, offered a study of regional diversity between the two backcountry settlements during the nineteenth century. Both potters and their families possessed Old World Germanic origins. Both families arrived and initially settled for a period of time in the countryside of Pennsylvania. Later, they worked their way south along the Great Wagon Road and into the Carolina piedmont. Daniel and Solomon received early training in the production of lead-glazed earthenwares, probably from their fathers. For Solomon, and other the eastern piedmont potters, the influences of the successful Moravian potters, whose slip-trail decorations were very popular, inspired imitation. But in the western piedmont, Daniel and his neighboring potters were more removed geographically and stylistically from the influences of the Moravian pottery tradition. Though the Catawba Valley potters successfully produced the needed earthenware vessel forms to serve their immediate customers, they apparently never excelled in the variety of forms nor quantity of vessels as compared those from the eastern potters. Both potters eventually reached a level of production which required the aid of an apprentice. Just as their fathers before them, both potters later trained their own sons

in the production of ceramics; only this time it was stoneware. By the mid-nineteenth century, Daniel apparently operated a substantial shop which employed as many as ten people. Solomon, on the other hand, relied on the labor of his son, a nephew and a neighbor; but perhaps others the records do not reveal. The specifics of changes in vessel forms, glazes, decorations, markets, and kilns offers additional comparative data extracted from the archaeological investigations. Details of how the historical picture compares to the one gained through archaeological investigations now awaits review.

**CHAPTER IV**  
***BY POTTER'S ART AND SKILL:***  
**ARCHAEOLOGICAL INVESTIGATIONS**

Some historical archaeologists have argued that data collected archaeologically should always be separate from first-hand, or eyewitness accounts. Others, conversely, believe that archaeological data should be considered the equal of first-hand account and that the data gathered only differs in nature. More precisely, the recollections of humans are haphazard, impressionistic, and irreplicable, while scientific observations are supposed to be accurate, measurable, and unreplicable. But, the argument continues, what first-hand accounts lack in accuracy they more than make up in ambiance and insight. They provide color, and give flesh to the bones (figuratively so) we have uncovered. Thus, archaeological observations are approached differently because they provide a different type of information, and are held to different standards. But researchers of human behaviors, such as anthropologist Clifford Geertz (1988), caution us that even the most conscientious scholars who profess objectivity cannot escape or overcome their own socialization. The things we see are determined by our own ways of looking at them, and the things we find (or find out) are the things we look for, very often, despite every attempt at objectivity and every protestation to the contrary.

Complete archaeological excavations were conducted at the Solomon Loy kiln site and the Daniel Seagle kiln site, while only archaeological testing was done at other nearby kiln sites in Alamance County, Person County, and in the Catawba Valley. All archaeological endeavors were done by myself or with a team of volunteers. In the field, local residents also donated time, equipment, and knowledge to the research simply out of

their interests in the project. The contributive effort by so many people is what made this research project successful and rewarding. Partial university support was made available during the laboratory and analysis phase of this project, again augmented by a faithful team of volunteers. The methods for archaeological and historical investigations, as well as laboratory procedures, were consistent with contemporary professional standards as set forth by the Secretary of the United States Department of the Interior. Minimally, this means that all excavation units and features were drawn to scale, all stages of excavations were documented with black and white and color photographs, all soils were screened through half-inch mesh wire (if possible), all artifacts were bagged and labeled according to their provenience and, as in this case, all excavation units were backfilled upon completion for protection. Basic provenience data recorded on each bag included the site name and number, excavation unit number, level, feature (if required), date of excavation, and initials of excavator(s). All methods, archaeologically achieved and those garnered from first-hand written accounts, were aimed at learning more about the past, its built environment and its human occupants. Whatever is left behind for us to discover and recover at each site was a remnant of the something created **by potter's art and skill.**

#### 4.1 The Loy Site 31Am191: Excavation and Description

Archaeological investigations at this site actually began in 1986 during the Alamance County Survey, a project undertaken to identify and record prehistoric and historic cultural resources on a county-wide basis (Carnes 1986: 126-143, and McManus and Long 1986). At that time, the property owner had uncovered sherds and kiln debris in his yard during landscaping activities. A low mound south of the existing smokehouse/shop building was at that time thought to be a waster pile. The presence of kiln debris and kiln furniture signaled the nearby location of a kiln and not just sherd wasters. After an interview with Mr. Whitehead, my attention was directed to an area immediately southeast of the smokehouse. Here, the informant stated, was an unknown buried feature.

Several decades prior, Mr. Whitehead's father, and former property owner, had attempted to install support posts for a dog pen fence. The first two holes he dug were abandoned because of subsurface obstruction. The pen was subsequently reconfigured to its present location. So with the owner's permission, I laid out my first test unit (four-by-six feet) adjacent to the smokehouse and commenced excavation. Numerous pieces of kiln debris were found and several diagnostic sherds (both slip-trail decorated earthenwares and salt-glazed stonewares). Large in situ rock slabs were exposed .6 foot below ground surface and were first thought to be building foundation stones (or piers). Then two square postholes were found, aligned slightly northwest to southeast, which were undoubtedly the result of Mr. Whitehead's fence post attempts. Upon closer inspection and clean-out, I discovered that I was standing on top of a brick-lined tunnel or arch. Portions of the brick walls (sides and top) were visible in the profiles of the postholes. At the time, I believed this underground brick tunnel to be the remains of a groundhog type kiln and the large stones slabs on top to be additional support. It appeared the kiln extended underneath the smokehouse, but neither firebox nor chimney end could be determined from the limits of the test unit. I covered the test pit in black plastic and then backfilled on top of it for protection until further excavation could be done. A state site number was assigned based on the archaeological integrity of the remains and potential for future research. When I departed the field in 1986, I assumed that what lay buried was a subterranean groundhog kiln made of brick and stone, similar to ruins of the Boggs kiln located just down the road. Though results of this preliminary test were tantalizing, it would be another year before dissertation fieldwork could begin. The next visit would entail systematic full-scale excavation and map construction.

Work resumed at 31Am191 in October 1987. With the help of volunteers a datum point was established and a site grid laid out. Datum was positioned south and east of the known ruins and far enough away to set in base lines north and west of this fixed point. For elevation purposes, an arbitrary elevation of ten feet was selected for datum.

Thus, all squares were assigned a West and North coordinate number based on their distance from Datum, point N0W0. Figure 4.1 shows a site plan for 31Am191 with extant structures, position of datum, location of posthole tests, contour lines and excavation areas around the remains of two kilns: Kiln A, adjacent to the smokehouse, and Kiln B, an area believed to be a waster pile in 1986. Because of the compact nature of the foundation remains, a grid layout using five-foot squares was chosen. A grid this size was also useful to better record spatial distribution of the artifacts. Backdirt was cleared away from the 1986 test unit and in compliance with the new grid system, it became Unit W15N50. To the north Unit W15N55 was opened to trace out the stone slabs. At this stage, stratigraphic layers consisted of: Level 1 composed of sod, humus, and light brown topsoil ranging from .2 to .8 foot in thickness, and Level 2 identified as light pink clay rubble, ranging in depth from .4 to .6 foot. Level 2 soils were located immediately on top of the stone slabs and south. Because of the density of brick and stone rubble and the shallow nature of the foundations, all digging was accomplished with hand trowels, and shovels were abandoned at this point. The clay matrix around the stones was extremely hard, a result of thermal alteration and years of compaction. A third unit was opened to the east, W10N50, to expose what might have been an end (firebox?) of the suspected groundhog kiln. Excavations on this side exposed three distinct strata: Level 1 consisted of loose rubble topsoil mottled dark gray to light brown in color almost a foot thick, over Level 2 which was gray to tan clay composition and very hard, over Level 3 composed of dark orange to light orange compact clay (Figure 4.2). Levels 2 and 3 showed evidence of thermal alteration and were so hard that a mattock was required to cut the unit down to a depth of 1.6 feet. This unit constituted a "deep" test as most other units subsequently revealed sterile soil at about one foot deep. Workers in this unit also exposed what appeared to be a cavity in the west profile. This was initially interpreted as the part of the subterranean kiln vault.

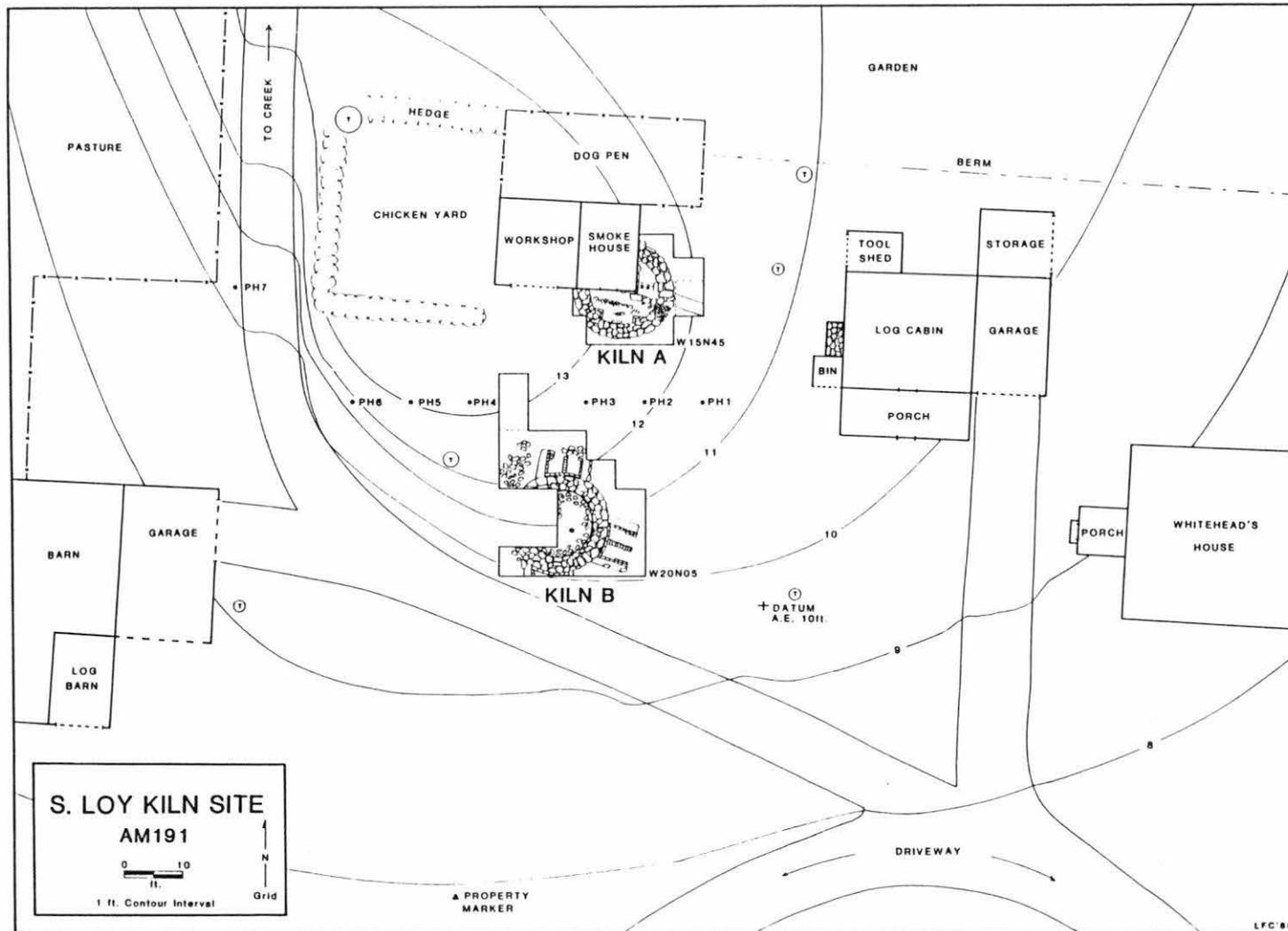
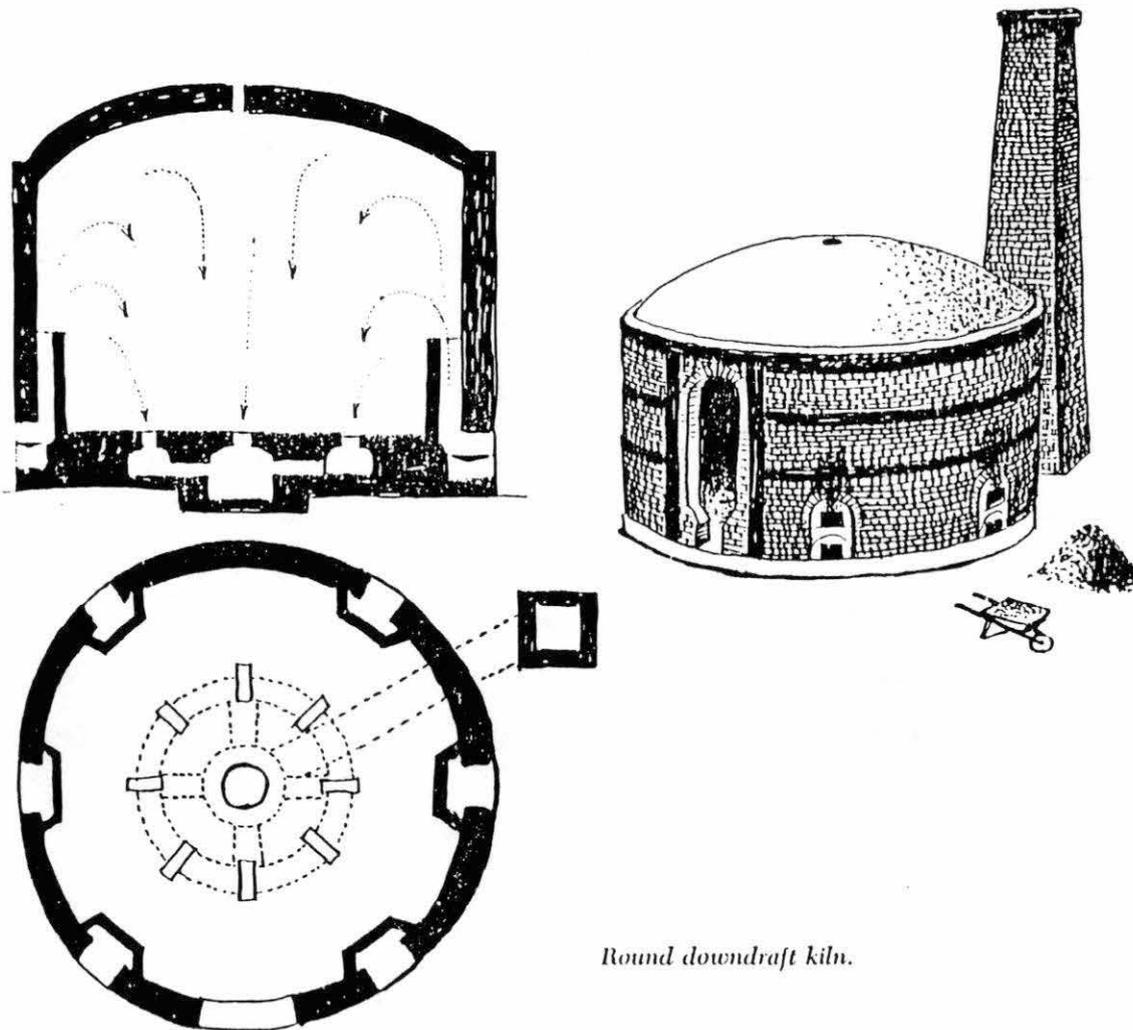


Figure 4.1 Site Plan for 31Am191, The Solomon Loy Pottery Site.



On the third day of excavation, with three adjacent five-by-five foot units completed, a revelation occurred. As I stood over the stones in Unit W15N55 and looked south at the stones in Unit W15N50, I realized they formed a slight curve. Suddenly I realized that what I was looking for (a groundhog kiln) was not what I was seeing. Instead, this curved stone wall formed the foundation for what must have been a **circular kiln**, and the subsurface brick arch or tunnel was not a subterranean groundhog vault, but was an **underground transept flue**! A transept flue was commonly found in downdraft kilns and used to transfer the heat exhaust out away from the kiln floor to a remote chimney (Figure 4.3 from Rhodes 1968:49). (This will be further explained later.) The cavity visible in the west profile of Unit W10N50 was the collapsed flue as it extended east southeast past the stone foundation wall of the kiln. Measurements of the underground flue were taken by sticking my hands and a tape into the two postholes punched into the vault roof. It measured 2.8 feet in width and 3.2 feet in height from floor to top of brick arch. Once the deep test was cleaned off at the 1.6 foot level in this unit, a distinct trench-like feature was visible where the flue had been, but the bricks were gone. One possible explanation could be that these bricks, more accessible here than underneath the kiln floor, were robbed out (for recycling?) after this kiln was abandoned. No above ground evidence of a remote chimney was discernible. Could this chimney have been dismantled and the bricks recycled as well? With new insight, the excavation plan was modified to trace out the remainder of the stone foundation wall in each direction. Unfortunately, the extant smokehouse blocked further excavations in the northwest quadrant. Upon closer inspection, a thin veneer of glaze deposit was visible on the interior curved wall of the stones. In areas where the stones were mapped in situ, the thickness of the foundation measured 2.5 feet in width on this side of the kiln. Soil composition was identified as "interior" vs. "exterior" based on the location around the stone foundation.

Prior to this discovery, the only other round kiln foundation excavated in the state was the Mount Shepherd Kiln located near Asheboro, North Carolina. It was excavated



*Round downdraft kiln.*

Figure 4.3 Example of Round Downdraft Kiln with Detached Chimney from Rhodes (1968).

by Alain Outlaw in 1973 and further researched by MacKay Whatley in 1980. This kiln measured approximately nine feet in diameter with wall thickness ranging from 1.4 to 2.8 feet. Foundation walls were constructed of local field stone with subterranean brick flues (he called them channels) radiating out from the center like wheel spokes. The interior setting floor was approximately six feet in diameter. Outlaw speculated that this small circular foundation supported an updraft "beehive" or domed kiln fueled by five perimeter fireboxes and used for firing temperatures suitable for earthenwares (1974:2-12). In an updraft kiln the heat from the fireboxes is drawn into the kiln chamber, and then up and out through an open portal(s) at the top (Greer 1979, Olsen 1983:137, and Rhodes 1968:119). Whatley's subsequent research on this site and its pottery revealed that the person responsible for its construction was one Phillip Jacob Meyer (or Myer), a "renegade" potter from the Old Salem community (1980: 21-56). Meyer was apparently an apprentice under Gottfried Aust, master potter for the Moravian community at Old Salem. Meyer decided to leave the Old Salem because of certain "philosophical and religious schisms between himself and the Moravians" and his censure by the Collegium (Whatley 1980:51). Though the kiln and sherds recovered at the site express what Whatley and others have referred to as the "Wachovia vernacular," Meyer's decision to leave reflected a mild divergence from the mainstream of pottery designs he practiced as an apprentice. Based on deed research and Moravian records, Whatley estimated the period of operation for this kiln to have been between 1793 to 1799 (1980:51). No circular kilns have been found in the Moravian communities of Old Salem and Bethabara, an area where large amounts of lead-glazed earthenwares were produced from the mid-eighteenth century and into the early nineteenth century (Bivins 1972:7-12). As of today the only kiln excavated in the Bethabara area belonged to Gottlob Krause and subsequently to John Butner. This kiln site was excavated by John Clauser in 1974 (1979). His research revealed a rectangular kiln measuring approximately eight by ten feet, and similar in style to a British Newcastle kiln (Rhodes 1968:45). So, to my great

surprise and delight, there I stood on that October day in 1987, looking down at the massive circular stone foundation of the **second round kiln ever excavated in North Carolina.**

As work continued at the Solomon Loy site, Unit W15N60 was excavated to reveal more of the curved stone foundation on the north half. With this done, nearly one-third of the circular foundation was exposed (Figure 4.4). Excavations were taken up to the edge of the smokehouse foundation, where it became evident that the kiln foundation continued underneath it. Just inside the stone foundation on the north side, two glazed bricks were uncovered on the interior floor surface. Their placement was mapped in but their exact function remained unknown. Generally, the amount of brick recovered from Kiln A indicated that the side walls were constructed of stone and arch or dome of the kiln was made of brick. The brick dome would have allowed for the expanding and contracting of the structure which occurred during heating and cooling episodes of the kiln. Brick, because it maintains more "plastic" properties than stone, was a suitable construction material, though the stone side walls would have given the kiln much support and were less costly to obtain (or make). During the second week a crew of volunteers from the Cumberland County Archaeological Society showed up to help for one day. Excavations branched out to accommodate the group. Three adjacent units, W15N45, W20N45, and W25N45, were excavated on the south half of the exposed circular kiln. Due to the shallow depth of this feature all excavations were done by hand. A second group of volunteers were placed in a test trench 30 feet south of the kiln to bisect the waster pile mound.

In Unit W15N45 a distinct "break" in the stone foundation was noted and mapped. This anomaly has been interpreted as the possible doorway into the kiln, reasons for this will be further explored below. As work continued on this kiln, larger portions of the stone foundation were exposed, mapped, and photographed. All large stones were left in situ, as well as glazed bricks, and identifiable pieces of kiln furniture, some resting directly

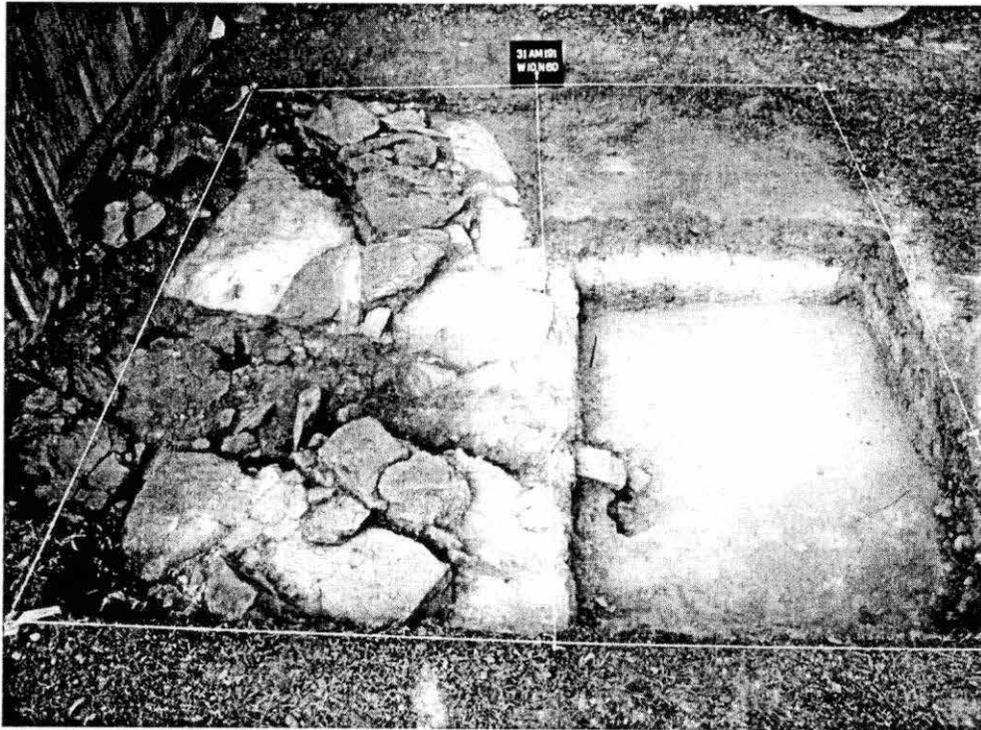


Figure 4.4. First excavated unit at the Solomon Loy Site exposed the ruins of Kiln A. Note profile and stratigraphy outside kiln foundation.



Figure 4.5. Double-chambered firebox on North Side of Kiln B after excavation.

on the kiln floor. Clean up and mapping of this portion of the kiln required several more days. Meanwhile, in the test trench to the south, a large sherd concentration was uncovered in Unit W40N25, along with an abundance of kiln furniture (slabs and draw trial pieces). In Unit W30N25 a buried wall composed of very friable brick was exposed. Further cleaning revealed **an unusual double-chambered feature identified as a firebox** (Figure 4.5). To our collective amazement we had uncovered the remains of a **second round kiln foundation** on this site. This southern most feature was then designated as Kiln B and the northern or first kiln assigned Kiln A (Figure 4.1). Fill from each side of this double-chambered firebox was excavated and analyzed separately. Also found in this kiln firebox was a ribbed (or fluted) earthenware tobacco pipe head. As luck would have it, when we showed the pipe head to Mr. Whitehead, he briefly disappeared inside his house, and returned with a pewter pipe mold which matched the exact artifact we'd just recovered! He told us the story of finding the pipe mold hidden in the clay chinking of the log cabin, near a window casement he wanted to enlarge. This could mean that the cabin served as the potters shop rather than their home, and given its close proximity to the kilns, this would be a logical location for a shop. Because of potential fire hazard, a potter would not necessarily have his home, including family and all his worldly belongings, so close to his kiln(s). The finding match of the pipe mold to the pipe head convinced us that the same potter who made the tobacco pipe also occupied the log structure.

Working alone again, I decided to cover the exposed firebox of Kiln B and focus on completion of Kiln A. As more of the stone foundation was cleaned and measured, its uniform thickness was consistent at 2.5 feet thick. This allowed us to calculate a projected **exterior diameter of 17 feet and an interior diameter of 12 feet, and total square footage of 227 feet** for the base of Kiln A (using the calculation of  $\pi r^2 = A$ ). At 17 feet in diameter, this kiln measured almost twice that of the kiln ruins found on Mount Shepherd, which measured nine feet in exterior diameter. On the south half of the

circle thicker glaze residue was noted on the interior curved surface of the large stones. The glaze was very glass-like, similar to that found on the interior of most salt-glazing kilns. To expose more of the interior floor, units along the N50 line were excavated (W30N50, W25N50, and W20N50). Because of the position of the smokehouse, only the south half of these five-foot units could be removed. The interior floor on the south half held a few surprises. Two glazed brick "vents" were uncovered adjacent to the interior curved wall. Both features were constructed of unmortared bricks stacked three tall and formed a right angle (Figure 4.6). Charred wood and very friable clay were packed in and around these two "vents". Located on the floor between the two brick features was a very large stone submerged into the clay floor. Again, charred wood, ash and friable clay surrounded this stone slab which abutted the interior wall. Near the brick vent in Unit W20N50, a cluster of hand made kiln furniture (coils and props) were found, mapped in situ, photographed and removed. Almost equidistant between the two brick features was another cluster of kiln furniture which consisted of two whole rings laid end-to-end. These were photographed and mapped in situ (Figure 4.7). A line of burned rock and glazed brick fragments and kiln debris rested on top of the clay kiln floor and formed a line roughly extending west to east. This was also mapped in place before removal to expose more of the kiln floor beneath. Several large stones appeared to line up on each side of the subterranean flue, possibly for additional support. As the final units were excavated, mapped and photographed, a more complete picture of the kiln ruins emerged. Three-fourths of the circular kiln foundation lay exposed, with the missing one-quarter hidden beneath the standing smokehouse (Figure 4.8). It became apparent that several large stones, some with visible glaze residue had been recycled into support piers for the smokehouse building. A profile was drawn along the N50 line to record stratigraphic data for the interior and exterior soils in relationship to the kiln foundation (Figure 4.9). Only two courses of stone remained of the foundation wall. On the exterior perimeter of the stone foundation a series of posthole tests were dug to record substrata and to look for



Figure 4.6. Closeup of brick "vent" against interior of Kiln A.

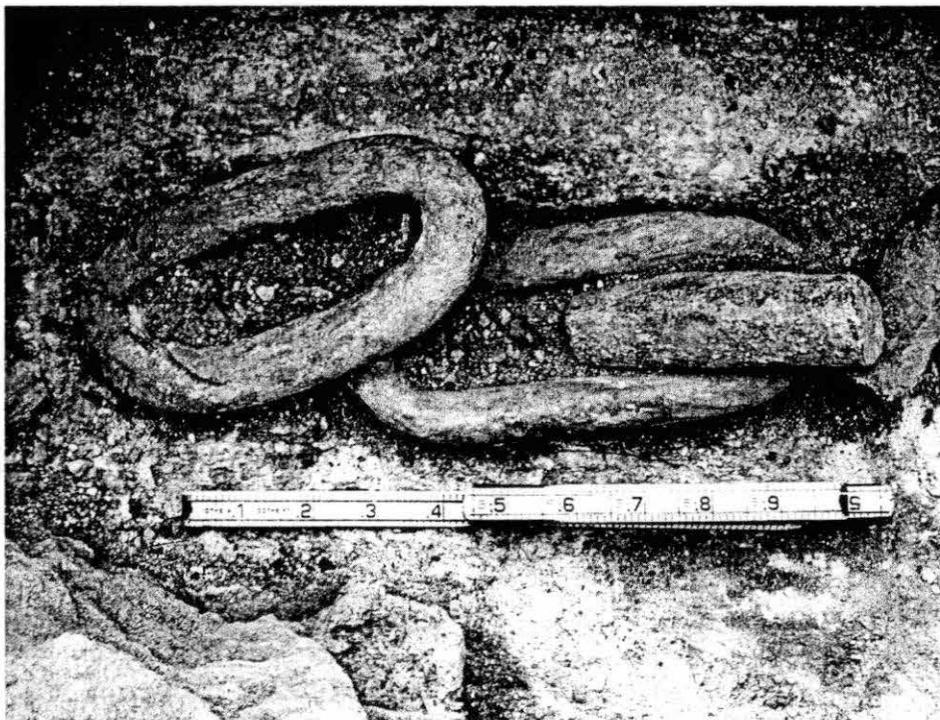


Figure 4.7. Kiln furniture (coils) found in situ on floor of Kiln A.

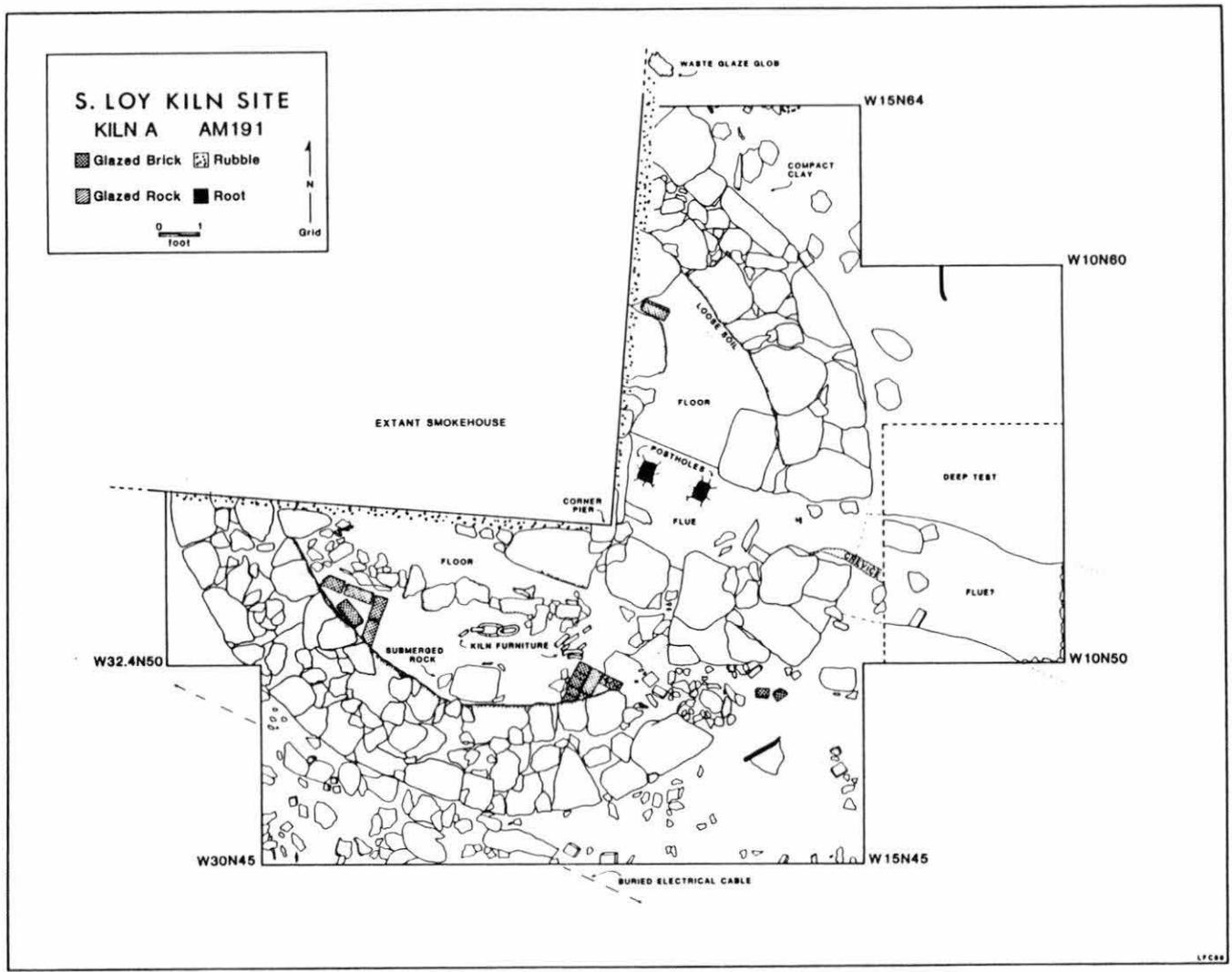


Figure 4.8 Plan Drawing of Kiln A after Excavation Showing Architectural Details and Features.



potential firebox locations. None were found, which lead me to believe that this kiln may have had only one large firebox located opposite the transept flue, and thus underneath the smokehouse. Or, alternately, the perimeter fireboxes were at a higher level than the foundations we exposed and evidence no longer existed for them (remember that only the bottom two courses of the stone foundation remained). Along the south outside edge of the kiln wall, an unusual line of stones was noted (and mapped). A few of these were moved and a posthole test was dug immediately opposite one of the interior brick "vent" features. What we discovered here was a buried 220 volt utility line! Upon its discovery, and our recovery, we asked the property owner about it. Mr. Whitehead had forgotten about this electrical line which was installed in the early 1960s to supply power to his shop in the barn. The trench had been excavated with a ditch-witch and barely grazed the outer edge of the stone foundation. Finally, as a last item of exploration, a series of postholes were dug directly into the hard clay floor of the kiln. No evidence of a subfloor was found which suggested that the wares were stacked on kiln furniture which was then placed directly onto the clay floor. Having exposed as much of Kiln A as was possible, the dirt balks used to separate the units were removed and a final clean-up was done. Level 2, as shown in the profile drawing (Figure 4.9), contained several nearly whole brick bats which appeared to be glazed only on one header end. These bricks were used to form the arch of the vault, or the upper vertical wall of the kiln structure. The position of these glazed bricks on top of the charcoal debris in Level 3, and the fire-hardened clay floor which comprised Level 4, would support the argument for them to be roof or arch material. Figure 4.8 shows a final plan drawing of Kiln A with its stone walls, possible doorway, in situ kiln furniture, brick "vents," position of underground flue, interior glazed support stones, and location of a modern buried electrical cable. Excavation of seven whole and six partial five-by-five feet units was required to expose the foundation of Kiln A and its flue remnant.

Next, a series of posthole tests were dug, parallel to the N35 line, situated between the two kilns (locations of postholes are shown on site map, Figure 4.1). Summary data for the seven postholes is provided in Table 4.1. Postholes #3, 4, and 5 yielded an abundance of kiln debris and sherds, some buried over a foot deep. All postholes, except #7 revealed stratigraphic evidence of kiln activities. Results of the posthole tests verified the location of a second kiln south of the N35 grid line. Work resumed on the double-chambered brick firebox previously exposed by volunteers. Zug arrived to help remove layers of ash fill from the firebox and found two handmade "props" of unusual shape. These were later identified as spiles, used to support inverted pipe heads in a sagger during firing (South 1965:53 and Bivins 1972:102-103). Interior surfaces of the brick exhibited glaze residue. East and west of the firebox brick was a hard gray clay which served to buttress the walls during expansion (from heating) and contraction (from cooling) experienced during kiln firing. The south wall of the firebox abutted a stone foundation which appeared to curve southward. West of the firebox a large concentration of stones, many with glazed edges, was cleaned off and mapped. Eight five-by-five feet units were now opened in the mound area of the site. The discovery of a second kiln was not planned and time for this field season ran out. The exposed firebox was carefully lined with black plastic and then filled with rubble from the excavations for added wall support. The other exposed units in this area were also covered in plastic and weighted down. Permission was granted by Mr. Whitehead for a return visit to finish Kiln B but it would have to wait until Spring of 1988. The foundation of Kiln A was also covered in black plastic and backfilled with soil from the backdirt pile. On hand that day were Hal and Eleanor Pugh, and Dot and Walter Auman, who were experts at shovel work and the site was backfilled at record speed. Grass seed was sowed over the Kiln A area for protection. On November 8, 1987, I left the site to return in the Spring.

Work resumed at 31Am191 on Kiln B on April 27, 1988. Backfill and plastic were removed from Unit W30N20 to re-expose the firebox. Next, we opened up the unit to

**TABLE 4.1**  
**SUMMARY DATA FOR SEVEN POSTHOLES AT 31AM191**

<b>PH#</b>	<b>Location</b>	<b>Total Depth</b>	<b>Stratigraphic Description</b>
1	W10'	1.2'	0-.5' dark topsoil, with sherds 5-.7' mixed fill with sherds .7-1.2' hard clay subsoil, sterile
2	W20'	1.2'	0-.3' dark brown topsoil .3-.5' mixed fill with sherds .5-.7' orange friable clay .7-1.1' lt. tan to brown friable clay 1.1-1.2' hard clay subsoil, sterile
3	W30'	2.0'	0-.3' dark brown topsoil with sherds .3-.6' lt. brown topsoil with sherds .6-.8' lt. gray with rocks .8-1.2' lt. orange with brick frags 1.2-1.7' lt. brown friable clay 1.7-2.0' lt. gray to tan friable clay
4	W50'	2.4'	0-.9' mixed clay with ashy fill and sherds .9-2.3' lt. tan to brown friable soil 2.3-2.4' dark orange hard subsoil, sterile
5	W60'	2.6'	0-1.1' dark brown topsoil 1.1-1.6' brick frags with sherds 1.6-2.2' lt. brown with glaze globs and brick 2.2-2.6' lt. tan, ashy, very loose with sherds 2.6' . . . no subsoil encountered
6	W70'	2.6'	0-.2' topsoil, dark humus .2-.5' bright orange friable clay .5-2.5' lt. brown to tan, ashy with charcoal 2.5-2.6' orange hard subsoil, sterile
7	W90*	1.7'	0-.9' lt. brown topsoil, friable with sherds .9-1.6' lt. tan friable clay 1.6-1.7' hard, compact subsoil, sterile

\*this posthole test was shifted 20 feet north to avoid a buried electrical cable

the east W25N20 to expose the eastern edge of the firebox and its clay buttress which measured 1.8 feet in width. The buttress was also supported by a line of stones along its eastern edge. Another unit was opened to the south and east, W20N10, and once again, a brick feature was discovered. As excavations progressed, another double-chambered firebox made of brick was uncovered. This feature was designated East Firebox and the first one exposed thus became the North Firebox (Figure 4.10). Like the first one, this firebox abutted the curved stone foundation wall of Kiln B. Excavation of the fill within the firebox revealed alternating layers of ash, charcoal, and gray clay, as shown in the profile drawing of Figure 4.11. These alternating layers of ash and charcoal represented the repeated firings and cleaning out episodes of Kiln B. Only the lower two courses of brick remained intact in the Eastern Firebox. In summary, both fireboxes were constructed of brick and clay mortar, both were double-chambered, with curved back walls abutting the stone foundation, both had parallel side walls, buttressed with clay, and constricted at the loading end. Eventually three-fourths of the circular stone foundation of Kiln B was exposed (Figure 4.12). Rubble was cleared from the interior to reveal a baked clay floor, littered with fragments of kiln furniture (mostly earthenware slabs, glazed and unglazed). Subsurface probing identified the presence of a West Firebox and the northern portion of a South Firebox was uncovered, but not excavated. Complete excavation of Kiln B was not an option because the owner had a small peachtree planted on top of the West Firebox location. In basic dimensions Kiln B was the same size as Kiln A, 17 feet exterior diameter and 12 feet interior diameter with wall thickness averaging 2.5 feet. The interior surface of the stone foundation also exhibited some glaze residue as seen in Kiln A, but perhaps not as thick. Figure 4.13 shows a plan view of Kiln B which highlights the architectural features exposed archaeologically, such as the location and construction of three double-chambered fireboxes around the perimeter, clay buttresses on the outside walls of the fireboxes, more rubble in situ on the interior floor, and sherd concentrations inside and outside of the feature. This round kiln appeared to have been an updraft type

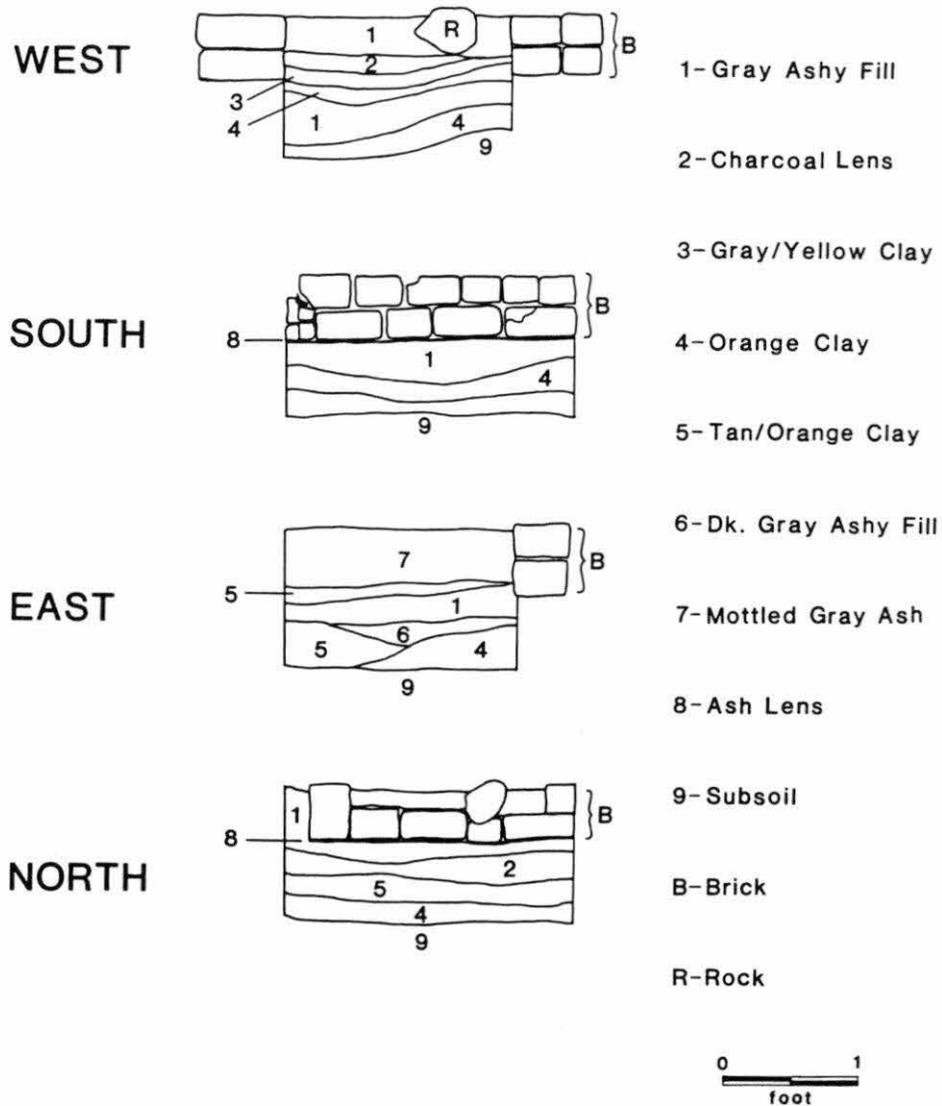


Figure 4.10. Double-chambered firebox on east side of Kiln B after excavation.



Figure 4.12. View of Kiln B facing south with the East and North fireboxes after excavation.

# KILN B: EAST FIREBOX NORTH CHAMBER PROFILES



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Figure 4.11 Kiln B: East Firebox North Chamber Profiles.

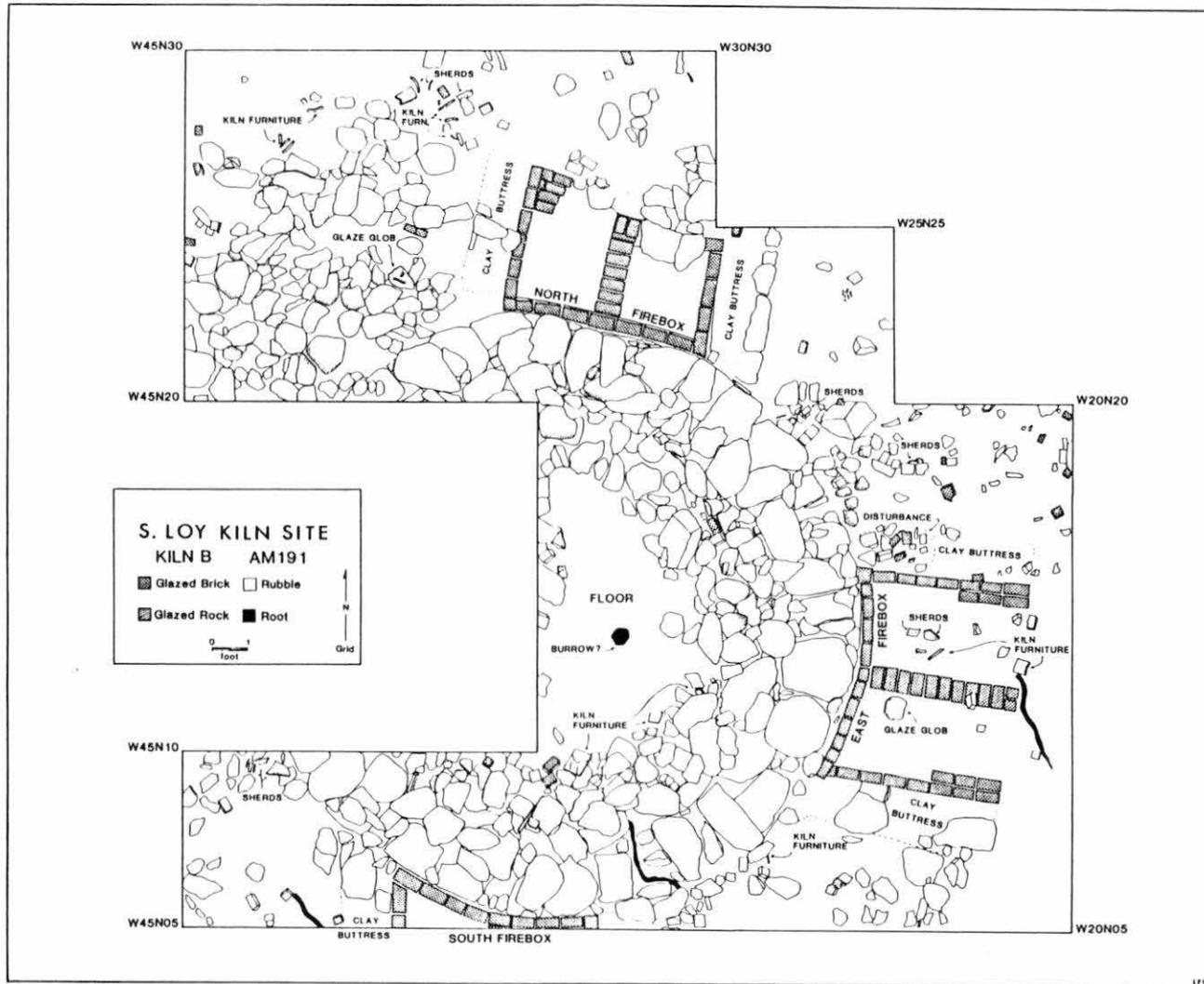


Figure 4.13 Plan Drawing of Kiln B after Excavation showing Architectural Details and Features.

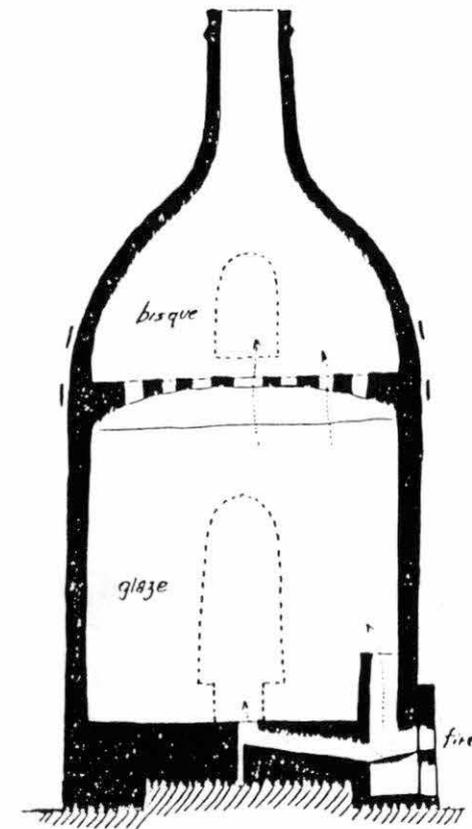
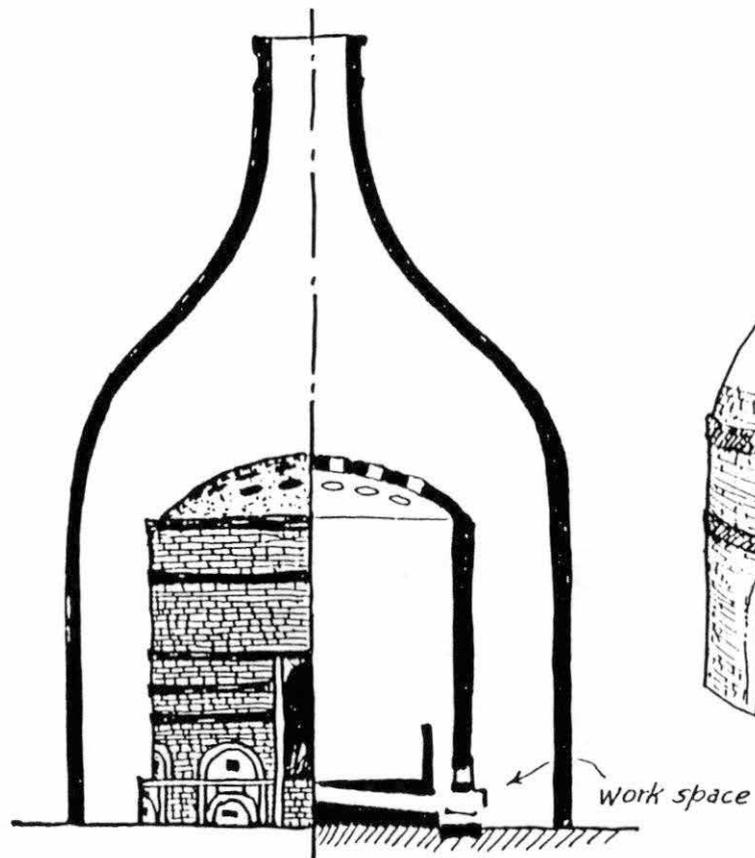
*Hovel kiln.**Bottle kiln.*

Figure 4.14 Examples of Round Updraft Kilns from Rhodes (1968).

possible example was found. Unfortunately, as a result of this particular "archaeologist's" zeal to find the first groundhog kiln north of North Carolina, he incorrectly identified the feature. According to his site interpretation, what was really a double-chambered firebox was described as a miniature version of a "two-flued, arched groundhog-type earthenware pottery kiln" (this, despite the abundance of kiln furniture used for stacking found in direct association with the ruin)! Apparently at this kiln site, located in Botetourt County, Virginia, a modern roadway had obliterated most of the (round?) kiln leaving only the firebox remnant in the roadside ditch (Russ 1990). This example, also built of brick, was nearly identical in overall dimensions as one of Kiln B's fireboxes at 31Am191. But, back to the point, **if** other kilns in Virginia or Pennsylvania have been excavated which resemble Kiln B at the Loy site, then the literature is not out there for review or research. To imagine that other round kilns with double-chambered fireboxes could be excavated some time in the future would be enough reward for further research in North Carolina as well as in northern states where emigrant potters first practiced their craft. The only written description for a firebox of this style came from a modern kiln book by Frederick Olsen, titled *The Kiln Book: Materials, Specifications, and Construction*, published in 1983. Olsen described it as a "hob" firebox where "there is a center hob which splits the firebox in half. Wood is laid across the hobs at a right angle to the draft. The primary air enters from the top, pulling the flames down and toward the throat arch and inlet flue. As the wood burns in half and drops into the ashpit, new logs are added to the pile in the hopper. As the embers fall into the ashpit, filling it halfway, they ignite the new logs in the hopper, which fall down onto the hobs" (1983:171). A careful look at construction details of the North and East fireboxes of Kiln B showed extra brick bats mortared to the outer side walls at the stoking end of each feature (Figure 4.13). These additional bricks may have served as reinforcement for the firebox walls as well as supports for horizontally-placed slabs of wood balanced on the center row of bricks, or "hob." It is not certain if the fireboxes of Kiln B functioned in exactly this manner because only the footprint remained,

but Olsen's description provides fuel for thought (pun intended). Whatever the case, the uniqueness of the fireboxes, kilns, and artifacts recovered at the 31Am191 make it one of the most historically significant sites in North Carolina, if not the Southeast as well.

To review, a total of 28 five-by-five feet units, and five partial units were excavated to reveal the structural remains of two round kilns, both 17 feet in diameter. Kiln A appeared to have been a downdraft furnace, and Kiln B on the other hand functioned as an updraft kiln. Seven postholes were dug across the site to determine subsurface integrity in and around the kiln feature. A total of 16,731 artifacts were archaeologically recovered which included earthenware and stoneware sherds, a wide variety of kiln furniture, glaze debris, building fragments, tobacco pipes, historic ceramics, glass, and prehistoric materials. These will be fully described in Chapter V. Fieldwork was conducted in two phases for a total of 33 days. Crew size ranged from a few as one (me) to as many as eight (all volunteers). Upon completion all units at the site were lined with black plastic and then backfilled. The two excavated fireboxes were lined for extra support. Two fireboxes, the West and South, remain intact for future excavations. The excavation areas were raked and grass seed sown. At present, the kiln foundations are buried and protected by the current property owner.

#### 4.2 The Seagle Site 31Ln59: Excavation and Description

Archaeological reconnaissance for the Daniel Seagle kiln site began in November 1987 in an abandoned field thought to have been the site location according to local informants. Permission was granted by the property owner, Mr. William Hoyle, to conduct subsurface testing on the suspected site. Unfortunately the site area had been timbered in the early 1980s and now stood in impenetrable dense brush, tree stumps, treetops, and thorns. A surface collection was made in an adjacent roadbed which produced several marked DS and JFS alkaline-glazed stoneware sherds, so hope was rekindled. Initially, I began to bushwhack a path through the undergrowth, heading south

from the field road. I dug a series of shovel tests (14 in all) and near the ravine found a few sherds of stoneware just below the surface. This activity took a whole day with limited results. Faced with a five-week work schedule and a field crew of one, I sought some assistance. After some neighborhood inquiries, I located a frontend-loader (with rubber tires, rather than metal tracks), and an operator willing to donate his time and expertise to clear an area near the suspected vicinity of the dismantled kiln. This activity took about half a day. As soon as the brush was cleared aside, artifacts began to appear on the surface. With a volunteer crew of three from the Schiele Museum, the transit was set up and a five-foot grid was laid out across the site. Datum was placed uphill, north and west of the sherd concentration. Thus, all excavation units were situated south and east of datum. An arbitrary elevation of ten feet was chosen to facilitate mapping of kiln features and surrounding area. Figure 4.15 is a plan drawing of the site, showing the area mechanically cleared, the field road to the north, the ravine to the south, contour intervals, location of datum, and the excavated kiln ruins.

The first excavation unit was placed near a partially exposed rock. Operating with some minimal intuition and considerable luck, the first unit revealed the northwest corner of a groundhog kiln; its remains just below the ground surface. Once again, shovels were abandoned in place of hand-tools, trowels, whisk brooms, and scoops. The fragile details of the kiln remains, so close to the surface, could easily have been shoveled away. The first unit, S55E50, was excavated to reveal a large in situ stone, with a fine quartz layer immediately south of it. A subsequent unit to the south, S60E50, uncovered the eastern brick wall of the rectangular kiln, and a larger section of the interior floor covered in a fine quartz sand (Figure 4.16). All large stones were left in place and photographed and mapped. Excavations continued to the west along the S55 line, and eventually the chimney end of this rectangular kiln was exposed. A small "break" in the stones appeared to be the doorway location. Extant kilns in the area, at Burlon Craig's, and the old Enoch Reinhardt place, also exhibit chimney-end doorways as access to the ware chamber,

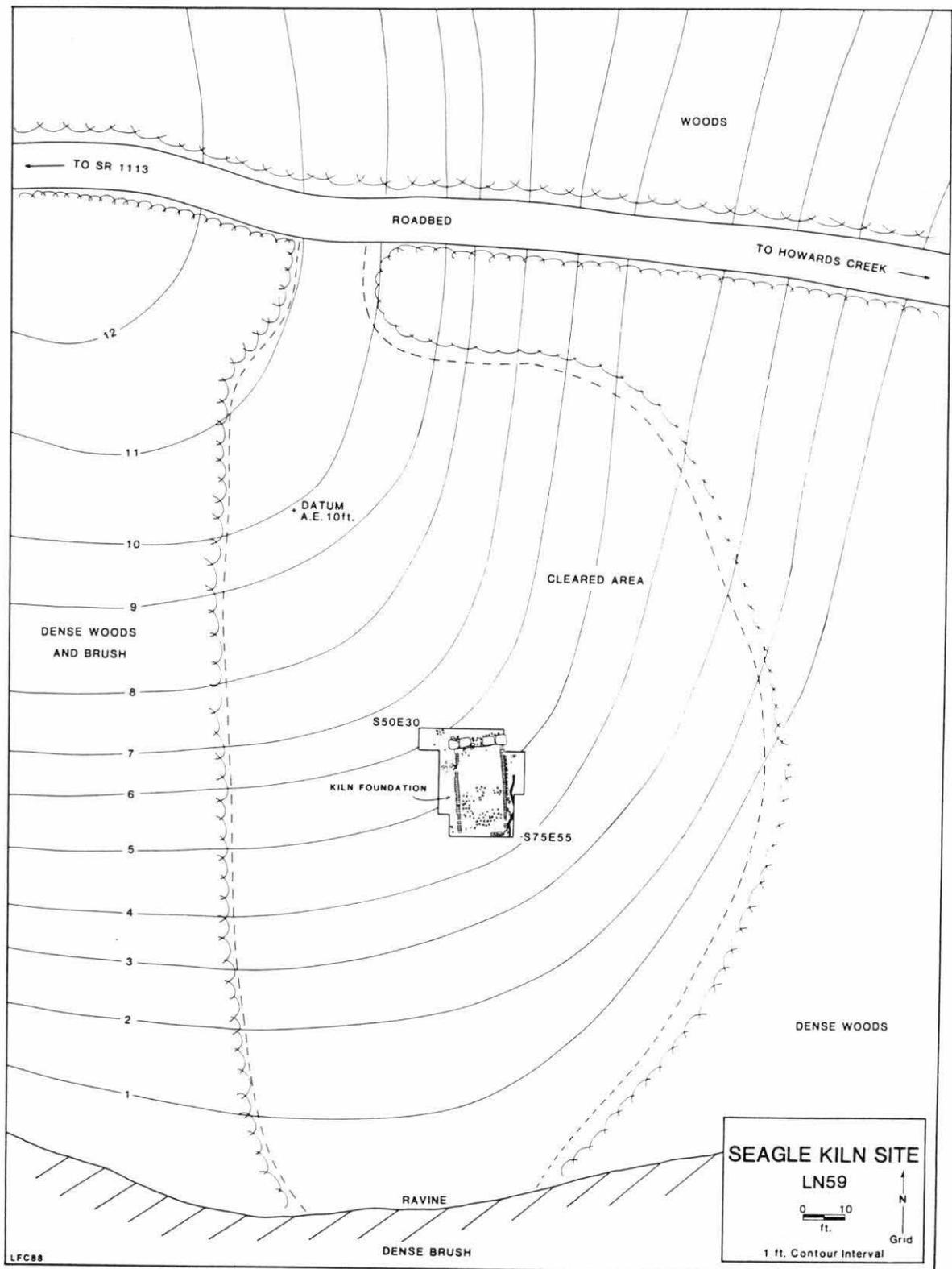


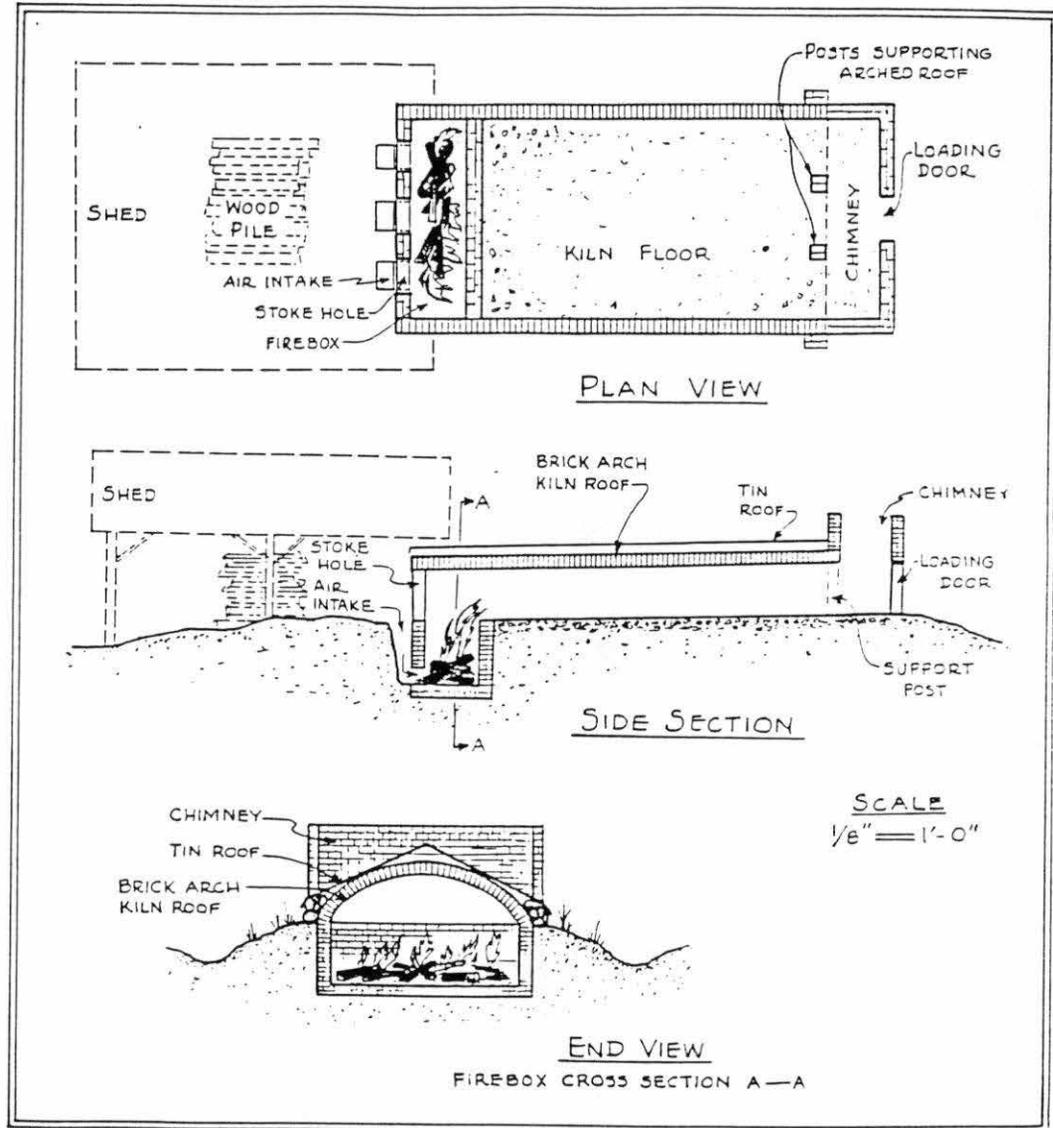
Figure 4.15 Site Plan for 31Ln59, The Daniel Seagle Pottery Site.



Figure 4.16. First two units excavated at the Daniel Seagle Kiln Site revealed the stone chimney base, brick side walls, and interior quartz-gravel floor.

except that they are constructed of brick instead of stone (Figure 4.17). Soils on the north side of the stone foundation were deep orange and very hard, a result from years of thermal alteration. Alkaline-glazed sherds and glazed brick fragments were the predominant artifacts. Two unglazed earthenware tobacco pipe heads were found in situ on the kiln floor in Unit S55E50 (Figure 4.18). These pipes were the type made in a two-piece mold, similar to the ones found at the Loy site. Both pipe heads were fluted, or ribbed, and had slightly anthropomorphic features. Finding these items in situ on the floor indicated that they were some of the last pieces of pottery fired in this kiln. Dense piles of brick rubble from the collapsed vault were uncovered in situ in the chamber floor as excavations continued south and downhill. Information from the property owner confirmed the general downhill trend of the debris. Mr. Hoyle actually remembered his father pushing the chimney ruins off and downhill towards the open ravine. Spatial plots of the surface collected material reflected this downhill scatter. Upon closer inspection, vegetation cover in the ravine was even thicker than across the field. Whatever lay in the bottom of that ravine would have to wait until another day.

Once the west wall was exposed a width was determined to be ten feet on the interior, with a wall thickness of one foot. The side walls were constructed of brick bats laid stretcher-to-stretcher or side by side, with the header ends facing the interior and exterior. Only two courses of brick remained of these side walls at the north or uphill end. Further excavations exposed at least three brick courses remaining of wall construction towards the firebox end. Dense glaze deposits were noted on the interior surfaces of all the bricks and the chimney end stones. Evidence of builder's trenches were visible on the exterior edges of the side walls, particularly apparent in Unit S65E40, west wall section. Care was taken to clean, photograph and map all the brick bats in place before removing them to expose the kiln floor underneath. A stretcher course of unglazed bricks was all that remained of the vault construction. Because it was winter, freezing and thawing began to create unforeseen problems on the exposed brick foundation. Bricks composed



Craig's Groundhog Kiln—Drawing by Catherine Mackelfresh.

Figure 4.17 Plan and Profile Drawing of Burlon Craig's Groundhog Kiln in Catawba Valley, by Catherine Mackelfresh (1980).



Figure 4.18. Chimney end of Seagle Kiln with pipe head on interior floor (lower right corner).



Figure 4.19. Interior of Seagle Kiln with brick rubble from collapsed vault.

of more sand than clay, quickly became small piles of white powder, crumbling when touched (Figure 4.19). Figure 4.20 offers a plan view of the groundhog kiln excavated at the Daniel Seagle site and summarizes the architectural details discovered. Overall exterior length measured 23 feet, with an interior length of 21 feet. Interior width was ten feet, with a wall thickness of one foot (basically the length of one brick bat). Square footage for the kiln interior was calculated as 210 feet (squared). The chimney chamber measured approximately two feet by ten feet wide. Several brick bats from Unit S60E45 exhibited thick glaze deposits on two sides. These were identified as bricks used for post (or pillar) supports for the arched roof (see Craig's kiln drawing for comparison - Figure 4.17). These pillars of brick were never more than two or three brick bats in width and would have been slightly less than 30 inches in height to accommodate to vaulted arch. The suspected doorway in the chimney end measured 1.75 feet in width. The chimney end was located uphill and the firebox end downhill. This orientation, as mentioned in section 3.1, allowed for better crossdraft in this type of kiln. Essentially, a groundhog kiln resembles a chimney placed horizontally on the ground as opposed to its normal vertical position.

Among the brick bats found in the floor of the kiln, several were wedge-shaped, with glaze deposit on the narrower header end (Figure 4.21). These specially-shaped, handmade bats were used to form the spine or backbone of the kiln arch. The term "keystone" is often applied to stones shaped like this and used in door and window archways. The exact dimensions of the arch could not be conclusively determined based on the archaeological evidence. But comparative dimensions from two extant kilns (one at Burlon Craig's and the other abandoned kiln at Enoch Reinhardt) provided a crucial clue. The archaeological kiln at the Daniel Seagle site was almost identical in length and width as Mr. Craig's. His vault measured 30 inches from chamber floor to top of the arch. Using this vault height, and estimating that the side walls were approximately 2.5 feet tall originally, an overall kiln size of 525 cubic feet was calculated for the Seagle kiln. No

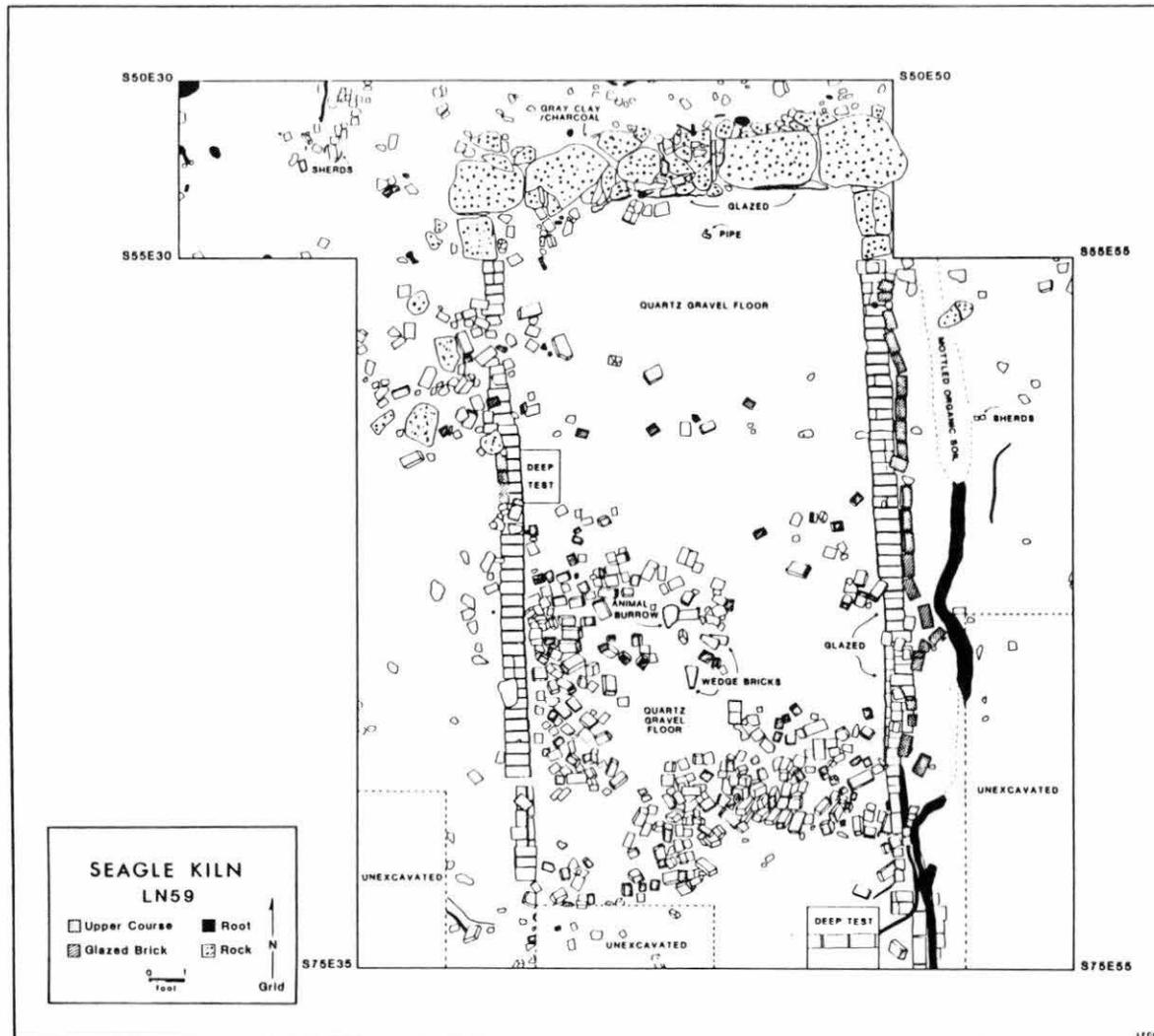


Figure 4.20 Plan Drawing of Seagle Kiln after Excavation showing Architectural Details and Features.

clear evidence of the firebox existed at the south end of the kiln, so a deep test was excavated adjacent to the last row of side wall bricks, in Unit S75E50. This deep test revealed the buried remains of the firebox wall. As seen in the profile drawing of Craig's kiln by Mackelfresh (Figure 4.17), the base of a firebox could be as deep as three or four feet below the ground surface. Due to the constraints on time and resources, a decision was made to leave the remainder of the firebox intact and unexcavated. Sufficient architectural information had been recorded to interpolate the overall firebox shape and depth. A second deep test was excavated against the interior of the west wall in Unit S65E45 to determine the depth of the quartz gravel lining the floor. Beneath a layer of crushed quartz gravel .3 foot thick was deep orange clay, very hard and compact, and thermally altered. Evidence of clay mortar was noted between the rows of brick and a sample was kept. Along the outside edge of the east side wall a line of bricks extended parallel to the length of the kiln. This line of bats, placed header to header, were interpreted as the base of a spanner course used to support the vault arch.

In summary, 20 five-by-five feet units were excavated to reveal the foundation remains of the groundhog kiln at 31Ln59. An extensive controlled surface collection was undertaken in an effort to locate the shop or other features associated with the kiln. A dense sherd concentration was mapped northwest of the chimney end of the kiln. This was interpreted as the remnants of a waster, easy tossing distance from the doorway. Most of the waster pile, like the kiln had been scattered downhill in the 1930s by Mr. Hoyle's father when he planted the area in timber. Another area, north and east of the kiln, was suspected as the shop location, but only two possible stone piers (for a cabin or shop) were noted. Time constraints precluded further exploration of this area and the deep ravine which borders the site on the south. Excavation of this site took 23 days with a minimal crew and bitter cold temperatures. A total of 2,891 artifacts, mostly alkaline-glazed stoneware sherds, were found at this site and will be described in Chapter V. Other domestic-related artifacts, such as glass, brass wick holder, and nails were also

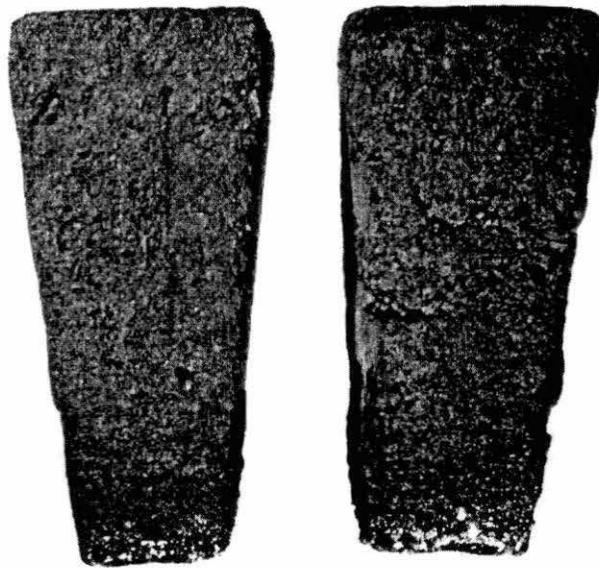


Figure 4.21 Wedge bricks from the kiln arch.  
Note glazed header ends

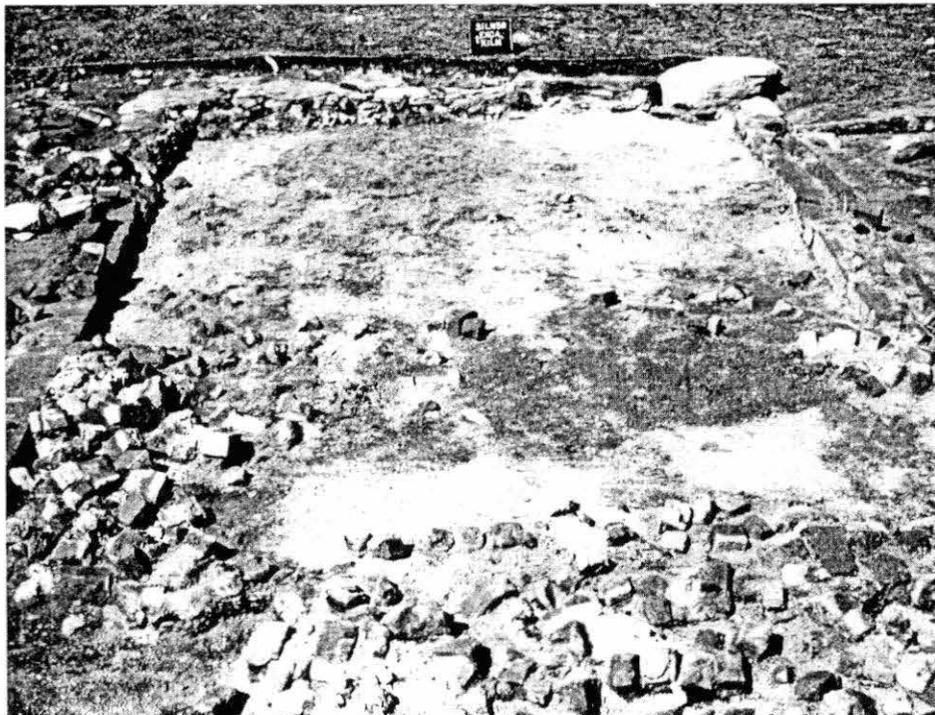


Figure 4.22. Foundation remains of Seagle groundhog kiln after excavation.

recovered outside the kiln perimeter. No kiln furniture was found at this site. This was not unexpected in a groundhog kiln with a typical low, arched vault. Generally wares were placed directly on the floor, unstacked, and arranged according to their height, for example cups and smaller items were placed near the edges and the taller churns, jugs, and crocks were placed near the center or tallest part of the arch. Final photographs were made of the exposed foundation and drawings completed (Figure 4.22). The excavation units were lined with black plastic and then backfilled for protection. The soil was raked and straw scattered over the surface to retard erosion before the vines reclaimed their purchase. More details of the architectural elements from this kiln are presented in section 5.2, but first, some comparative data regarding other kilns, or kiln sites, related to Daniel Seagle's and Solomon Loy's are provided below.

#### 4.3 Other Related Sites: Testing and Description

Limited archaeological reconnaissance on several other kiln sites in the two research areas provided some useful insight on regional variations of kiln styles, settlement and land use information, genealogical connections, and valuable resources for overall comparisons. A few of these sites exhibited significant archaeological potential and subsurface integrity. They could form the basis for several additional dissertations. Therefore for more immediate purposes, I will extract only relevant criteria from each site to present here. In addition, I wish to add that state site forms have been completed, and filed, for all of these locations and form a resource archives for a possible thematic nomination of these sites to the National Register of Historic Places.

In Alamance County, seven pottery kiln sites were identified and investigated as part of the 1986 survey (Carnes 1986). These sites were the Solomon Loy site (31Am191), the suspected Solomon Loy first site on Ross Stephens' land (31Am192), the John Loy kiln site, the Will (William H.) Loy site, the Albert F. Loy site, the J.T. Boggs site (31Am199), and the Joseph Vincent site (Figure 4.23). In addition, the Mabin (Mebane)

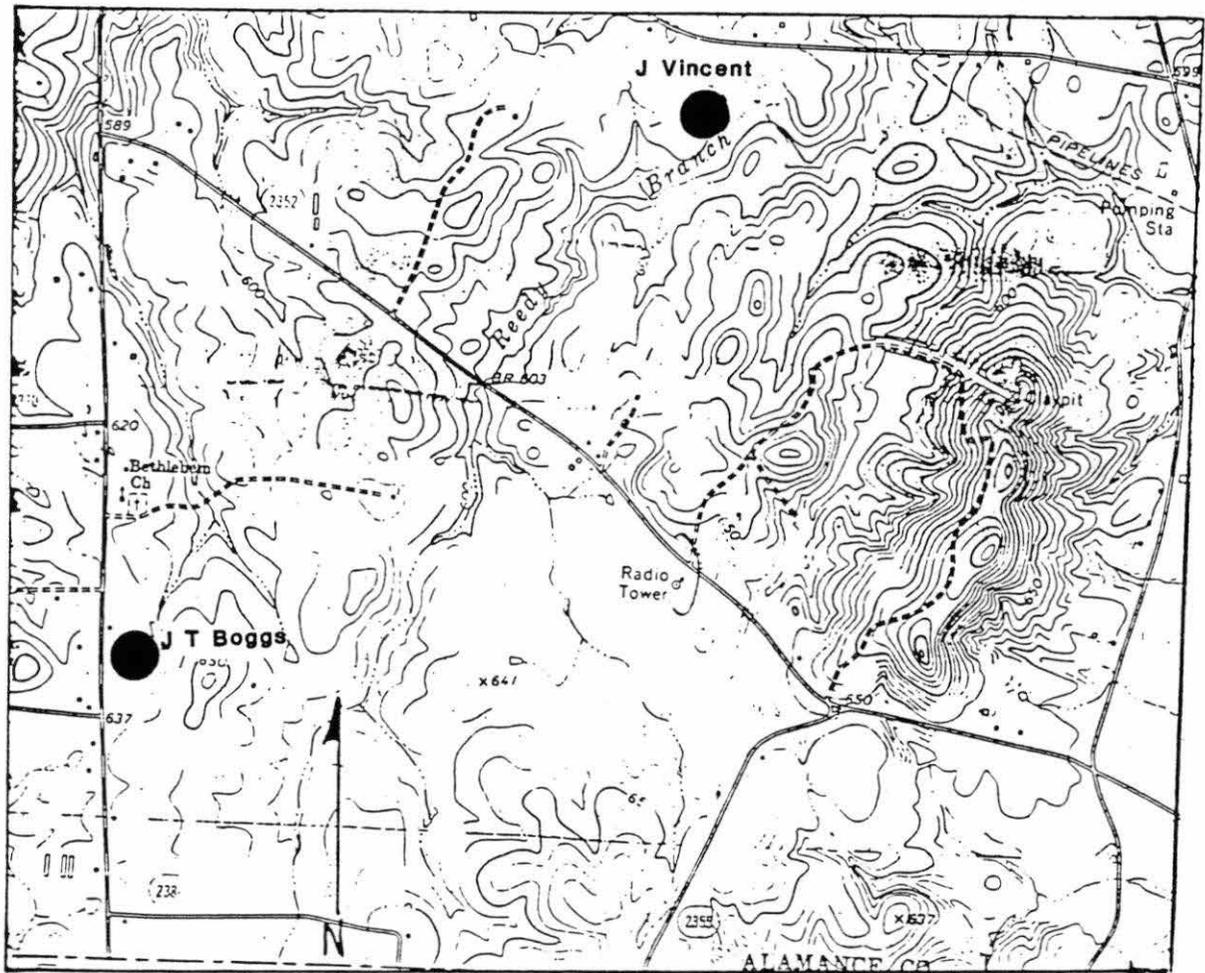


Figure 4.23 Location Map of Vincent and Boggs Kiln Sites.

Loy kiln site was recorded in the northern tip of Chatham County. Also related to the Loy family of potters, was the Joseph Loy site in Person County (31Pr59), and the Wood and Loy pottery site near Graham (31Am327). Most of the Alamance County sites have been discussed in detail in the 1986 survey report, so I will be brief and to the point here. At the Albert Loy and J.T. Boggs sites, the kiln ruins were mapped and photographed, while at the Will Loy and John Loy sites, extensive grading or erosion had claimed most of the kiln features. The Vincent site was only surface collected, but its integrity appeared to be promising. Kiln remains at the Wood and Loy site also appeared to have survived and await additional testing. Extensive testing was conducted at the Joseph Loy site and the "first" Solomon Loy site on Stephens' land.

The Boggs kiln probably dated to the mid-nineteenth century and operated until 1910. It was a groundhog type of kiln and measured 24 feet in length by eight to ten feet in width. The long axis was situated perpendicular to the road. The dome was collapsed and only one archway of brick remained. The side wall appeared to have been constructed of fieldstones and supported by a dirt embankment. The interior and remaining brick arch were coated with thick sodium-glass deposits, evidence of continuous salt-glazing. Like the Albert Loy kiln and the Joseph Vincent kiln, this was a side-loading oven. The Albert Loy kiln was also a groundhog type of kiln which measured approximately 16 feet long and eight feet wide. A long trench or ramp was attached to the firebox end for loading and firing purposes. The chimney base and side wall were constructed of local fieldstones and the arch remnant was made of brick. The kiln at the John Loy site was also a rectangular groundhog type of oven. The remains of the Will Loy site were indiscernible. These structural remains verify that a kiln constructed of local stone and brick was a common practice in the area which may have begun with Solomon Loy's kilns and continued into the early twentieth century.

Test trench excavations at 31Am192 (Ross Stephens' site) were interesting, not because the structural information they necessarily provided but, because of the artifacts

discovered during this work. The suspected kiln site was located some distance away from the current Stephens' homeplace, to the south in a large cow pasture. The closest domestic structure was the ruins of the Bob Overman cabin, located about 1000 feet west of the kiln remains. The mounded feature appeared to be roughly circular and covered with large stones and mature trees. It measured almost 21 feet in diameter and maybe four feet higher than the surrounding terrain. The extensive root systems of the trees made test excavations very difficult. One test trench (roughly three by four feet) was excavated in the northeast quadrant of the circle. Numerous large fieldstones were encountered, but none appeared to be in situ. A single handmade brick bat was found along with several unglazed and lead-glazed earthenware sherds. Tree roots forced the abandonment of this unit. A second trench (two by four feet) was subsequently excavated in the northwest quadrant of the mound. This test unit produced more earthenware sherds, glazed and unglazed as well as **kiln furniture**. Ribbed, extruded handles were found, a heavily glazed slab (a type of kiln furniture), and rims and bases of several straight-sided unglazed earthenware crocks. Numerous lead-glazed earthenware sherds (in a variety of earthy tones) were recovered in addition to five slip-trailed decorated plate rims. These artifacts were virtually identical to those found at 31Am191. Excavations at Kiln B yielded several fragments of the same straight-sided unglazed earthenware crocks as were found at 31Am192. Interestingly, of the 497 artifacts recovered at this site, no stoneware sherds appeared. Such a finding led me to conclude that this kiln site pre-dated the popularity of stoneware production in this area, and/or may have been used exclusively for the manufacture of earthenware. The undeniable similarities of kiln furniture and the earthenware sherds (in form and decoration) recovered from 31Am192 and 31Am191 convinced me that Solomon Loy was the potter at both sites. The overall absence of stoneware sherds or related kiln furniture from 31Am192 suggested this site predated 31Am191 and may have been Solomon Loy's first kiln.

The Joseph Loy pottery site (31Pr59) was discovered through the diligent efforts of his descendants, Allen and Hugh Campbell from Blacksburg, Virginia. Allen is the great-granddaughter of Joseph, and granddaughter of George Haywood. In 1992, using genealogical resources they were able to locate what they believed to be the homeplace of Haywood near the Hurdle Mills community in Person County. They also attended a talk I presented on the research at the Solomon Loy kiln site. Following that talk, they returned to the Haywood site, now in a large field south of Alderidge Creek, and began a surface inspection. Later, they sent a photograph of their collected artifacts, and we arranged to meet on the site. Permission was granted by the property owner to test the site in between crop plantings. One day in March of 1993, with a crew of volunteers and a magnetometer, we returned to explore. A datum point was established and grid laid out over the area where a sherd concentration was noted. The magnetometer was used to detect subsurface anomalies where additional test units were placed. Results of the magnetometer survey were limited and experimental. It was a new piece of equipment that had never been tried on sites of this type (kilns). A grid was set up for "sweeping" with the magnetometer. Walking uni-directionally, the operator would sweep and an assistant would mark the elevated readings in certain areas which indicated a "concentration" of buried (thermally-altered?) materials. We systematically flagged each high reading and returned to explore it. We subsequently discovered that a single piece of kiln furniture would produce a high reading of thermal-alteration. But progress was made. By the end of the day 14 two-by-two feet units, and one five-by-five feet unit were excavated to below plowzone. In two units, portions of a large stone foundation were exposed. Unfortunately, not enough of it was visible to determine if it was kiln foundation. Among the excavated artifacts were numerous green (copper-oxide) colored slip-trail decorated lead-glazed earthenware sherds representing cups, large pitchers, candlestick, and plate forms. Hand-formed clay marbles were also found, in addition to several glazed and unglazed pieces of kiln furniture (slabs, and clay wads or separators).

Domestic-related materials, such as creamware fragments, spun-back metal buttons, bottle glass and wrought nails, suggested an early date for this site. One creamware plate fragment marked "B B & I" was identified as Baker, Bevans, and Irwin, a pottery manufacturer from the town of Glamorgan in Swansea, Wales, and dated 1813-1838. Again, no stoneware sherds were found among the hundreds of sherds recovered at the site.

This revelation and the apparent early occupation of this site, led me to conclude that this was Joseph's pottery site, later owned and briefly operated by his son George Haywood. One slip-trail decorated lead-glazed earthenware plate stamped "G H LOY" was photographed from a private collection, which confirmed the fact that Haywood learned to make earthenwares. But several marked salt-glazed stoneware crocks made by Haywood ("G H LOY") have also been documented, so we know he was a successful producer of this later ceramic type. It seems reasonable to assume, therefore, that he built a suitable kiln for stoneware manufacture somewhere else. Joseph died in 1861, but pottery production at this location appears to have ceased long before that time. Some comparative analyses of decorative motifs used by Solomon and his brother Joseph will be offered in section 5.1.1. Future work at this site remains a possibility provided subsoil plowing does not destroy the fragile nature of the buried ruins. It would be interesting to learn if Joseph's earthenware kiln was round and built of stone.

In the Catawba Valley area where the Daniel Seagle site was excavated, three other pottery kiln sites were examined. As previously mentioned, the pottery shop and kiln at Burlon Craig's is still in operation (though severely limited). His kiln, located in the community of Henry, is situated on the west side of State Highway 1002. The kiln and shop were built by Harvey Reinhardt in 1936, and bought by Craig in 1945 where he has operated it ever since (Bridges 1980:43). The second kiln site examined also has nearly intact kiln remains and was built by Harvey's brother Enoch Reinhardt. This kiln is older than Craig's (formerly Harvey's) but has been abandoned for many years and is in

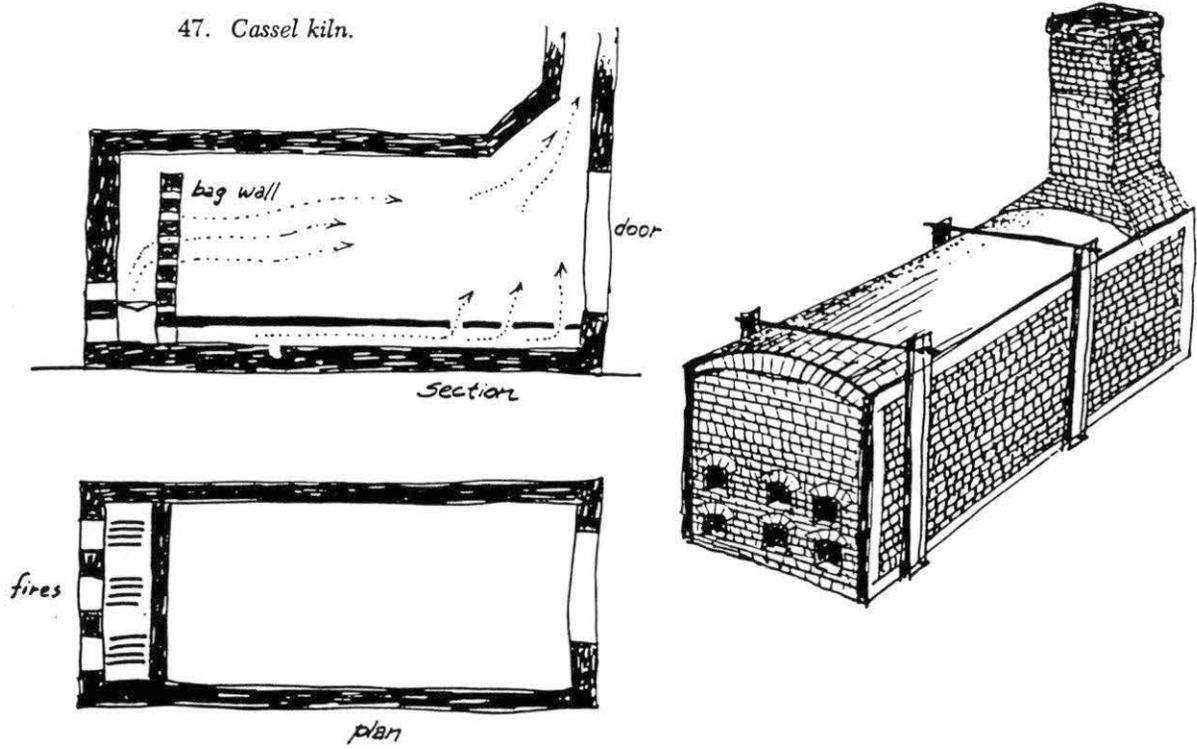
disrepair. The third kiln site located in the area and inspected during this research was that of Luther Seth Ritchie's, where the last firing occurred in 1946. This site is located on the north side of Highway 10, in the community of Blackburn in Catawba County (31Ct141). The site was graded away and the kiln leveled on November 18, 1987, two days before I arrived in the field. So from this sample of three sites, one still in operation, one abandoned but surviving, and one freshly graded away, I was able to draw the following comparative data.

Enoch Reinhardt's kiln was built around 1932 and operated jointly by the two brothers until Harvey set up shop down the road in 1936. Burlon Craig, as previously pointed out, took over Harvey's kiln and shop in 1945 when he returned from military duty (Zug 1986:202). Enoch and Harvey's kilns were virtually identical in size and shape except that Enoch had equipped his kiln with a slightly taller brick chimney. According to local tradition, this taller kiln presented a few problems for Enoch and "burned too fast" literally melting the pots closest to the firebox and not maturing the ones further back in the kiln (Sweezy 1984:90). The two Reinhardt kilns measured 24.9 feet in length by 11.5 feet in width exterior, and a setting floor of 20 feet by ten feet. Daniel Seagle's kiln, as you may recall, was 21 feet in interior length by ten feet in width. The interior vault height of the Reinhardt kilns measured 30 inches, though vault on Enoch relict kiln has partially collapsed. Zug reported that Burlon Craig still owned the wooden arch-boards (curved forms for vault construction) used to build the Reinhardt kilns and suspected they were used by almost every potter in the region to build their kilns (1986:230). On both kilns, three fireports were positioned at the firebox end and were used to stoke the kiln; beneath each was a smaller hole for draft. Air would be sucked through these lower holes as the wood burned overhead, thus creating maximum combustion. On the uphill end of each kiln was the brick chimney. The brick arch abutted the chimney wall and extended the length of the parallel side walls. The interior the arch was supported at the chimney end by two square pillars made of brick. The openness of this chamber allowed the flames

and heat to pass through unobstructed and out the chimney. The recovery of glazed brick bats from the floor of the Seagle kiln indicate that the union between chimney and chamber was much the same, supported by two (or more) pillars. Both of the existing kilns exhibit narrow doorways located at the chimney end located on the uphill sides. A "doorway" type threshold was measured on the Seagle kiln foundation which measured 1.75 feet in width, similar to the size of the two doorways on the Reinhardt kilns. One striking difference between the Seagle kiln and the kilns built by the Reinhardt brothers, was the construction fabric of the chimney; stone was used at Seagle's and brick bats were used on the Reinhardt kilns. The height of the chimney for the Seagle kiln could not be determined from the archaeological evidence available; therefore, it will remain a matter of conjecture. Both surviving kilns were also constructed without bag walls, commonly used to protect the wares on the floor from direct contact with the flames and flying debris generated out of the firebox. Bag walls were sometimes found on groundhog type kilns in other regions where they protected the wares as well as lowered the inside temperature if a kiln burned "too hot." As shown in Figure 4.24, bag walls were used on European style kilns such as the Newcastle kiln from England, and the Cassel kiln from Germany (Rhodes 1968:44-45). A shed addition was built over the firebox end of the kiln at Burlon's and at Enoch's, but the latter has partially disappeared. No direct evidence of a shed or postholes was found at the archaeological site. Nonetheless, the many similarities between the extant Harvey Reinhardt kiln used by Craig and the archaeological footprint of the Daniel Seagle kiln would clearly indicate that a continuity of kiln building tradition has persisted for nearly 16 decades.

The Luther Seth Ritchie site was interesting for the information it provided regarding site destruction techniques and artifact dispersion. In *Turners and Burners* (1986), Zug provided many references to the potters who worked at this site, as well as descriptions of the activities which took place here. His work becomes more valuable now since the site has been destroyed. Luther Seth Ritchie was born in 1867 and died in 1940. "Uncle

47. Cassel kiln.



48. Newcastle kiln.

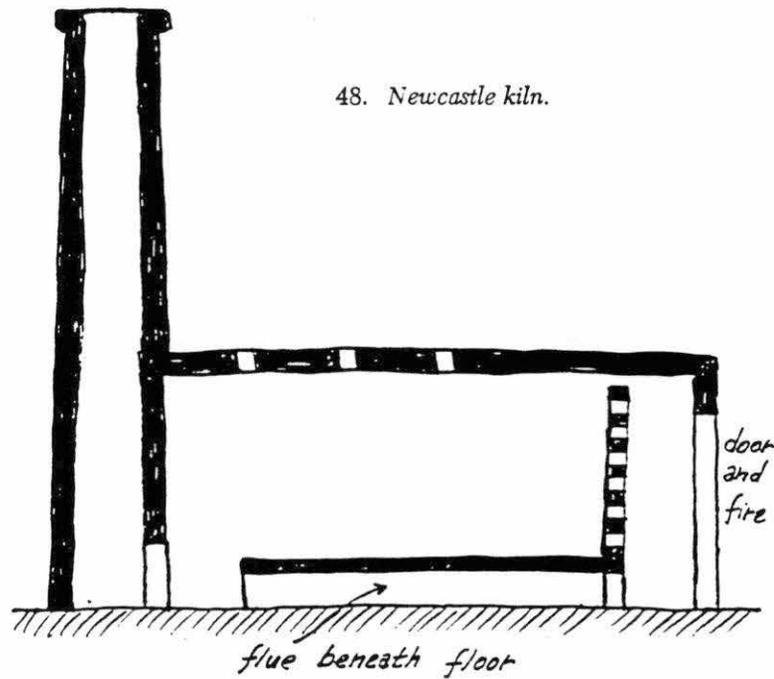


Figure 4.24 Drawings of Rectangular Newcastle and Cassel Type Kilns from Rhodes (1968).

Seth" was the last potter in a long line of potters of German ancestry who settled and worked in the Blackburn community in Bandy Township. Luther was the son of Thomas Ritchie (1825-1909), and grandson of Moses Ritchie. At least three photographs of the shop and Luther Ritchie are shown in Zug's book, along with a sample of his wares. Additional valuable information is probably available from county and state archives, and possibly local informants.

I approached the site with the eye of an archaeologist. I wanted to identify and document all that remained of the site activities and potters as expressed in the archaeological record. A detailed site map was constructed which was later incorporated in the state site form. On it I plotted concentrations of waster sherds, the probable kiln ruins, the location of an older shop, and a berm created from burned trees dragged across the site and set afire. My goal was to see what I could see from a "freshly" destroyed pottery kiln site and compare those findings to an older and long-gone site. The site's accessibility to transportation and water sources was immediately apparent. The site was within 200 yards of the road, and less than 100 yards from a small unnamed creek. The waster pile appeared to be linearly distributed, not by the bulldozer, but by the previous potters. Most of this waster zone was just uphill from the water source. The old home site was approximately 100 yards away from the kiln ruins. The kiln ruins appeared to be rectangular. Bricks from the destroyed kiln were partially piled into the collapsed kiln foundations, but others with glaze deposits were found in the mounded berm north of the kiln area, where they had been pushed (?). A surface collection was made of only diagnostic sherds due to the overall abundance of artifacts and space restriction for storage. Diagnostic sherds included all marked pieces, handles, rims, bases, and any decorative pieces. Samples of kiln brick and glaze debris were also retrieved for future analysis. Four large cardboard boxes were quickly filled. One extant wooden building remained which probably served as the last shop on the site. Again, the research potential at this site could not be fully determined because of time constraints and another pottery

site which awaited excavation down the road. This site and others nearby could serve as components in a thematic nomination for pottery sites of the Catawba Valley to the National Register of Historic Places and should be pursued with vigor before they are all gone.

These sites represent a nonrenewable cultural resource which could provide archaeologically derived answers to many questions regarding technological and chronological indicators. As a resource base, these sites are being lost (destroyed) at a rapid rate, reducing the possibilities of future regional pottery studies. These sites are all cultural components of North Carolina's historic pottery-making industry and warrant additional research beyond what I was able to accomplish in this endeavor which focused primarily on the Solomon Loy and Daniel Seagle kiln sites. Additional information garnered from these comparative sites regarding artifact analyses and structural interpretation is incorporated in the following chapter.

## CHAPTER V

### *FATWARE AND LEANWARE:*

#### ANALYSIS OF RESULTS

The analysis of artifacts and features recovered from pottery manufacturing sites can be approached from several directions of inquiry. Analysis can be conducted in a completely reductive and overly generalized way, or it can be so data-laden with many arcane details and measurements as to render it equally uninformative. My objective throughout this research was to create an attribute database for the works of each potter, or the products of their shops, with sufficient enough detail to allow subsequent researchers the opportunity to identify particular vessels or sherds, found elsewhere, with their source of origin. Identifying the hand of the potters who worked at these sites became a research objective which met with reasonable success. During the course of this research I was allowed access to numerous whole vessels made by these potters now in museums and private collections. Measurements and photographs of these intact pieces augmented my analysis of the archaeological materials. Understanding the architectural remnants of the kilns and how they functioned was somewhat more conjectural. While extant examples of the groundhog kiln were still available for inspection, no kilns have been located which resemble the remains found at the Loy site.

As is true in any endeavor of artifact analysis, a word of caution must be issued regarding the appropriate choice of nomenclature to use. Terms used to identify objects, features, and processes related to any particular activity, in this case pottery making, can vary considerably between **the creator** of the object, **the seller** of the object, **the consumer** of the object, and eventually, **the analyst** of the object. As analysts, we are all

aware of the fact that terms used by ceramic creators of long ago often did not survive into the written or ethnographic records. Occasionally, when names of specific wares did survive or were recorded, their application and meaning varied from one ceramist to another. Often formulas for particular ware types became well-guarded trade secrets. For traditional potters of southern utilitarian wares (or folk potters), some of the terms were handed down to sons and apprentices who continued to use the folk terms for various wares, clays, glazes, or related objects and activities associated with this cottage industry. For example, "fat" and "lean" were vernacular descriptors which have survived several generations of potters and refer to specific properties of different clay types (Zug 1986:109). From the folk potter's perspective, the term "fat" referred to highly plastic clays which tended to be fine-grained in texture and relatively free of non-plastic materials such as iron and other oxides. Conversely, "lean" referred to coarse-grained clays which contained a higher incidence of sand or flint. Plasticity and strength of the clays were primary concerns for the folk potter, as well as other physical properties such as shrinkage, color, and fusibility or vitrification (Zug 1986: 108). Other examples of vernacular terms pointed out by Wigginton and Bennett were; turning for throwing, burning for firing, turning lathe for potter's wheel, fire wall for flash wall, ash pit for fire pit, bed for floor (of kiln), and mud mill for pug mill (1984). For the ceramic analyst, discerning the differences in clay types (or properties) was a crucial first step, given that different clays yield different wares. Thus, the terms **"fatware" and "leanware"** evolved into my vocabulary to mean those vessels made from stoneware and earthenware clays, respectively, though some practicing potters may disagree with the use of these terms.

Appropriate nomenclature for vessel forms was also researched. Principal resources were those studies of southern folk pottery by Baldwin 1993, Bivins 1972, Brackner 1994, Bridges 1980, Burrison 1983 and 1993, Carnes 1977, 1982, 1986, and Carnes-McNaughton 1995, Comstock 1994, Drucker, et al. 1993, Greer 1981, Guiland 1971,

Outlaw 1974, Pugh 1988, Scarborough 1986, Smith and Rogers 1979, South 1967 and 1970, Steen 1994, Sweezy 1984, Webster 1971, Wigginton and Bennett 1984, Willet and Brackner 1983, Whatley 1980, and Zug 1981 and 1986. Other sources were gleaned for descriptive and functional information regarding specific artifact classes, such as kiln furniture, brick types, decorative treatments of vessels, tobacco pipes, and kiln construction.

### 5.1 Artifact Analysis

Archaeological excavations at the Solomon Loy Site 31Am191 and the Daniel Seagle Site 31Ln59 yielded a total of 19,622 artifacts, 16,731 and 2,891 respectively. Of that total 65.4% (N=12,836) were pottery fragments, while the remaining 34.6% of the artifacts were kiln furniture, architectural debris, waste glaze, and other historic and prehistoric items. All artifacts were returned to the Research Laboratories of Anthropology at the University of North Carolina in Chapel Hill to be cleaned, identified, quantified, cataloged, and eventually stored. Laboratory space and storage space were generously provided, but all processing of this material was accomplished, like the field work, through a coordinated effort of a few dedicated volunteers and myself. Permission to retain all the artifacts was graciously given by the property owners, but plans to provide access to the collection for future museum displays in the originating communities is already underway.

To facilitate quantitative and descriptive data for such large numbers of artifacts and to systematically record all visible attributes of these artifacts, a unique database was created. The relatively small number of prehistoric artifacts found during excavations were not coded in this database though they received a thorough identification. Likewise, other historic artifacts related to domestic activities such as European-manufactured ceramics (e.g. pearlware, creamwares, and whitewares), bottle and window glass, iron nails, brass wick holder, and buttons were thoroughly identified, dated, and described, but

also not included in this special database program specifically created for pottery-related artifacts.

As summarized in Table 5.1, measurable attributes were grouped by key variables such as body composition, surface finish, decoration, maker's mark, type of vessel, percent of vessel size represented, paste color, portion of the vessel represented, condition of the sherd, and a count per entry. Provenience data, specimen number, and artifact classification code were also added to this analysis format. A free-field or comment section was included to provide space for any idiosyncratic descriptor the analyst wanted to add. The artifact classification code identified the object in broad groups such as p for pottery, m for miscellaneous, eb for ethnobotanical, a for artifact, etc. Body or paste composition referred to the type of ware such as earthenware, stoneware, intermediate earthenware/stoneware, and indeterminate. Surface finish was recorded for interior and exterior surfaces and included unglazed, lead-glazed, salt-glazed, alkaline-glazed, albany slip, combinations, and indeterminates. Decoration attributes were recorded for the interior and exterior, depending on the vessel form (plate form vs. hollowware form). These included undecorated, slip-trailed, cobalt painted, manganese/iron oxide painted, glass streaked (a discussion on this as a decorative technique will follow), incised, and ribbed or cordoned. The type of vessel or object represented by each cataloged sherd was recorded if it could be determined. Types of forms were segregated into either food-related vessels or non-food related containers or objects, architectural/by-product objects, and kiln furniture. Food-related forms included crock/jar, jug/ pitcher, churn, plate, small bowl, large bowl, cup/tankard/mug, saucer, lid, or indeterminate. Non-food related pottery was divided into flowerpot, smoking pipe, tile, or object indeterminate. The architectural/by-product category included glazed or unglazed brick, glazed or unglazed mortar, fired clay pieces, gravel floor samples, glazed rocks, waste glaze globs, clay samples, and indeterminate. Kiln furniture included coils, slab/shelf pieces, saggars, trivets, props, draw trials, and pieces of pottery subsequently used as kiln furniture. Next,

TABLE 5.1  
POTTERY SITE ANALYSIS

<u>Label</u>	<u>Column</u>	<u>Attribute</u>	<u>Attribute State</u>
Site	1-6	Site Designation (eg, Ln59) County Abbrev. (col. 1-2) Site Number (col. 3-5) Suffix - if any	
Accession	8-11	Accession Number (right justified)	
Class	12	Specimen Class (eg., a, p,m,eb)	
Spec. No.	13-16	Specimen Number (right justified)	
Count	18	Quantity per category	
Composition	20	Composition 1 earthenware/bisque 2 stoneware 3 intermediate ew/sw 4 indeterminate (burned)	
Surface Finish	22	Interior 1 unglazed 2 lead glazed 3 salt glazed 4 alkaline glazed 5 albany slip 6 combination salt over albany 7 other 8 indeterminate	
	24	Exterior 1 unglazed 2 lead glazed 3 salt glazed 4 alkaline glazed 5 albany slip 6 combination salt over albany 7 other 8 indeterminate	
Decoration	26	Exterior/Interior 1 undecorated 2 slip-trailed 3 cobalt 4 manganese/iron 5 glass streaked 6 incised 7 other	

Type	28-29	<p>Food-Related</p> <p>1 crock/jar</p> <p>2 jug</p> <p>3 pitcher</p> <p>4 churn</p> <p>5 plate</p> <p>6 bowl, small</p> <p>7 bowl, large</p> <p>8 cup/tankard/mug</p> <p>9 vessel indeterminate</p> <p>Non-Food Related</p> <p>20 flowerpot</p> <p>21 smoking pipe</p> <p>22 tile</p> <p>29 object indeterminate</p> <p>Architectural/By-Products</p> <p>30 glazed brick</p> <p>31 unglazed brick</p> <p>32 glazed mortar</p> <p>33 unglazed mortar</p> <p>34 fired clay pieces</p> <p>35 gravel floor</p> <p>36 glazed rock</p> <p>37 waste glaze globs</p> <p>Kiln Furniture</p> <p>40 coil</p> <p>41 slab/shelf</p> <p>42 sagger</p> <p>43 trivet</p> <p>44 prop</p> <p>45</p>
% of vessel size	31	<p>1 nearly whole (reconstructed)</p> <p>2 greater than 3/4</p> <p>3 1/2 to 3/4</p> <p>4 1/4 to 1/2</p> <p>5 less than 1/4</p> <p>6 indeterminate</p>
Paste Color	33	<p>from Munsell Chart</p> <p>1 buff/tan</p> <p>2 gray</p> <p>3 orange/terra cotta</p> <p>4 mixed, multiple tone</p> <p>5 other</p> <p>6</p>

Portion	35	Unit of Analysis 1 rim/lip 2 handle 3 shoulder 4 base 5 lid 6 wall/body 7 other 8 9
Condition	37	Surface Interior 1 normal 2 burned (crazed from heat, melted) 3 bloated/blistered (bubbles on surface) 4 fettling (fused together) 5 warped/split 6 mottled coloring 7 other 8 9
	39	Surface Exterior 1 normal 2 burned 3 bloated/blistered 4 fettling 5 warped/split 6 mottled coloring 7 other 8 9
Free Comment	41-60	observations, MARKS, other data

the percentage of the vessel represented by the individual sherd or fragment was calculated, such as nearly whole (included reconstructed vessels), greater than three-quarters, a half to three-quarters and so on. Paste color for each sherd and kiln-related object was guided by the Munsell Color Chart which provided a descriptive color as well as numerical value for each color. Four main color groups were represented in the collection and these were buff to tan, gray (all shades), orange to terra-cotta, and combination or multiple tones. The diagnostic portion of the vessel or object represented by the sherd was recorded; rim or lip, handle, shoulder, base, lid, wall or body, marley (of plate forms), other, and indeterminate. The condition of the interior and exterior surfaces of each sherd or object was noted. Various conditions of the sherds reflected problems in the firing of the kiln or quality of the clay used in the pots. Examples of conditions were normal, burned (melted or crazed from heat), bloated or blistered (a condition where air pockets appear in the paste, or the glaze has bubbled), fused (two or more pieces fused or melted together), warped or split (a result of too much heat or drying too quickly), mottled coloring (reflected quality of glaze solution or uneven temperatures in the kiln), and crawling (where a slip glaze wrinkled on the sherd surface). The free-field comment included other observations not covered elsewhere in the coding format such as unusual marks, scars from kiln furniture, cross-mends, etc. All summary tables for each artifact group or category presented in this chapter were extracted from this coding format.

### 5.1.1 Ceramics

In the long course of human history, people have been learning to understand their physical environment and to make themselves at home in the world. First we learned by shaping and altering for our use and convenience the materials nature had to offer. The first cooking pots were containers found in nature, such as gourds, shells, pods, husks, and animal skins. When these simple tools and utensils were discarded, or abandoned, not only did they provide a glimpse of technological developments, but they also held an

imprint of early steps towards the sciences. As if by some Oriental alchemy of the world, pottery was formed from the combination of natural elements--earth, air, fire, water, and wood. And the original purpose of this early pottery was inextricably related to human subsistence and survival. The primary bond between ceramics and foodways is universal and thus, multicultural. In this way, Anna Shepard in *Ceramics for the Archaeologist* (1954) reminded us, "that the creation of pottery and ceramics studies in general, can contribute to a common endeavor of understanding human behaviors." As archaeologists, we are forced by our certain dependence upon material remains and the consequent meagerness of this data to probe carefully and fully the interrelationships of the artifacts and their creators to discern meaning. As mentioned earlier in this study, folklorist John Burrison emphasized that, "the making of pottery can be viewed as the ultimate civilizing act, for by transforming amorphous clay into formed vessels, chaotic nature is given order in the controlling hands of the potter, who at the same time expresses a society's values and needs" (1989:5). Given the plasticity of pottery then, it would not be unexpected to discover that certain shapes or forms reflected the diversity of the potters creating it. Some shapes, however, may not have been guided solely by culturally-specific variables but were responses to universal functional problems. For example, hollowware forms were created to hold liquids, while their particular design was culturally determined. For the folk pottery of the South, certain forms reflected distinctly regional responses, while others resonated broader Euro-American traditions (Burrison 1989:8). Thus regional and inter-regional responses of cultural groups were expressed in their material culture by the pottery they created and used, in addition to the foods stored in and eaten from those containers.

One of the most long-standing but nonetheless explicit relationships in the field of ceramic studies has been that between the form of the vessel and its function. The late Georgeanna Greer, a noted ceramic researcher and pottery collector, once remarked, "there is an old adage among designers and craftsmen that the primary form of an object

follows its function" (1981:55). The forms of folk pottery in eighteenth- and nineteenth-century rural North Carolina reflected three basic concepts: utilitarianism, conservatism, and regionalism (Zug 1986). Pottery was utilitarian in its basic function as containers for food preservation, preparation, and consumption. It was conservative in its fidelity to inherited traditions of forms slowly refined as they were passed down from generation to generation (Burrison 1989:5). And pottery forms and glazes became recognized regional variables as potters settled into different parts of the piedmont surrounded by neighbors of their own ethnic origin. The forms, glazes, and decorations used by Solomon Loy and Daniel Seagle demonstrate these three basic concepts and then some. First a brief discussion on basic nomenclature for vessel forms and body parts is essential.

Vessels were divided into three broad categories based on overall morphology: hollowware typically referred to upright or vertical containers designed to hold liquids or foods (e.g. chamber pots, spittoons, vases, pitchers, jugs, crocks, jars, churns, mugs, tankards, and teapots); bowls or basins referred to flat-bottomed pancheon forms with flared or curved side walls; and flatware referred to plate, platter, saucer, and dish forms, which were all typically flat-bottomed. Non-vessel forms included tobacco pipes, tiles, candlesticks, and grave markers. Most vessels of the hollowware category had a top, middle, and bottom. The very top was labeled the rim or lip depending on the particular vessel (such as the lip on a cup, and the rim of a crock). The neck or collar were also terms used to describe the constricted upper portion of some hollowwares (such as the neck of a jug or collar of a churn). The middle portion was called the body or wall. Walls of the hollowware vessel were either straight-sided or curved. Curvature of the body or walls was a measurable variable and broad chronological indicator. On certain hollowware forms the portion between the top and middle was called the shoulder (such as the shoulder of a jug, jar or crock). The bottom was called the base. In completely wheel-turned pottery footrings were not typically found, but were added to ornament some forms (such jugs, vases, or cups). Footrings were more frequent on earthenware

forms of the earlier production. Handles were necessary to facilitate porting, pouring, or drinking. Depending on the hollowware form, these were added to either the shoulder, neck, rim, upper body, lower wall, or any combination thereof. Handles were either horizontally positioned or vertically attached on the vessel, again dependent on the form and function. Other details added to hollowware forms for specific purposes were spouts (for pitchers) or recessed lips (to seat a lid). Decorations, if present, were applied to the exterior surface of the hollowware vessel for greatest visibility. Marks for storage capacity were most common on hollowware forms and also appeared on the exterior.

Bowl or basin forms referred to those vessels whose body or wall height was shorter than the diameter of their rims or whose rim diameter was larger than the basal diameter. These forms would also have portions similar to that of hollowwares, such as a rim, wall or body, and base. Typically large pancheon (or pan) forms had straight-sided outwardly extended walls. Height of the walls depended on function of the vessel. Bases of bowl forms was generally flat. Decorations and capacity marks, if present, were found on the flattened rims or on the interior base. On milk crocks, decorations and/or capacity marks were visible on the exterior side walls. Slip-trail decorations on large pancheon forms was found on the interior surface, which suggested a dual function as display vessels and containers.

Vessel morphology for flatware ceramics included top, middle, and base but with some descriptive modifications. The top was known as the rim or edge and was often everted or thickened on the underside. The middle on plate, platter, and dish forms was known as the marley or brim and was either concave or convex in profile. The interior base of these flatware vessels was called the cavetto (Bivins 1972:283). The exterior base was flat, and may or may not have had a footring. Decoration on these forms was located on either the rim, marley, or cavetto, or the entire interior surface. By contrast, plate forms (or dishes) at the Seagle site were more like short-walled bowl forms with simple outwardly flaring sides and very flat bases. It is important to emphasize here, that all

flatware forms recovered at these two sites were wheel-turned wares and **not** drape-molded. Drape-molding was a common plate manufacturing technique popularly used in the northern United States and Europe, but apparently never in North Carolina as no surviving examples have ever been found or documented. Here, I refer to drape-molded forms as those round or oblong-shaped earthenware dishes with coggled edges which distinguish them from the early press-molded tablewares (e.g. creamwares) made in America at the John Bartlam pottery sites (South 1993:17) and Old Salem (Bivins 1972:174-214). The Moravian potters of Old Salem and Bethabara were known to use press-molding extensively in the manufacture of some hollowware forms (figural flasks and bottles, teapots), baking dishes (bundt pans, tart plates) and non-food related items (stove tiles, toy figurines and doll parts, and decorative medallions) (Bivins 1972:174-214). The Moravian potters also used a press-molding technique in the manufacture of tobacco pipe heads, as did most other potters in the state including Daniel Seagle and Solomon Loy.

To sum up vessel form morphology used in this study, three basic categories were identified; hollowware, bowls/basins, and flatware. All forms were examined for diagnostic attributes related to their top, middle, and basal portions. Now, having laid the morphological groundwork so to speak, we can examine particular vessel forms and their occurrence at the kiln sites. There was a wide variety of distinct vessel forms represented by the pottery sherds recovered from the two sites, as well as whole vessels documented in private collections. The most common were divided into seven general categories, plus lids (used on jars). Table 5.2 provides a summary of vessel forms found at each site and grouped by body composition, such as earthenware, stoneware, and the indeterminate or transition body referred to as earthenware/stoneware. Some of the sherds included in the indeterminate category may, in fact, represent typically overfired or underfired vessels, as you would expect to find at a kiln site where all the "successes" (if not sold away) as well as all the "failures" of firing would be present. Still, other sherds, clearly represent a very

**TABLE 5.2**  
**SUMMARY OF VESSEL TYPES BY COMPOSITION**  
**FOR THE SEAGLE AND LOY SITES**

VESSEL TYPE-----	-----SEAGLE SITE-----							
	TOT	TOT%	EW	EW%	EW/SW	EW/SW%	SW	SW%
CROCK/JAR	135	69	4	22	5	71	126	74
JUG	9	5	0	0	2	29	7	4
PITCHER	15	8	0	0	0	0	15	9
PLATE	7	4	0	0	0	0	7	4
BOWL	23	12	14	78	0	0	9	5
SAUCER	0	0	0	0	0	0	0	0
CUP/TANK/MUG	0	0	0	0	0	0	0	0
LID	6	2	0	0	0	0	6	4
SUM	195	100	18	100	7	100	170	100

VESSEL TYPE-----	-----LOY SITE-----							
	TOT	TOT%	EW	EW%	EW/SW	EW/SW%	SW	SW%
CROCK/JAR	1533	65	525	45	83	71	925	86
JUG	124	5	17	1	9	8	98	9
PITCHER	32	1	18	2	2	2	12	1
PLATE	293	12	283	244	4	3	6	1
BOWL	328	14	313	27	3	3	12	1
SAUCER	16	1	0	0	9	8	7	1
CUP/TANK/MUG	27	1	12	1	7	6	8	1
LID	3	0	0	0	0	0	3	0
SUM	2356	100	1168	100	117	100	1071	100

EW= EARTHENWARE  
 SW= STONEWARE  
 EW/SW= EARTHENWARE/STONEWARE INDETERMINATE

conscious effort by the potter to experiment with different clay combinations and firing temperatures to create the "newer" stoneware ceramics. Eventually, these experiments led to additional changes in glazes and vessel forms which accompanied the creation of stonewares at each site. The following discussion on specific vessel forms will incorporate the summary data presented in Table 5.2.

Crock or jar forms were recognized as vessels taller in height than the diameter of their rims. In overall shape, these forms were either rounded (or ovoid) or cylindrical. The top orifice was either large or small, and some were fashioned with a recessed lip to seat a lid. The upper rim was designed with a rolled or tooled edge, suitable for covering with a cloth and tied on by string. Some larger jars had handles for portage purposes. Capacity markers were found on crock or jar forms along with limited decorations and the occasional maker's mark or initials. In general, crocks and jars were used for storage of bulk liquid, semi-solid, or solid food stuffs. Crocks were used to store liquid milk or as cream risers. The one to four gallon crock with a slightly flattened rim, was a popular container for milk, known traditionally as the milk or milch (Germanic) pot (Zug 1986: 311-313). Semi-solid foods such as applesauce or sauerkraut were stored in crocks or lidded jars. And for the storage of solid foods such as sugar, salt, or lard, lidded jars or crocks were used. Thus, crocks and jars differed from bowls and flatwares in their intended function as storage vessels rather than as food preparation vessels. Greer (1981:83-92) distinguished between wide-mouth crocks or jars and small-mouth preserve jars. Exact function and location of these storage vessels in a frontier household probably varied, with the smaller storage jars placed on shelves or in cupboards, and the larger storage jars in larders or on the floor in a corner of the kitchen. Analytically, only the rim fragments were used to separate crock or jar fragments from other hollowware vessels. Table 5.3 provides a summary of the minimum number of vessel types based on diagnostic rim analysis and divided by body composition. Information from this summary table will be discussed per vessel category description. Jars with recessed edges for lids

**TABLE 5.3**  
**MINIMUM NUMBER OF VESSELS**  
**BASED ON DIAGNOSTIC RIMS**  
**FOR THE SEAGLE AND LOY SITES**

RIM TYPE-----		SEAGLE SITE-----			
	TOTAL	%	EARTHENWARE	STONEWARE	UNGLAZED STONEWARE
CROCKS	60		2	54	4
JARS	18		0	16	2
JUGS	5		0	4	1
PITCHERS	1		0	1	0
PLATES	7		0	7	0
BOWLS, LARGE	16		3	6	7
LIDS	4		0	4	0
SUM	111 / 100%		5 / 4%	92 / 83%	14 / 13%

RIM TYPE-----		LOY SITE-----			
	TOTAL	%	EARTHENWARE	STONEWARE	EARTHENWARE/ STONEWARE
CROCKS	598		336	254	8
JARS	24		3	21	0
JUGS	32		7	21	4
PITCHERS	6		1	3	2
PLATES/DISHES	156		154	2	0
BOWLS, SMALL	16		16	0	0
BOWLS, LARGE	86		81	5	0
SAUCERS	4		0	3	1
CUP/TANK/MUG	8		2	2	4
LIDS	2		0	2	0
SUM	932 / 100%		600 / 64%	313 / 34%	19 / 2%

were further separated from open-mouth crock forms. At the Seagle site, 135 crock or jar sherds were recovered, and of this total, 126 were stoneware, four were earthenware, and five were indeterminate earthenware/stoneware body. Crock and jar fragments formed 69% of all the diagnostic sherds from this site. A minimum vessel count was determined from the crock rim fragments which totaled 60; 54 stoneware, four unglazed stoneware, and two earthenware. Rim fragments from 18 stoneware jars were also recovered at the Seagle site and reflected two styles; lidded jars (seven) and open-mouth jars (nine), two indeterminate (Figure 5.1). Small straight-sided crock forms with simple horizontal rims were identified as milk crocks, a late nineteenth-century form. Of these milk crock forms several were stamped with the maker's initials JFS, and all appeared to have been made by Frank. No milk crock forms attributed to Daniel Seagle have ever been documented, archaeologically or in collections. For the Loy site, 1,533 (or 65%) total sherds represented crock and jar elements. These were 925 stoneware, 525 earthenware, and only 83 from the earthenware/stoneware category. The minimum number of crock forms calculated by rims for the Loy site was 254 stoneware, 336 earthenware, and 8 indeterminate. In profile, some of the crock rims were flattened, while others were rolled or rounded. These morphological differences reflected both functional and chronological changes in the crock forms. The trend from ovoid forms to cylindrical forms has been documented as a diachronic phenomenon in southern folk pottery by some ceramic researchers (Burrison 1983, Greer 1981, Steen 1994, and Zug 1986). For jar forms, there were 21 stoneware rims, and three earthenware rims for a total of 24 jars. Of these jars, nine had recessed ledges for lids, and the remainder were either narrow mouth forms or rolled rims. Narrow mouth jars (Figure 5.2) were a unique style of jar known to be made at the Loy pottery shop and at the nearby Boggs pottery (Zug 1986:62).

Churns, as a type of hollowware, were difficult to determine from the rim sherds examined in the two site assemblages. Churns typically associated with food preparation were also used as storage containers in the backcountry kitchen. The most diagnostic

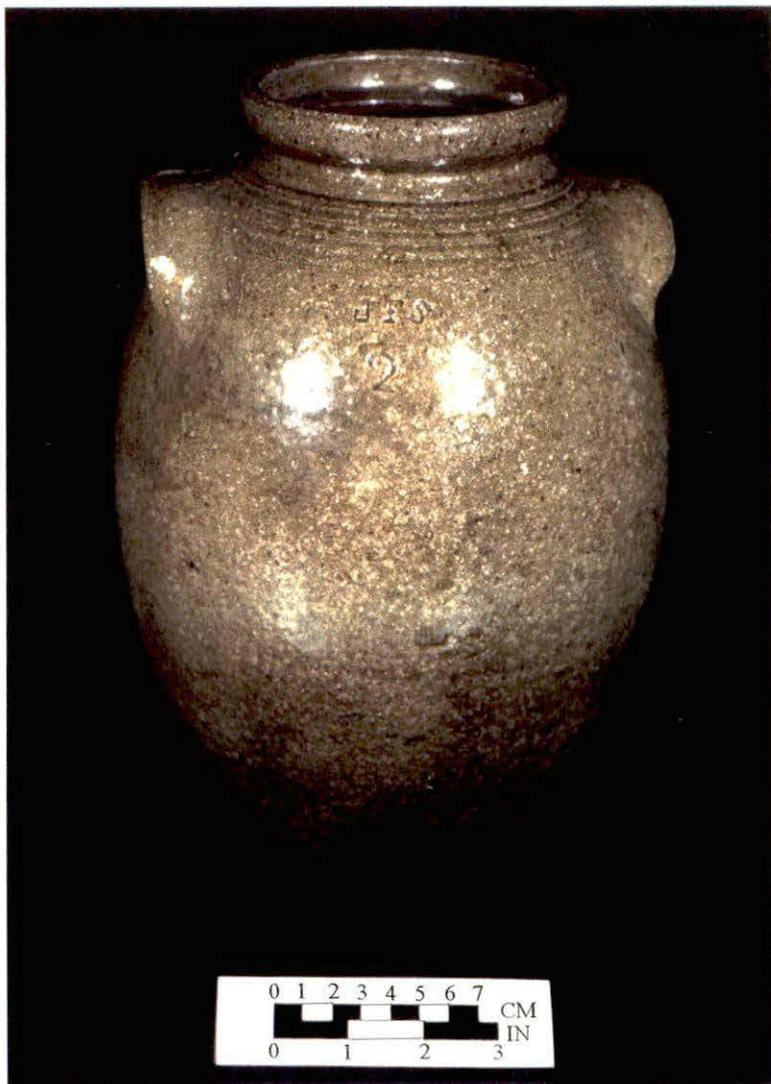


Figure 5.1. One gallon alkaline glazed jar with incised decoration, maker's mark, and capacity stamp.

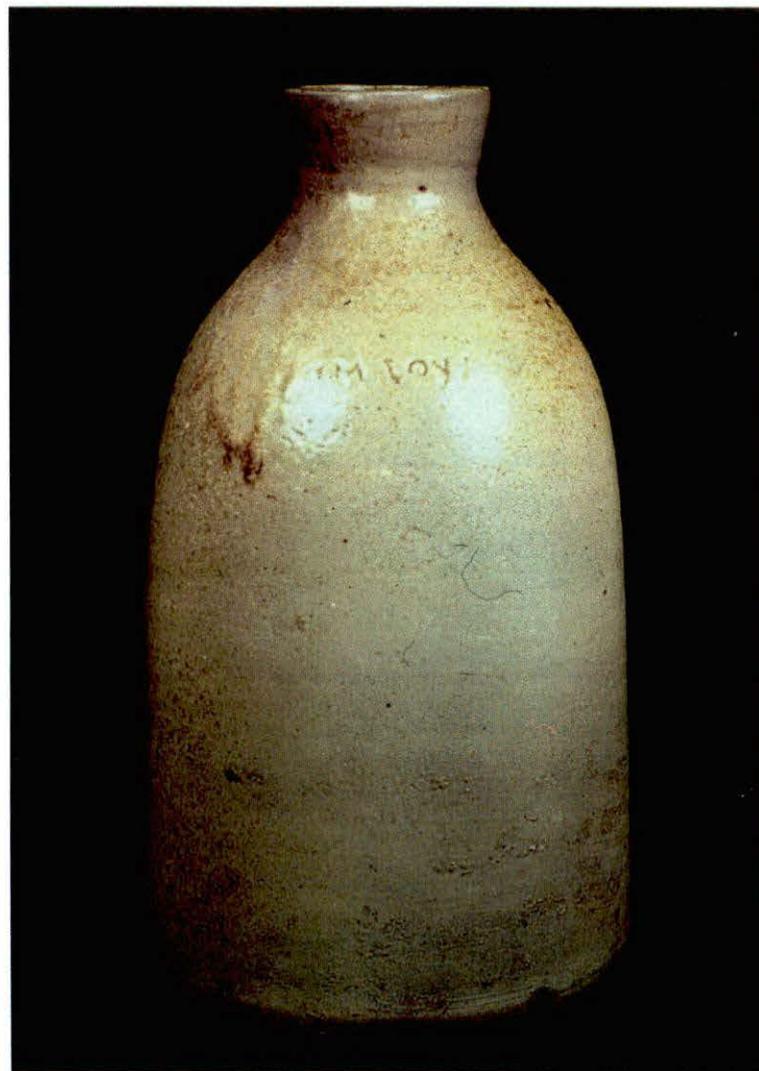


Figure 5.2. Typical stoneware jar with narrow mouth made by John M. Loy.

element of the churn was the tall collar type rim usually designed with a recessed edge to hold a lid or splash guard. Morphologically, churns were straight-sided and taller than their rim diameters. The straight-sided walls were designed to guide the wooden plunger or dasher up and down during the process of butter making. Ovoid or bulbous side walls would have less efficient and awkward during "dashing." Lead-glazed churns were manufactured by the Moravian potters of Old Salem (Bivins 1972:163), but were not as common in other piedmont communities in the eighteenth or nineteenth century (Zug 1986:315). Where they were not available, wooden churns and dashers probably substituted. Eventually, with the advent of stoneware production, ceramic churns became popular. The sturdier stoneware bodies were better suited to the rigors of "dashing" the wooden plunger up and down. Churns forms were produced by most stoneware potters during the nineteenth century and well into the twentieth century in days before commercial dairies captured the market. Large and small churn forms were manufactured, ranging from one to six gallons in capacity (Zug 1986:315). Interviews with traditional potters revealed that a special form evolved during the early twentieth century known as the "churn-jar," which served the dual purposes of storage and churning (Zug 1986:301-302). Given this data and the complete absence of any recognizable churn rims among the archaeological material, "churn" as a diagnostic vessel type became obsolete for this study. Possible churn forms were thus included in the crock or jar hollowware category. Handles were also noted on large crock forms to facilitate lifting and/or pouring. Horizontal ear and strap handles were photographed on large crocks made at each site. On Seagle's largest crock forms it was not uncommon to have four horizontal lug or ear handles positioned equidistant around the shoulder. Indeed, these behemoths of 15 to 20 gallon capacity would have required two people to move when they were full of comestibles (Figure 5.3). The largest documented stoneware crock made by Solomon Loy was also equipped with multiple horizontal handles necessary for transporting. The example shown in Figure 5.4 weighs 82 pounds EMPTY.



Figure 5.4. Large salt glazed stoneware jar with elaborate cobalt decoration and maker's mark: "SOLOMON LOY / REFINED STONEWARE / STATE OF NORTH CAROLINA / CHATHAM COUNTY / FAMILY JAR: 1855".

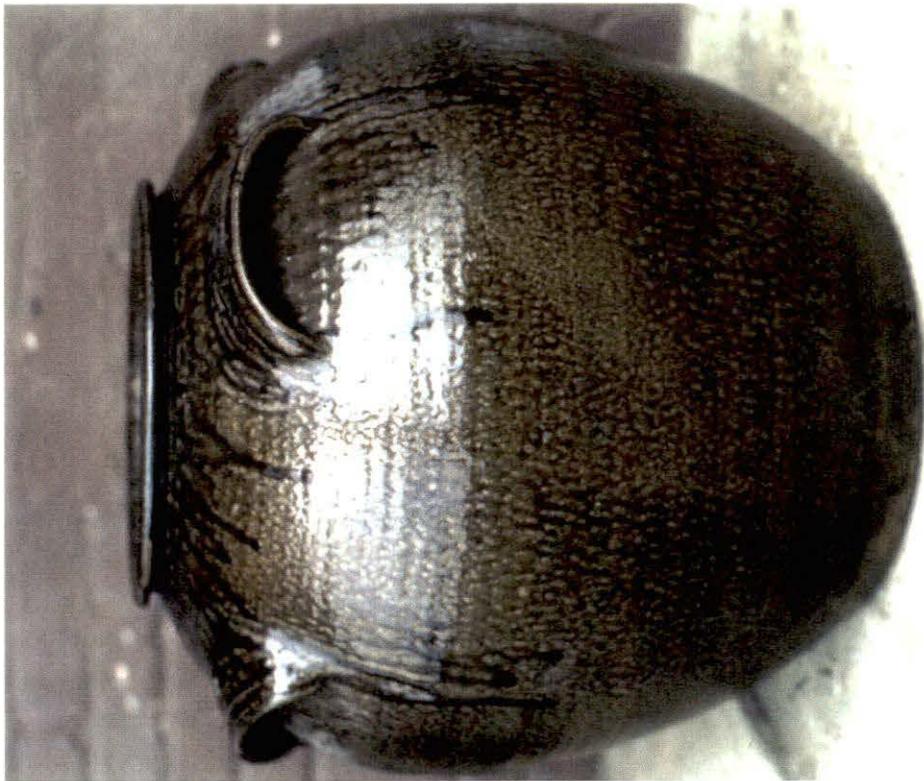


Figure 5.3. Large alkaline glazed stoneware jar made by Daniel Seagle.

Storage jars or crocks differed from jug forms in their intended function and in the size of the top orifice. Jugs resembled bottles in that they had very small aperture created from tightly constricted necks and tops. Jugs, like some jars, were specifically used for the storage and transport of liquids, such as molasses, vinegar, cider, distilled spirits or whiskey and water. The opening of a jug was often sealed with a stopper, sometimes made of cob, cork, or wood. Morphological differences between bottles and jugs were primarily in size and not function; both were intended to hold liquid. Bottles were often designed with specially rolled rims or lips from which to drink. Drinking directly from the jug, however, was not uncommon. Bottles were generally smaller compared to jugs, but often the two terms were used interchangeably by consumers. For this analysis, bottles were combined with jugs as an analysis category. Jug shapes varied somewhat regionally and chronologically. Early jugs tended to be more ovoid in overall shape, and later forms became more cylindrical in the lower body, with rounded shoulders. Because only fragments of jugs were recovered at the sites, some of these observations were based on inspection of extant pieces by each potter, now in private collections. Jugs were examined for their size, handle characteristics, orifice diameter, and body. Rim styles varied considerably at the Loy site where jugs/bottles of earthenware and stoneware were recovered. These included simple, slightly flaring rims, rolled rims, and fancy double ring rims (Figure 5.5). Jug rims from the Seagle site were simple vertical rims with cordoned tooling around the neck (Figure 5.6). Larger mouthed jugs (three to four inches in diameter) usually had turned rims or squared-off edges and may have been used for syrup containers rather than drinkable liquids. Jugs with smaller rounded edges on the tops (one to two inch diameter) were assumed to be for drinking of liquids. Information regarding handle attachment of jug forms was derived from whole pieces and a few archaeological specimens. Double strap handles appeared to be more common on Seagle's larger jugs, extending from the lower to upper shoulder portions of the vessel (Figure 5.7). Jugs made and stamped by his son Frank, had slightly different handle positions. Frank's



Figure 5.5. Variety of jug tops in earthenware, stoneware and transition wares.



Figure 5.6. Two gallon alkaline glazed stoneware jug with cordoned neck.



Figure 5.7. Alkaline glazed stoneware jug with double strap handles and marked DS / 4.

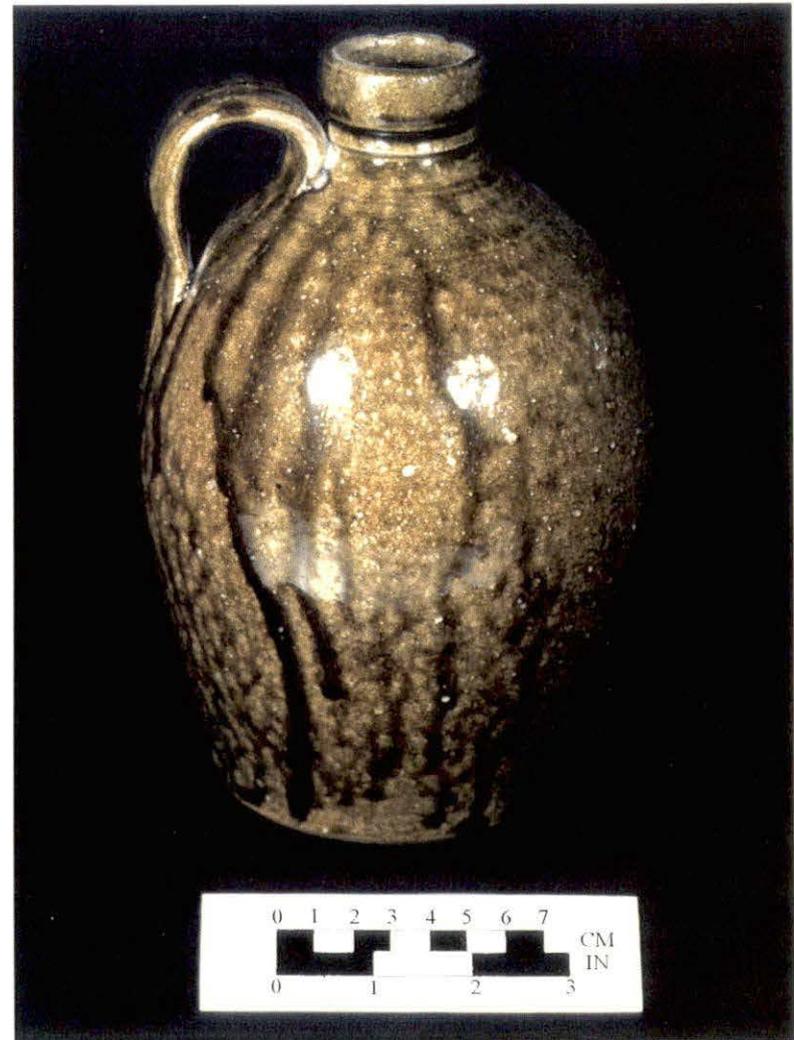


Figure 5.8. One gallon alkaline glazed jug made by JFS.

jugs had strap handles which extended from the mid-shoulder to the neck or side of the mouth (Figure 5.8). Differences and similarities between the wares made by Daniel and his son, Frank will be discussed in summary. No extant jugs made by Solomon Loy were documented during this study, but several jug sherds recovered at the kiln site showed that his forms had handles attached from the upper shoulder to the side of the neck (Figure 5.5). Jug fragments were identified archaeologically by rim sherds and a few sherds with unglazed interior surfaces (generally, the interior surfaces of jugs were difficult to glaze or coat because of their small mouth opening). At the Loy site 124 fragments of jugs were found which included 98 of stoneware, 17 of earthenware, and nine of indeterminate or transition body. Some of the earthenware jugs (or bottles) exhibited the double collar top. All had rolled rims. A few of the salt-glazed stoneware jug tops featured cobalt decorations around the rim and handle terminals. Again, using exclusively jug rims, the minimum vessel count was calculated to reveal 21 stoneware jugs, seven earthenware jugs, and four earthenware/stoneware jugs. At the Seagle site rim fragments from five stoneware jugs were found; four were alkaline-glazed and one was unglazed (three are shown in Figure 5.9). Liquid storage capacity could not be determined for any of the jug forms based on rim sherds. Fragments of jug forms comprised only 5% of the total vessel assemblage at each site, but the reverse was true of jug forms represented in private collections; jugs, followed by crocks/jars, were the most frequently photographed (N=17) and all were marked.

Pitchers were the last hollowware form to be analyzed from the archaeological assemblage. These forms were used in the storage and serving of liquids. Often they were stored in the kitchen cupboard, on the table, or in the springhouse. To prevent insects and trash from contaminating the contents, pitchers were typically covered with either cloth secured with string, or a saucer or plate. Morphologically pitchers were identified by their rims, spouts, strap handle and body shape. Greer described the most common style of pitcher as baluster in shape with a full rounded bottom and a cylindrical top section



Figure 5.9. Fragments of a plate, lid, and jug tops of alkaline glazed stoneware.

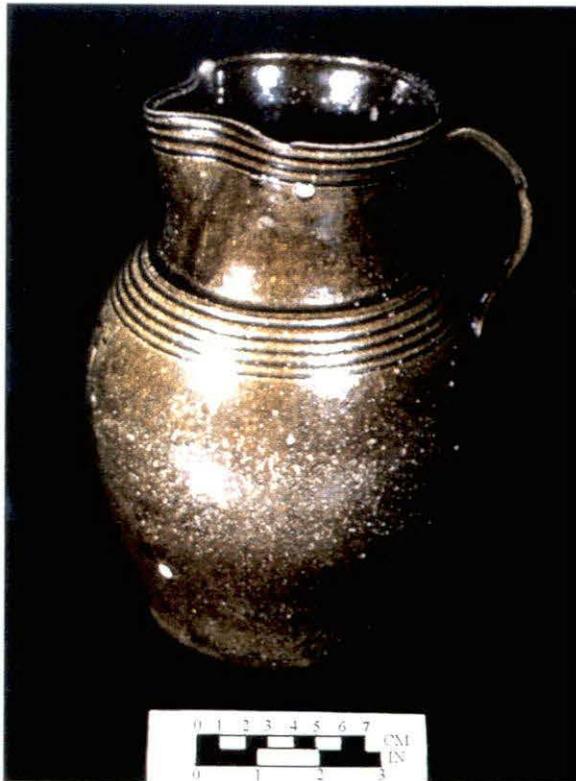


Figure 5.10. One gallon alkaline glazed stoneware pitcher with meised decoration.

(1981:103). Spouts were pulled in the rim and a vertical strap handle was mounted opposite the spout to facilitate pouring. Pitchers, because they were commonly used on the table for serving, were often decorated. Two nearly complete pitchers made and marked by Daniel Seagle were documented in private collections (Figure 5.10). Mr. Hoyle, the property owner, had discovered a one-gallon alkaline-glazed pitcher in the ravine just south of the kiln site. On his example, the upper rim, spout and handle were missing, but the initials DS and 1 were visible (Figure 5.11). Incised banding (six lines), a simple form of decoration used by Daniel and Frank Seagle, was exhibited around the shoulder of the pitcher. His pitcher appeared to be slightly underfired and may have been discarded as a "second." Another pitcher, photographed by Zug from a private collection, was examined for comparison. This pitcher, also alkaline-glazed stoneware, exhibited multiple lines or bands incised around the shoulder (five lines) and upper rim (four lines). The incised grooves were so uniform in width and depth, it appeared they were made with a multiple-tooth template or edging tool. Only the handle was missing from this specimen. Excavations at the Seagle kiln site yielded 15 alkaline-glazed stoneware sherds, which, when reconstructed, represented a single pitcher (Figure 5.12) This specimen also exhibited the multiple lines or bands incised around the shoulder and upper rim. Unfortunately, the body portion where the maker's initials and capacity stamp would normally have appeared was missing, but the similarity of form attributed it to Daniel Seagle. To date, no broken or partial pitchers made (or marked) by James Franklin Seagle have been documented archaeologically or in collections. Pitcher forms found at the Loy site represented only 1% of the total vessel assemblage with 32 sherds. Of these, 18 were earthenware, 12 were stoneware, and two sherds were indeterminate. A minimum vessel count was determined from rim sherds and some vessel reconstruction. Three stoneware pitchers, two transition body pitchers, and one earthenware pitcher were represented. The partially reconstructed unglazed earthenware pitcher was generally baluster in shape but without a distinct shoulder. A simple vertical strap handle extended from the upper neck

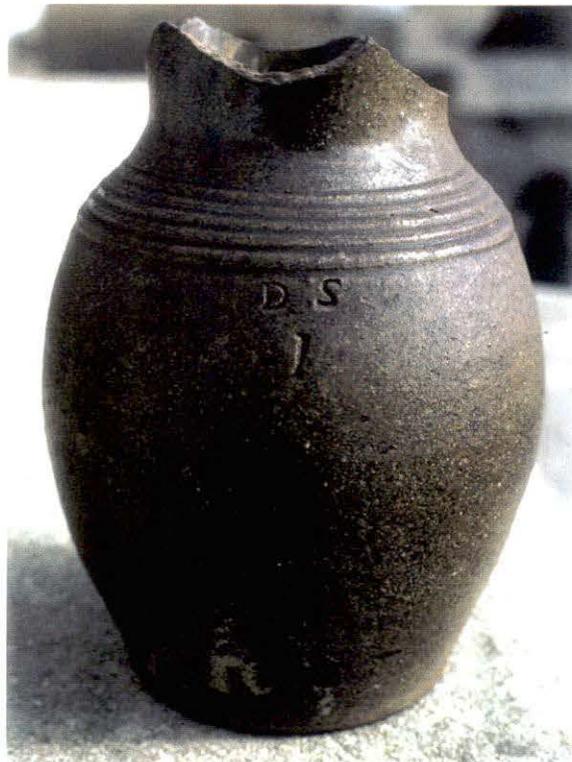


Figure 5.11. One gallon alkaline glazed stoneware pitcher recovered from kiln site by Mr. Hoyle



Figure 5.12. Pitcher fragments with incised decoration and glass variety of alkaline glaze

to the upper shoulder in a graceful arc. Rim sherds of salt-glazed stoneware pitchers were identified but the lower body shape was not determined. One intact salt-glazed and cobalt decorated stoneware pitcher was photographed by Zug from a private collection. This specimen resembled Seagle's style of pitcher in that it had an ovoid lower body, a distinct shoulder, and a slightly straight vertical neck portion. This example was also stamped S LOY on the shoulder directly under the spout, similar to Seagle's pitchers. Cobalt paint was applied with a brush over the maker's stamp for emphasis. Opposite the spout, cobalt was also painted on at the handle terminals for decoration.

Bowl or basin forms were found in earthenware and stoneware at both sites. These cylindrical vessels were identified by projected rim diameters larger than their basal diameter, or their side walls were shorter than the projected rim diameter. The side walls or body of the bowls were sometimes flared outwardly, with or without rolled rims. A few bowl or basin forms from the Seagle site had slightly taller straight walls. These vessels were multi-functional and were probably used for everything from clabber bowls to chamber pots. Bowls were involved in the preparation, storage, and serving of food. A total of 23 bowl/basin sherds were found at the Seagle kiln site; 14 of earthenware and nine of stoneware. Minimum vessel count of bowl rims was six glazed stoneware, seven unglazed stoneware, and three earthenware. Of these, six exhibited flared sides and rolled rims and represented large bowl forms. Seven fragments of unglazed stoneware bowls may actually have functioned as flower pots (Figure 5.13). Interestingly, no whole bowls or basin forms have been documented in private collections, so no intact examples were available for comparison. This was a surprise given the proportional quantity of this vessel form in the archaeological assemblage (12% of the total). None of these bowl fragments were marked with capacity or maker's stamp. Bowl and basin fragments excavated from the Loy site formed the second largest vessel form category, after crocks and jars, with 328 sherds (or 14% of the total vessel assemblage). The majority of these bowl sherds were earthenware (N=313) as opposed to only 12 stoneware sherds and two



Figure 5.13. Unglazed stoneware sherds recovered from the Seagle kiln site.



Figure 5.14. Sample of "splatter" decorated lead glazed earthenware from the Loy Kiln Site.

of indeterminate body. These bowl fragments were sorted by projected rim diameters and divided into two sizes, large (such as milk pans), and small (individual serving size). Small bowls measured less than six inches in projected rim diameter. Sixteen small earthenware bowls were represented by rim fragments, and of these, six bowls were unglazed, the other ten were lead-glazed. All of these small bowls were slip-trail decorated on the interior. Lead glaze was applied over the slip-trail decorations and restricted to only the interior surface, undersides were not glazed to prevent sticking together in the kiln. Figure 5.14 illustrates an example of a decorated small bowl recovered at the Loy kiln site. This small bowl was decorated with two colors of slip under the glaze in what could be termed a "splatter" pattern. Several other small tableware type vessel forms, such as mugs, tankards (tall mug forms), and a vase, were found with this decorative pattern of slip under lead glazing (see Figure 5.14). One large tankard with this unique splatter pattern, currently curated by the Museum of Early Southern Decorative Arts in Old Salem, and illustrated in Zug's *Turners and Burners* (1986:332), is now recognized as the work of Solomon Loy. Identical tankard fragments were recovered from the kiln site. The vase, previously mentioned, will be discussed below. Additional details regarding decorative patterns used by Solomon Loy will also be presented following vessel form discussions.

Cup, mugs, and tankards were compressed into one vessel form category. These forms were used to hold liquid either for personal consumption or as serving pieces. They may also have functioned as measuring cups for liquids or solid foods. Commonly they were associated with the table, and thus, food preparation and consumption. Morphologically, cups tended to be smaller, with curved or straight sides and rolled rims for comfort to the lips. The rim diameter of cups was larger than its basal diameter. Mugs, on the other hand, were flat-bottomed, straight-sided and cylindrical in shape, and had equal rim and basal diameters. Tankard was a term applied to tall mugs, but look the same otherwise. Vertical strap handles were fitted to the sides of these drinking vessels. These hollowware forms were not produced in great quantities by most of the traditional

potters of the South, but nonetheless occur with frequency on some sites. Lead-glazed earthenware cups, mugs, and tankards were made by the eighteenth century potters in Old Salem (Bivins 1972:92-93,129-133) and other non-Moravian earthenware potters such as William Dennis in Randolph County (Pugh 1988:14) and Solomon Loy. The popularity of hand-turned, locally produced cups and mugs may have been overshadowed by the availability (in certain areas) of industrial or mass-produced tableware and teaware sets. Another factor which may have contributed to their lack of commonality was the availability and durability of metal drinking vessels, such as pewter or tinned iron containers. Some stoneware potters of the mid-to-late nineteenth century, however, were turning out salt-glazed and alkaline-glazed cups in North Carolina (Zug 1986:331-333). With that said, I report there were no cup or tankard fragments found during excavations at the Daniel Seagle site. At the Solomon Loy site, however, cup and tankard sherds were recovered in earthenware and stoneware bodies. The sherd counts for this vessel form were eight stoneware, 12 earthenware, and seven earthenware/stoneware indeterminate, which comprised a total of 27 or 1% of the total vessel assemblage. Minimum vessel counts calculated by rims revealed two earthenware, two stoneware, and four indeterminate cups or mugs (Figure 5.15). The four indeterminate examples were all tall tankard forms, identical in shape to the one illustrated in Zug's *Turners and Burners* and previously described. One of the lead-glazed earthenware forms appeared to be shorter (possibly a mug) and decorated with the splatter pattern slip (Figure 5.14).

Lids were specialized vessel forms associated with large and small hollowwares. The lids found during excavations at the Loy and Seagle sites were made of stoneware and generally flat in form with button finials to facilitate lifting. Six stoneware lid fragments from the Seagle site represented four different tops. All were alkaline-glazed and appeared to be the size suitable for small mouth storage jars similar to the whole shown in Figure 5.16. Zug pointed out that the lidded jars became a popular form after the mid-nineteenth century in North Carolina (1986:291). Not unexpectedly, most of the whole



Figure 5.15. Cup and saucer fragments from the Loy Kiln Site.



Figure 5.16. JFS lidded jar in center, JFS jug on left, and DS jug on right, on floor of kiln.

examples from the Seagle shop were made by Frank, his son. The lid fragments from the Loy site totaled three and represented two different vessels, both salt-glazed and undecorated jar forms.

Large bowl forms from the Loy site were segregated by rim diameters (projected or reconstructed) of over six inches. Based on rim analysis, there portions of 81 large earthenware bowls found at the site, and five stoneware bowls. The stoneware bowls were all salt-glazed, and one exhibited cobalt dots around the rim. Many of these large bowl forms had outwardly flaring side walls typically associated with pancheons (pans) used for food preparation. Two salt-glazed stoneware bowls were pancheon forms. Still other forms of large earthenware bowls resembled bigger versions of the small bowls with slightly curved, but outwardly sloping sides and shallow grooved rims, often decorated with slip-trailed wavy lines. Eighteen large earthenware bowls were unglazed and undecorated. Decorated large bowls totaled 25, and of those, 21 were glazed with clear lead and four were only bisque-fired. The term bisque (or biscuit) is commonly used by ceramic analysts to describe earthenwares fired once but not yet glazed. Double firing was required by some potters who slip-trail decorated their wares; the greenware was first decorated, then fired once to "fix" the slip to the clay body, then coated with clear (or colored) lead, and fired again to seal the surface (Bivins 1972). One large bowl made by Solomon Loy was photographed in an antique shop and provided valuable comparative morphology (Figure 5.17). This particular example was red-bodied with underglaze slip-trail decorations along the rim (wavy line) and on the interior base. The "dotted-star" motif on the interior base was a common, and maybe unique, decorative favorite of Solomon Loy's. Several examples of this same design were found on the excavated sherds and on other whole pieces of his wares. Figure 5.18 also illustrates sherds from plain lead-glazed pancheon forms.

Flatware vessel forms included plates, platters, saucers, and dishes. Plates and platters made by traditional potters varied mainly in size, and probably weight. Both



Figure 5.17. Large earthenware bowl with underglaze slip-trail decorations.



Figure 5.18. Lead glazed earthenware fragments from pancheon forms.

functioned in the preparation and consumption of food, but also served decorative purposes in some cases. Morphologically, plates and platters had a flat base, outwardly sloping curved or straight sides, and then a brim or marley finished with a rolled or rounded edge. Profiles for stoneware plates differed from the more elaborate earthenware forms. Stoneware plates tended to be more rigid in wall profile with fewer angles. Saucers were small in rim diameter and generally resembled very shallow basins. The term dish was often used interchangeably with plate forms commonly found in the eastern piedmont and produced from the early 1800s until the 1930s. The "dirt dish," as it was called, was always made of lead-glazed earthenware and found its niche in the kitchen as a baking container. Due to its porous earthenware body, the dirt dish proved to better withstand thermal shock from heating and cooling after multiple uses (Zug 1986:18). In fact, aside from unglazed horticultural wares, such as flower pots, production of the dirt dish continued into the "modern" era by a few remaining potters in the eastern region. Archaeologically, however, it was difficult to separate plate, platter and dish fragments from each other. For this reason, and knowing that the terms dish and plate have been used interchangeably, it made sense to compress these three subcategories into one for the sake of analysis summary. Saucers remained a separate vessel category because they were readily identifiable based on size and profile. No saucer fragments were found at the Seagle site, but 16 were retrieved from the Loy site. Of these, seven were stoneware and represented three saucers, while the other nine fragments of the transition body earthenware/stoneware represented one saucer (Figure 5.15).

Plates apparently were not a main production form at the Seagle pottery shop. A total of seven stoneware plate fragments were recovered from excavations, and interestingly, each sherd represented a different plate. Thus, the sherd count and minimum vessel count for this vessel form at the Seagle site were equal at seven each. At 4% of the total vessel assemblage, plates were almost as frequent as jug forms (5% of the total). This was a surprising find. If we follow the same logic and assume vessel sherd count

mirrors frequency of manufacture for that form, then we would have expected to find fewer jug forms made by the Seagles, but the opposite was true. Most of the whole vessels marked or attributed to the Seagles and documented in private collections were jug forms. Clearly, another explanation for the scarcity of jug fragments found at the kiln site must be considered. Perhaps the form sherds recovered from the kiln site represent the later or last years of production, when the frequency of jars made may have increased while the numbers of jugs decreased. The stoneware plate fragments were alkaline-glazed, flat-bottomed, with short curved sides and simple in shape (plate base shown in Figure 5.9 with jug tops and lid fragments).

Plate/platter/dish fragments found at the Solomon Loy site totaled 293 or 12 % of the archaeological vessel assemblage. This form category was the third most represented after crocks/jars and bowls/basins. The vast majority of these plate sherds were earthenware (N=283), followed by six stoneware, and four earthenware/stoneware. When rim sherds were carefully examined the minimum individual number of plates became 154 earthenware compared to only two stoneware. Upon closer inspection, the 154 individual earthenware plates were subdivided by unglazed (N=31) and lead-glazed (N=123). Thirty-five of the individual earthenware plates exhibited some evidence of slip-trail decoration (21 in bisque-fired condition and 14 with lead glaze coating). Some effort was made to distinguish individual rims of deep dish forms from the plate rims. Based on the shape, thickness, and profile of all rims, 39 dish forms were identified in the assemblage. Decorations are discussed below.

Bivins (1972:283) and Pugh (1988:12-13) provided useful comparative earthenware plate descriptions from other North Carolina pottery sites. Bivins described plates produced by the Moravian potters from Old Salem, and Pugh described plates recovered at the William Dennis Site (31Rd981), in the community of New Salem. Bivins' analysis of plates from Old Salem described three distinct forms, each representing different periods of production. His "Early Period" plates, dated from 1756 to 1773, when

described in cross-section, had a pronounced foot at the base, a slightly concave marley (or brim), everted rim on the underside, and the a convex-shaped double booge (booge refers to the underside of rim and wall in profile). His "First Part of the Middle Period" plates dated from 1774 to ca.1789, and were described by a flattened brim or marley, a squared everted rim, a semi-double booge and the absence of a pronounced foot. Plate forms dated to his "Second Part of the Middle Period", from ca.1789 to 1829, were simplified in profile, with an unfooted flat base, squared rim, and concave booge. Hal Pugh, a Randolph County potter, studied hundreds of pottery sherds surface collected from the non-Moravian William Dennis Pottery Site, which may have begun in 1811. Pugh recognized plate fragments from all three of the previously described types found in Old Salem. He stated, "the rolled and squared rims were not heavy in cross-section and were proportionate with the overall shape of the thinly turned plates. The double booge plates, while differing in rim design and thickness, were similar in shape to plates dated 1755-99 found at documented Germanic pottery sites in North Carolina" (1988:13). Pugh goes on to postulate, based on rim profiles, that the Dennis potters were later trying to "emulate English wares being imported at the time of the pottery's operation" (Pugh 1988:13). The earthenware plate fragments found at the Solomon Loy site also exhibited morphological elements of all three plate styles described by Bivins and Pugh, with the exception of basal shape. No plate bases from the Loy site exhibited a pronounced foot; and most were simple flat bases. Consequently, the booge profiles also differed slightly from Loy plates, having semi-double to concave shapes and thinner rims. Overall, plates manufactured at the Solomon Loy shop were smaller and lighter than those made by the eighteenth-century Moravian potters, at least from a tactile examination of whole pieces. Clearly, the popularity of the highly decorated and sought-after plates of the famous Moravian potters of Old Salem provided incentive for the other equally skilled earthenware potters of North Carolina to imitate in their own decorative wares (to a certain degree), and economically to capture some of their market. But, regardless of any

direct or indirect influence the early Moravian potters had on their nineteenth-century competitors, both groups were responding to what Burrison has called "Old World decorative impulses" (Burrison 1989:14). These decorative impulses faded from the material folk culture by the late nineteenth century, or were replaced by innovative "American" designs. The most apparent display of these "Old World decorative impulses" was mirrored in the slip-trail, cobalt and iron oxide designs of Solomon Loy's pottery. The use of colored glazes in Central Europe and Germany was thought to have come from Italian and Spanish tin-glazed earthenwares in the early 1500s, where this influence spread northward and later eastward into England (Kaufman 1979:13). Brears, on the other hand, postulated that the introduction of colored slips in England came from the Netherlands in the late 1500s, again as a result of tin-enameled earthenwares (1971:125-126). The use of colored slips in America came from German and English immigrants who manufactured pottery in their new country, rather than the influence of Spanish or Italian tin-enameled wares.

Color was added to glazes and slips by the addition of various powdered metal oxides; iron oxide produced browns and blacks, manganese oxide produced dark purples and browns, copper oxides yielded greens. These colorants when used alone or in combination produced the wide range of earth-tones displayed on Loy's plates. Cobalt was not typically used on lead-glazed earthenwares because of its high melting point (thus, it was better suited to stonewares) and because coating of lead would obscure the blue color. During Loy's transition from earthenware to stoneware production, he attempted to try cobalt decoration under a clear lead glaze. Zug points out that this decorative combination (of cobalt under lead glaze) occurred again in the early twentieth century when potters reverted to lead glazed earthenware production (1986:386-413). The results, shown in Figure 5.19, turned out very dark and somewhat murky. Once he perfected his line of stoneware ceramics, his use of cobalt for decoration under the salt glaze flourished (as seen on the large crock form previously shown). On earthenware



Figure 5.19. A sample of cobalt-decorated salt glazed transition wares.

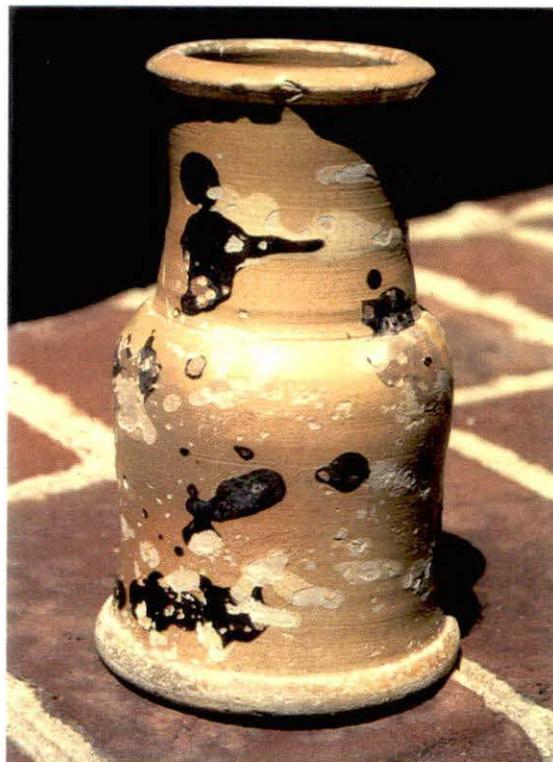


Figure 5.20. Lead glazed earthenware vase with splattered slip.

forms, the basic clay used for slip trail designs was white, most likely a kaolin-based clay. It was to this basic clay that the colorants were added for polychrome decorations. Once coated, this white clay slip turned light-to-dark yellow in color. Glazes were applied to the greenware vessels in a liquid form, and either painted on or trailed through a special cup equipped with a narrow spout (much like a modern cake decorator). Occasionally, Loy and other earthenware potters would apply an overall coating or background of colored clay on the plate or bowl interior, allow it to partially dry, and then add slip-trail designs on top. Potters refer to the overall background colored clay as an engobe. The final product was very dramatic in color contrast, and showcased the great skill of the decorator. Examples of this type of decoration were recorded at the Dennis site (Pugh 1988:15-16), and at the Moravian pottery sites in Old Salem. After decoration was applied, the wares were bisque-fired once, then coated with a liquid lead glaze, and fired again. Proper firing of the kiln was a critical factor for potters who used polychrome glazes, as any alteration such over- or underfiring greatly affected the final colors.

The slip-trail designs found on the Loy pottery included geometric and floral motifs, in complex and simple patterns. Names for these designs were found in a variety of references on slip-trail decorated wares from Germany (Lehneman 1980 and Kaufman 1979), England (Brears 1971, Cooper 1968, and Wondrausch), the northeastern United States (Barber 1970, Cullity 1991, Ketchum 1991, Lasansky 1990, and Watkins 1950), and the Moravian potters of Old Salem, North Carolina (Bivins 1972 and South 1970). Cooper also made a distinction between those slip wares made for commercial purposes versus those made strictly for ornamental or presentation purposes (1968:7). He argues, the slip on commercial wares was more "flush" or pressed flat onto the body, while the ornamental pieces had "raised" slips thus were not intended for everyday. No distinction of this type was made during this analysis because the majority of decorated sherds came from kiln site contexts and their specific intended purpose could only be presumed. For the sake of convenience and consistency I chose pattern names used by Bivins and South,

but with modifications along the way as some patterns appeared to be uniquely Solomon Loy's. The splatter pattern has already been mentioned and described as it appeared on small and large bowl forms, cups and tankards, and a vase (photographed from a private collection and shown in Figure 5.20). The dotted star motif was also found on the interior bases of plates and large bowl forms (as shown in Figure 5.17). This pattern consisted of four opposing rays or lines radiating out from the center, with each ray accented with three or four dots at the end. Other popular designs found on Loy's plates were simple wavy sine lines in single or multiple rows, broad-stroke florettes or grasses, multiple arched lunettes, dotted circles, nested triangles, and fish-scales (also referred to as the pinecone or van-dyke pattern). Figure 5.21 shows a variety of decorated bisque-fired sherds recovered from the site. Figure 5.22 shows a sample of lead-glazed decorated sherds. One particularly stellar example of Solomon Loy's artistic skills was photographed in a local antique shop (Figure 5.23). This single intact specimen illustrates the combined use of Loy's decorative repertoire (lunettes, dotted star, grasses, fish-scale, and multiple colors). Sherds from the kiln site were placed directly over the patterns for comparison. Zug illustrated another common decorative pattern unique to Solomon Loy, that of the nested triangles used as a border on the plate rim (1986:235, plate 2 and shown in Figure 5.24). Sherds of this pattern were found at the site. Elaborate floral motifs (tulips?) were also found on earthenware (in slip) and stoneware (in cobalt) plate bases. This was a common decoration for Moravian plates (Bivins 1972 and South 1970). Cobalt was also applied to stonewares in dots along the rims of saucers and jug tops (Figure 5.25). Solid lines or bands of cobalt were painted around handle terminals of stoneware jugs and large crocks. Still other brush strokes of cobalt were used to accent the potter's name in stamp form or written in script, and in broad-branching "tree-of-life" patterns and simple asterisks (as seen in earlier example Figure 5.4). Several examples of a fleur-de-lis pattern, painted on in iron oxide and salt-glazed over, were recovered on large crock forms, apparently made and stamped by John M. Loy. Another unique



Figure 5.21. A sample of polychrome slip-trail decorated bisque-fired sherds.



Figure 5.22. Sample of lead glazed earthenware plate and bowl forms with slip-trail decorations.



Figure 5.23. Complete plate and decorated sherds with matching motifs.



Figure 5.24. Elaborate slip-trail decorated lead glazed earthenware plate signed by Solomon Loy.



Figure 5.25. Cobalt decorations exhibited on rims, handles and stamps, as well as floral and geometric motifs.

decorative technique used by Solomon Loy and found in only two places was a square-cut floral stamp, approximately two inches in length and width. The first notice of this stamp came from a slab-type salt-glazed stoneware grave marker which stands in Cane Creek Friends Cemetery just west of the Loy pottery site. This same marker was illustrated in Zug's *Turners and Burners* (1986:360). The child's name on the headstone was "ISRAEL C. WOODY" and dated August 14, 1834, stamped on the rounded tympanum section of the marker. Centered beneath the child's death date was the small floral stamp (Figure 5.26). The same stamp appeared four times on the backside and formed a line. Zug recorded another such marker in the same cemetery, which has now disappeared, which belonged to "T BOGGS" and dated August 14, 1861, but it apparently was not stamped with this floral motif. The second notice of this unique stamp was seen on an intact stoneware crock found in a private collection (Figure 5.27). This pot was stamped with S LOY and accented with cobalt. Directly beneath his name, Loy stamped the floral square. This finding also indicated that Solomon Loy created the Woody and Boggs grave markers seen in the Cane Creek Friends Cemetery. No sherds with this motif were found at the kiln site. In summary, Solomon Loy used a wide variety of decorative techniques and designs on his earthenware and stoneware ceramics, many of which have survived today but have previously been attributed to generic Moravian potters. His son John M. Loy also used decorations but to a more limited extent. Both potters marked their names on the wares using a variety of techniques, discussed momentarily.

The use of decoration on Daniel Seagle's pots was less frequent and less elaborate. Not much is known of his earthenware and very few pieces were found at the groundhog kiln site. Two whole lead-glazed earthenware jugs made and stamped by Daniel Seagle have been documented, however. One of these, shown in *Turners and Burners* (Zug 1986:236, plate 3), was a small vessel of one gallon capacity. Morphologically, the jug was very ovoid in shape, with a footed base, rounded rim top, and vertical strap handle which extended from the upper shoulder to the side of the neck. The clear lead glaze



Figure 5.27. Salt glazed stoneware crock with floral stamp and maker's mark.



Figure 5.26. Salt glazed stoneware gravemarker with floral stamp at Cane Creek Friends Cemetery.

created a cinnamon colored pot. Two bands of impressed geometric design encircle the jug, at the base of the neck, and around the upper shoulder, perhaps to guide or accent the handle placement. This design appeared to have been made by a coggled wheel and was rolled onto the greenware jug prior to glazing. The crispness of the dentate pattern indicated that the coggled wheel was made of metal rather than wood. A second whole lead-glazed earthenware jug was documented in a private collection. This jug was also one gallon capacity and similar in overall appearance, except for the color and lack of decorative banding. The lead glaze on this jug was darker due to iron or manganese oxide used as a colorant. Both jugs were stamped with the initials DS on the shoulder opposite the handle. Based on archaeological and historical research, it does not appear that Daniel Seagle ever used slip-trailing as decoration on his lead-glazed earthenwares. Decorative techniques used on his stonewares, as seen on whole and archaeological examples, were incising and melted glass runs. Incised bands, as previously mentioned, were visible on the necks of jug forms (large and small), the shoulders of jar and crock forms, and the necks and shoulders of pitcher forms. Some ceramic analysts and collectors have suggested that the number of incised bands represented the gallon capacity of the piece, but this information was proven incorrect. Incising was achieved by the use of a ribbed template or edging tool, held in place against the pot as it turned on the wheel. These ribs or edging tools were probably fashioned out of a wooden stave. Other Catawba Valley potters were known to use the same incising technique for decoration on their alkaline-glazed stonewares (Bridges 1980). The last decorative technique known to be used by Daniel Seagle was identified as melted glass runs (Figure 5.28). Since crushed glass was known to be used as a fluxing agent in some alkaline glazes and those used by Seagle, a supply must have been kept on hand. Primarily, for decorative purposes chunks or large sherds of glass were placed in particular spots (handles, mouths, or rims) on the glazed, but unfired, raw ware. In the kiln the glass sherds melted and created long streaks down the sides of the pot. Often these streaks were milky white or pale blue in color and



Figure 5.28. Daniel Seagle alkaline glazed stoneware jug with melted glass runs.



Figure 5.29. Signed name in thick cobalt on salt glazed crock.

created a striped look to the pots. Zug pointed out that other potters in the neighborhood (such as the Hartsoes) used this decorative motif, but it was considered a local tradition (1986:78). The dark color of the alkaline glaze restricted the use of slip-trail decoration on stonewares in this region, even though it was recognized as a popular aesthetic in the Edgefield District of South Carolina. One main difference between the stonewares and alkaline glazes produced in each region was color. Those from South Carolina were lighter color in body and glaze and thus, more suitable for underglaze slip-trail designs (Baldwin 1993 and Steen 1994). So in summary, Daniel Seagle and his son Frank were known to use incising and glass runs as decorative techniques.

Both potters and their sons stamped their wares with maker's marks. Solomon Loy signed his name in a variety of ways; he slip-trailed it across the front of an earthenware plate, he signed it in cobalt on stonewares, he stamped it onto the shoulder of jugs, crocks, and pitchers, and he incised it in script onto a few vessels. Variations in his marks revealed at least three different stamps; one S S LOY, one S. LOY, and another S. LOY surrounded by a cartouche of dot impressions. The cartouche stamp was only seen on earthenware pots, while the S. LOY was found on earthenwares and stonewares. The name stamp was also slightly arched. When he signed in script the letters were connected by a flowing line, either painted on or incised (Figure 5.29). Often he included additional relevant information, like what appeared on the large stoneware crock which read "SOLOMON LOY / refiend stoneware / State of North Carolina / Chatham County / family jare / 1855" (Figure 5.4). Truly every archaeologist's and collector's dream piece, with the who, what, when and where of its creation! In another example, on a small crock of earthenware/stoneware composition with residual salt glaze, he wrote in cobalt "SOLOMON LOY / STONEWARE," just in case a buyer mistook it for earthenware (Figure 5.30). Whole pots and sherds from the site indicated that John M. Loy used at least three different stamps on his stonewares. One was JOHN M. LOY in an arch, and the other was J M LOY, also arched. The third was simply J M L in slightly taller letters

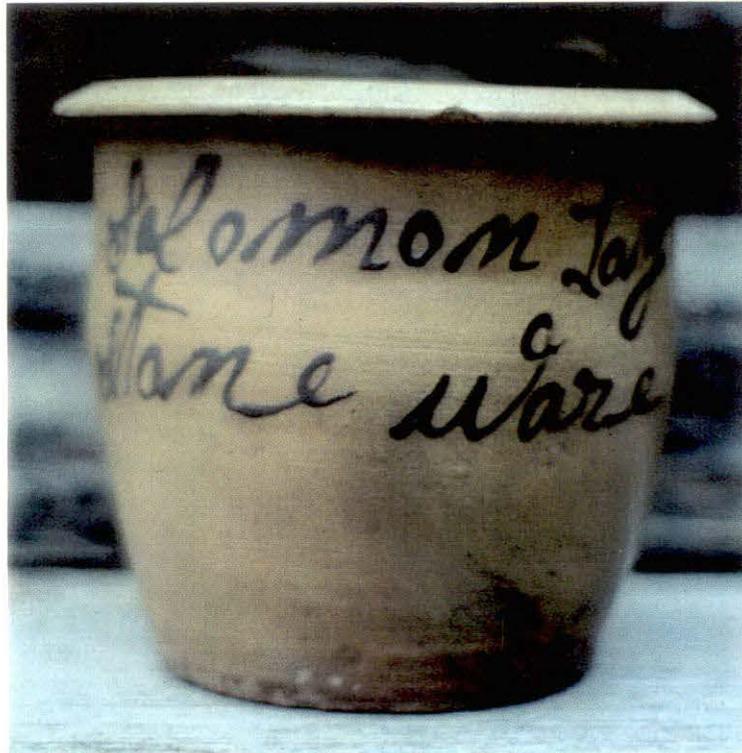


Figure 5.30. Signed name and ware on crock of transition body.



Figure 5.31. Salt glazed crock forms with J M L stamp.

(Figure 5.31). Three salt-glazed stoneware sherds found at the site may indicate the work of Solomon's nephew who trained at the shop; this mark was a simple tall M as in Mebane (Figure 5.32).

Daniel Seagle used only his initials D S applied to the pots with a stamp. A closer study of his initials on archaeological specimens and whole pots from collections revealed some important differences which may serve as chronological indicators. At least four different stamps were used by Daniel and the earliest was indicated on the two intact one gallon lead-glazed earthenware jugs. On this stamp his initials D S were flanked on each side by a small Maltese cross shape or "fylfots" (Zug 1986:21). This mark was seen on two stoneware pieces; one, a four-gallon stoneware jar, but in this example the right hand fylfot was slightly obscured, and two, a one-gallon jug form with a ringed neck. Another similar example was found on a ten-gallon jug form. This second stamp again showed the D S flanked on each side by a decoration, a dot on the left and a star on the right, all set within a rectangular box. A third variation was found on crocks, jars, and jugs in the three to five gallon capacity range. This mark had the initials D S but separated on each side and in the middle by a faint spacer, and all set within the rectangular box. The rectangular "box" may be the impression created by the stamp face which held the letters in place. Finally, the fourth mark was seen predominately on his large crock forms, typically stamped on the horizontal handles or shoulders of the pot. This stamp consisted of the letters D S but arranged as if they were stamped individually. Only one name stamp was used by James Franklin Seagle and consisted of the initials J F S within a rectangular box (mount?). The S initial was slightly tilted and all letters were gothic in style. Frank stamped his crock, jar, and jug forms on the shoulder. A sample of sherds with maker's stamps is shown in Figure 5.33. Both Seagle potters used arabic and roman numeral stamps to indicate capacity on their storage containers. Frank used two small horizontal dashes over placed over a 2 to indicate half-gallon capacity and Daniel marked his with a large dot over a 2. Other potters who worked at this site also marked their stonewares



Figure 5.32. Stoneware sherds with letter M stamp, possibly for Mebane, Solomon Loy's nephew.



Figure 5.33. Variety of DS and JFS stamps on sherds recovered at kiln site.

with simple impressed initials, such as I L for Isaac Lefever, and J G for John Goodman. Daniel Holly, Seagle's early apprentice, marked his stonewares D. HOLLY, though numerous other stylistically similar stonewares marked D H have been attributed to him by collectors.

In review, archaeological work at the 31Am191 recovered 11,039 (or 65.9% of the total assemblage) fragments of pottery which could be analyzed. From the specially created coding format sherds were divided into recognizable vessel forms. These forms were again segregated according to the paste or body composition, such as earthenware, stoneware, or earthenware/stoneware indeterminate. A total of 2,356 sherds were identified as particular forms, such as crock/jar, jugs, pitchers, plates/dishes, bowls (large and small), saucers, cup/mug/tankards, and lids. Rim analysis was used to further divide the vessel sherds into minimum individual vessel counts which totaled 932. Of the sherd counts, earthenware and stonewares ceramics were almost equally represented, 1,168 versus 1,071, respectively. In terms of vessel forms, however, earthenware vessels were twice as frequent as stonewares, 600 versus 313. Transitional paste ceramics were recognized by 117 vessel sherds, and 19 individual forms. At this site, earthenwares were glazed with lead and unglazed, decorated and undecorated. Stonewares from the site were all salt-glazed, decorated and undecorated. No evidence of slip glazing was found on stoneware sherds.

At the Seagle site, 31Ln59, a total of 1,797 sherds (or 62.2% of the entire assemblage) were coded for analysis. Of this total, 195 sherds were identified as vessel fragments based on eight distinguishable forms. Earthenwares were fewest with 18 sherds, while stonewares were prominent with 170 sherds. Rim analysis revealed that 111 individual vessels were included in the assemblage, of which 83% (N=92) were stoneware forms. Based on the few pieces of earthenware, lead was the only glaze used. Stonewares, when glazed, were alkaline. Two varieties of alkaline glaze were present on the stonewares, the crushed glass variety and the crushed iron ore variety. A few

stoneware sherds were unglazed. Limited decorative techniques were exhibited on these sherds, as indicated by incised band and melted glass runs. Seagle and his son marked their wares with initials made by a stamp (Figure 5.33).

Other artifacts recovered during excavations at the sites will follow, including kiln furniture, tobacco pipes, historic materials, and architectural debris.

### 5.1.2 Kiln Furniture

The artifact category of kiln furniture describes the moveable kiln fittings used to stack or place the unfired wares in the kiln prior firing, as well as testers (or draw trials) used to regulate glaze, body, and temperature variables. Pieces were used to keep glazed wares from touching each other and the kiln walls, and to stabilize the stacks of wares (or bungs) to prevent shifting or collapsing. Expedient, hand-made wads or props of irregular shape were fashioned from moist clay, coated with a gritty or sandy mixture, used for one firing and then discarded. Manufactured, or mold-made rectangularly-shaped slabs or shelves were often recycled several times before discarding. These special forms were used to stack wares and as flooring material inside the kiln. Testers or draw trials were often made from already formed wares and were either cut or broken for use. A single large hole was made into one end of the tester to facilitate removal from the kiln during firing with a long rod. Also included in this artifact category are specialized pieces of kiln furniture used in the manufacture and firing of tobacco pipe heads. A few collapsed or broken vessels used as kiln furniture are also discussed here.

Not unexpectedly, no examples of kiln furniture were found during excavations at the Daniel Seagle groundhog kiln. Generally, this style of kiln, with its low vaulted arch, was not built for "stackable" wares. Most of the pottery fired in these kilns was placed directly on the graveled floor, side by side from front to back. Height of each vessel determined its placement under the arched roof, with the tallest in the center, and shorter pieces to the sides. Tablewares, though never manufactured in great quantities, were also placed in

between larger forms to fill up space in this type of single-shot kiln. One noted surprise at this site was the absence of the special saggars designed to fire the molded tobacco pipe heads, several of which were found in situ on the kiln floor. At the Loy site, it was a different story altogether. There, two large kilns were used to fire earthenwares and stonewares in multiple stacks. Kiln furniture played a crucial role in the success of this operation. A wide variety of expedient and specially-formed kiln furniture was found. Unlike vessel forms, the styles of kiln furniture were not regulated by market or consumer demands; they were the sole creation of the potter and used for very specific purposes. Only he could determine what was needed to get the job done and protect his pots. An analysis of kiln furniture thus provides a unique insight into the skill and training of this potter. Because these pieces of fired clay were never intended for sale, fingerprints were never smoothed over or erased. Hundreds of prints were seen on these pieces, uniquely individual and fired into clay for eternity. In an effort to re-create the potters' actions when forming a piece of kiln furniture, I would place my fingers directly on top of his fingerprints and then just hold the object, feeling its weight and absorbing its history. It was a very rewarding exercise.

A total of 868 artifacts were identified as kiln furniture from the Loy site. This formed 5.2 % of the entire assemblage. Kiln furniture was then subdivided into seven categories, somewhat based on function. Table 5.4 provides a summary of kiln furniture by type and frequency. Coils, whole and partial, formed the most common type of kiln furniture recovered and totaled 390 or 45% of the total. Several coils were found in situ on the floor of Kiln A (illustrated in Chapter IV, Figure 4.7), and were associated with stoneware sherds. Coils were made of stoneware clay and varied in diameter and length. Most were coated in grit to prevent sticking to the pots and floor (Figure 5.34). Similar pieces of kiln furniture have been documented at other salt-glaze stoneware kilns in Pennsylvania (Guappone 1977:8). Basically, coils functioned to support and separate large stoneware pieces. The second most frequent type of kiln furniture was the slab or

**TABLE 5.4**  
**SUMMARY OF KILN FURNITURE**  
**BY TYPE AND FREQUENCY**  
**FOR THE LOY SITE**

TYPE OF KILN FURNITURE	FREQUENCY	PERCENT
COIL	390	44.9
POTSHERD PROP	75	8.6
PROP OR WAD	5	0.6
SAGGER	14	1.6
SLAB OR SHELF	262	30.2
TESTER	106	12.2
TRIVET OR SPILE	16	1.8
SUM	868	100%



Figure 5.34. Sample of kiln furniture recovered from Kiln A.



Figure 5.35. Sample of glazed and unglazed kiln furniture shelves.

shelf, represented by 262 fragments (or 30%) of earthenware and stoneware composition. These pieces were simple flat rectangular or square platforms or slabs, and ranged in thickness from one to two inches. Some exhibited intentional glaze, other only residual coatings. A sample of shelves and props is shown in Figure 5.35. This type of kiln furniture was used to stack wares on the floor and, when supported by bricks, formed tall shelves inside the chamber on which to place smaller tableware forms for firing. This common kiln furniture was found on other earthenware pottery sites; at the Dennis site in Randolph County (Pugh 1988), at the Joseph Loy site in Person County, and the kiln site on Ross Stephen's farm (31Am192). It was also commonly found on salt-glaze stoneware sites; at the Weaver site in Knoxville (Carnes 1981:77), and five Buncombe County stoneware pottery sites (Carnes-McNaughton 1995:85).

The third most abundant form of kiln furniture from the Loy site was the tester, which totaled 12 % of the assemblage with 106 fragments. Draw trials were used to test the firing and glazing conditions in the kiln. Rhodes (1957:150) indicated that draw trials were the chief means of testing firing conditions before the use of pyrometric cones. Characteristically, draw trials were elongated pieces of pottery cut or broken from unfired or biscuit ware. Many exhibited finger ridges of turned wares and typical vessel curvature. A hole was cut out at one end and a long iron rod was used to extract it from the kiln during firing. Once removed they were dipped in cool water and then examined paste fusion and/or glaze maturity. As a consequence of the examination, most were snapped in half by the potter and discarded on the spot. A few earthenware trial pieces were found in situ on the floor of Kiln B. These pieces appeared to have been dipped into a lead glaze on one end. None of the pieces contained a cut hole (for extraction) but were solid. For this reason, these were interpreted as glaze testers. Virtually identical stoneware draw trials have been documented at pottery sites across the South; at the Rolader site in Atlanta (Bowen and Carnes 1984), the Weaver site in Knoxville (Carnes 1981), various potteries in Tennessee (Smith and Rogers 1979), and the Rutherford site in Buncombe

County, North Carolina (Carnes-McNaughton 1995:85). Guappone illustrated a few draw trials found on kiln sites in Pennsylvania (1977:8).

Props were formed by forming a fist around a coil of moist clay and then pressing the two ends inward. In general they resemble crude little dumbbells (Carnes 1981:38 and Guappone 1977:8). They were used to separate pots and level stacks of pots. Most of the stoneware clay samples were also coated with kiln wash, a gritty mixture. Only five props were found at the site, but many broken potsherds appeared to have been used as substitutes. A total of 75 potsherd props were present in the assemblage. Included in this category was a small collapsed jug with very thick salt glaze deposit. It was found in situ on the floor of Kiln B. The thick glaze, its context and position indicate it functioned as a prop multiple times (Figure 5.36).

Trivets, represented by 16 fragments or 2% of the total, were made by hand and used to support inverted tobacco pipe heads during kiln firing. South reported finding these specially formed supports associated with pipe manufacturing at the Old Salem potteries (1970). At Old Salem, the trivets or spiles were attached to the inside wall of a protective sagger, a vessel designed to hold dozens of pipe heads during firing. All of the trivets from the Loy site were made of earthenware; a few were lead-glazed, but most were unglazed. Fragments of hand formed bases used to support three or four spiles were found (Figure 5.37). Evidence suggested that these pipe supports were not affixed to the side wall of a sagger but were probably fired beneath an overturned crock for protection.

The final type of kiln furniture from the Loy site was the sagger. Saggars were wheel-turned types of furniture specifically designed to stack certain vessel forms in the kiln. Fourteen pieces of saggars were found, many of which exhibited thick salt glaze deposits and pieces of floor gravel, a result of multiple firings (Figure 5.38). All examples were made with thick vertical walls and cut outs to facilitate handles on jug forms and other handled pots. A few very thick walled fragments of large saggars were recovered. A sagger of this type was illustrated in Guappone (1977:9) from Pennsylvania. It was



Figure 5.36. Examples of kiln "accidents" including one jug recycled as kiln furniture.



Figure 5.37. Fragments of hand-formed bases and supports for firing tobacco pipe heads.



Figure 5.38. Sagger fragments with thick salt deposits from multiple firings.



Figure 5.39. Unglazed anthropomorphic pipe heads and fragments recovered on the floor of Seagle's Kiln.

bottomless with side walls tall enough to protect and hold five or six hollowware forms at one time. The inverted base (or top) of the sagger would then provide a platform for stacking the next piece of ware (or sagger of wares). All of the saggars found appeared to have been associated with salt glaze stonewares.

### 5.1.3 Related Artifacts

This discussion will be devoted to description and analysis of other historic artifacts associated with the two kiln sites. Some of these provided additional chronological data for the sites and represented other domestic activities that occurred at the kilns. Though I have chosen to focus on the pottery activities which took place at these sites, we must keep in mind that the shops were also associated with rural homesteads. Both sites contained household debris of some type, such as industrial ceramics, container glass, architectural items, personal gear, and farm tools. Descriptions and analysis of the tobacco pipes manufactured at each site is discussed herein. For practical reasons, these artifacts were not included in the specialized coding format used for pottery items, but nonetheless were examined as thoroughly as possible.

Two-piece molded tobacco pipe heads were made at each kiln site. This style of pipe, also referred to as a stub-stem variety, is found at pottery sites throughout the South, and on residential sites from rural farmsteads to Native American villages. Tobacco pipe heads of this type were a common sideline production item for most potters and some farmers who fired them in their kitchen hearths. Early forms of this type of pipe were made by the hundreds (if not thousands) by the Moravian potters in Old Salem. Stanley South described them in detail (1967 and 1970) and provided useful chronological attribute for those found at the Gottfried Aust waster dump (1755 to 1771), and those from the Christ and Krause waster dump (1786 to 1802). Many of these early examples were simple elbow-shaped, anthropomorphic in form, with characterized faces and stylized hair. The areas around the face and lower stem were fluted or ribbed, again as

part of the mold. A hollow reed was inserted into the pipe head and functioned as the stem. At the Daniel Seagle kiln, two whole pipe heads were found in situ on the floor. These specimens, as shown in Figure 5.39, were identical in size and shape; both were unglazed high-fired earthenwares. The whole pipes measured two inches in height and length. Bowl diameter was  $13/16$  of an inch and reed diameter was  $3/8$  inch. Upon closer inspection, residual anthropomorphic features were discerned as well as fluting. A stem fragment of the same style of pipe, also unglazed, was found. A fourth pipe stem fragment of a different style was recovered. This fragment represented the stem end of a pipe head. It was unfluted with a series of small nodes around the reed end and was also unglazed. A lead and wooden pipe mold was illustrated in Zug's *Turners and Burners* which, according to Burlon Craig, once belonged to Ambrose Reinhardt (1986:341, Figure 11-16). Based solely on visual comparison, this pipe mold looks identical to the pipes found at the Daniel Seagle site. Ambrose Reinhardt (1831-1914) could have obtained the mold from James Franklin Seagle after their kiln shut down in the late 1890s. The discovery of the pipe heads in the dismantled kiln clearly suggested that they were among the last items fired in this furnace.

Fragments of 13 pipe heads were recovered at the Solomon Loy site. Spatial distribution revealed five came from the excavation units of Kiln A, six were found in the area of Kiln B, and two were surface collected in the plowed garden. A sample of these pipes is shown in Figure 5.40. As discussed earlier, specialized kiln furniture used to support the pipes in the kiln was found at the Loy site. Five pipe fragments were unglazed earthenware, two were lead-glazed, and the other six were salt-glazed stoneware. The unglazed earthenware examples were fluted, and one exhibited a "face" at the outer elbow joint. The fluted variety matched the pipe mold found by Mr. Whitehead in between the logs of the cabin wall.

The remaining historic artifacts found at the Seagle site included three pieces of window pane glass, a modified iron hoe blade, 3 square cut nails, a brass wick holder, and



Figure 5.40. Sample of glazed and unglazed anthropomorphic pipe heads from the Lov Kiln Site.

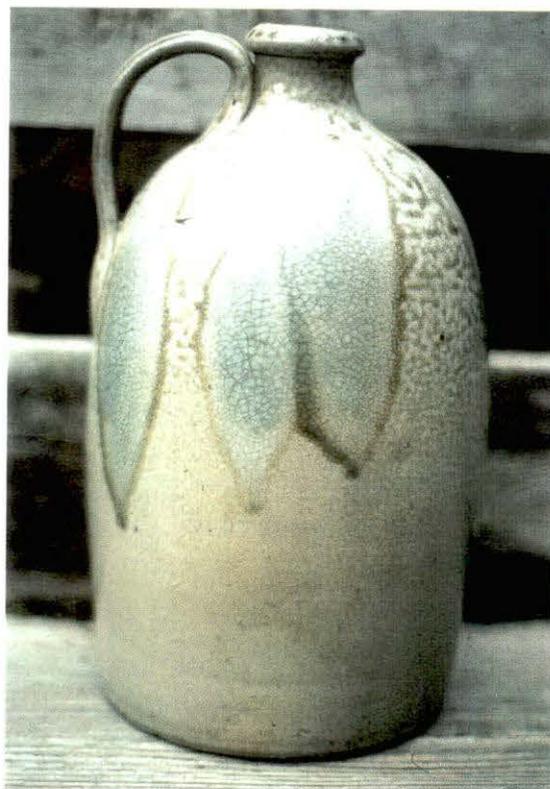


Figure 5.41. Salt glazed stoneware jug with melted glass drips on shoulder.

three prehistoric lithics. The hoe blade measured six and 1/8 inches in width and was broken off at the poll end. Hoes were used as essential farm tools and also in the raking of clay at pottery sites. The window glass was light aqua in color and measured 1.8 to 2.0 mm in thickness. This glass could have come from a broken shop window, or part of a stock pile waiting to be crushed and used in the glaze mixture. The square cut nails were two to three inches in length and may have survived demolition of the shop and kiln. The brass wick holder was in mint condition and a patent date of "JUNE 23, 1863" was readable on the cogged turn wheel. This lamp part was probably used as a light source in the pottery shop. Overall, these artifacts reflect everyday nineteenth century activities and those associated with a rural pottery shop. The abandonment and demolition of the pottery shop and kiln, as well as subsequent landscaping and timbering, probably altered any "normal" midden deposits associated with this site.

The farmstead associated with Solomon Loy pottery shop and kiln has been continuously occupied since the early nineteenth century. For this reason, the quantity of domestic-related historic artifacts found during kiln excavations was considerably greater than the Seagle site. In addition, a significant number (N=308) of prehistoric lithics (including large chunks of clear quartz crystals) were discovered. Among the historic materials were 184 nails, 92 flat and container glass fragments, five tools, ten architectural elements, miscellaneous metal scraps and wire pieces, and 125 dateable industrial ceramics. Diagnostic nails were divided into cut and wire, the former dating after 1790 and the latter after 1830. Sizes ranged from 2d pennyweight (one inch in length) to 60d pennyweight (or six inches in length). Fifty-six cut nails and 78 wire nails were identified. Smaller sizes (2d to 5d) functioned as fasteners for shingles or light timber framing. Sizes 6d to 8d were used to fasten siding or sheathing.

The 92 fragments of glass found at the Loy site, included 41 window pane, 45 container, two lamp chimney, three tumbler, and one wine bottle. Window glass pieces have been used on some historic sites as chronological indicators (Orser, et al. 1987:132).

With this in mind, pane thickness and color was recorded for each fragment. Aqua was the most frequent color, followed by yellow-green, then clear. Thickness measurements were fitted into a regression formula:  $x = 41.46 + 1762.76 = y + N$ , where  $N=53.75$ . From these calculations a manufacture date for the window glass was determined to be 1886.99 to 1891.14. Again, this date only reflects the addition of windows to any (already existing) building. A construction phase as early as 1857.97 was also represented by pane thickness of 1.0 to 1.2 mm. The container glass pieces came from canning jars, milk bottles, and patent medicine bottles.

Other architectural items found included one brass skeleton-type key, a door lock plate, three shingles, two wood screws, and one iron bushing. Four pieces of a cast iron stove were found, along with nine barrel bands, sheet metal scraps, one horseshoe, four clay skeets, one piece of chain, one .22 cal. brass cartridge, wire and staples. Agricultural and construction tools included one tractor wrench, one ax head, one harrow tooth, one rasp, and one froe tip.

A total of 125 historic ceramic sherds were retrieved from the site. These included plain and decorated pearlwares, whitewares, one ironstone, porcelain, and modern flowerpots. Modern pieces, which totaled 16, were segregated from the earlier ceramics in order to determine a mean ceramic date of manufacture. Using South's 1977 formula, the 109 earlier ceramics were divided into type and quantified. The product calculated and divided by 109 which yielded a date of 1833.15. When the 16 modern sherds were factored in a date of 1841.7 was achieved. This finding indicated that purchased tablewares, imported from the European market, were common items in the Solomon Loy household. To sum up, 406 historic artifacts came from archaeological excavations at the Loy pottery site. The nails, window glass, and industrial ceramics provided complementary chronologies for the continued occupation of this site.

## 5.2 Structural Interpretations

Analysis and interpretation of the archaeological features which remained in situ at the sites forms the basis of this discussion. A description of the features was presented in Chapter IV as they were uncovered and recorded during archaeological excavations. The architectural remnants of the kiln foundations form the most critical component in recreating the events and processes of pottery making as a cottage industry in the North Carolina's piedmont region during the nineteenth century. As with most archaeological endeavors, however, the interpretation and mental reconstruction of the above-ground components relied on research and intellectual conjecture. These kilns formed the heart and hearth of the pottery-making activities at each of these sites.

Experts, such as Frederick Olsen (1983) and Daniel Rhodes (1968), differentiate kiln types based on two main criteria: 1. the episode of firing, and 2. the way in which heat travels through the chamber. In a kiln, the firing process may be either periodic (or single episode) or continuous. The pottery kilns discussed in this study were of the former type, where single episodes of loading and firing, then cooling and unloading took place. An example of a continuous kiln would be the tunnel kiln, where brick bats are stacked on rail cars and moved through the heated kiln at a slow but steady rate until "baked." Heat transfer through the ware chamber segregates most episodic kilns into three categories: crossdraft, updraft, and downdraft.

In a crossdraft, the simplest type, heat travels from the firebox across the chamber to an exit, usually a chimney end. The rectangular groundhog kiln is an example of a crossdraft kiln (Figure 4.16). The German "Cassel" kiln and the English "Newcastle" kiln are European examples of crossdraft furnaces (Figure 4.23). Typically these kilns are known to have somewhat uneven heat distribution, but knowledgeable potters often used this trait to their advantage by placing low-fired wares in the "cool" spots near the chimney end, and high-fired wares closer to the heat at the firebox end. In an updraft kiln the heat enters through perimeter fireboxes located at the kiln base and is percolated

through the chamber, then up and out through the top portal(s). Most updraft kilns were circular, such as the bottle kiln, hovel kiln, or beehive style of kiln (Figure 4.13).

Generally, circular kilns provide more uniform heat distribution overall as opposed to square or rectangular ones which, by their design, have "cool" spots in the corners. If the updraft kiln is tall, a longer firing time is required to insure even heat distribution. Tall bottle kilns and hovel kilns, used for earthenware production, often had two chambers; a lower glaze or "glost" chamber and an upper chamber for unglazed or bisque firing. Updraft bottle style kilns were used in England as early as the 1700s, whereas circular kilns by design appear to date much earlier to Gallo-Roman culture (Greene 1992:51, and Swan 1984) and the subsequent Middle Ages (Coleman-Smith and Pearson 1988:398-401). The third type of episodic kiln is the downdraft. In a downdraft furnace the heat travels across the chamber floor from perimeter fireboxes at the base, up through the chamber, and is then drawn down and out of the chamber through a transept flue to a detached exit or chimney (Figure 4.3). Downdraft kilns are usually associated with high-fired wares because the design allows much higher internal temperatures to be reached. Because the heated air is more evenly circulated through the kiln chamber this type of kiln is more energy efficient and requires less fuel. Downdraft kilns, the most sophisticated architecturally, are believed to be of German origin.

One regional study of potters and their kilns provided some interesting comparative data. Archaeologist David Newlands examined nineteenth century pottery manufacturing in Ontario and came up with a chronological distribution of kiln types for that area (1974-1979). Of the 12 sites he investigated five types of kilns were identified. The earliest kiln type was the rectangular shaped updraft kiln which dated 1820s to 1830s, represented by one site. The next kiln type which appeared on the pottery landscape was the circular updraft, or bottle-shaped kiln. This type of kiln was found at five pottery sites and dated 1830s up until 1915. The third type of kiln found was a rectangular crossdraft, equivalent in style to the southern groundhog kiln, which dates from the early 1860s up to the 1900s.

A single kiln represented this type in the Ontario study. Finally, by the mid-1860s the downdraft kiln emerged, in both circular and rectangular shapes. It continued in use until the early 1900s, just as the groundhog kiln has persevered in the Southern pottery tradition. In Newlands' study, four sites had this type of kiln. The last kiln type identified in his study was a hybrid he described as a "multiple-chambered, downdraft and updraft combination," found at one site which dated 1898 to 1940s and was used to produce industrial tablewares. No other regional archaeological study which specifically focused on kiln styles has been attempted, though the need for such comparative data is obviously essential. Based on Newlands' study and data gathered from regional studies dealing with ceramic traditions (Baldwin 1993, Burrison 1983, Greer 1981, Smith and Rogers 1979, Steen 1994, Sweezy 1984 and Zug 1986), a general chronology of kilns emerged. Round and rectangular simple updraft kilns appeared first, followed by rectangular crossdraft kilns such as the southern groundhog kiln, and then, finally, the more complex design of the round or rectangular downdraft kiln was employed. A few examples of the rectangular crossdraft groundhog kilns still exist in North Carolina, most in the central piedmont pottery communities of Moore and Randolph counties, and six in the Catawba Valley region. In the mountains, round kilns were used at the Brown Pottery and Pisgah Forest Pottery shops near Arden. But early examples of updraft kilns used for the production of lead-glazed earthenwares are rare. Other than the Mount Shepherd kiln remains, no other example of this type of kiln had been uncovered until the Solomon Loy site was excavated. In time, other eighteenth and nineteenth century pottery sites in the state will undoubtedly yield the remnants of circular updraft kilns. Much remains to be determined about the evolution of this kiln type and how it was used in the South. Moreover, the introduction of the groundhog kiln into North Carolina also remains somewhat nebulous, and more pottery sites need to be excavated in order to determine its evolutionary sequence in tandem with downdraft kiln types. Be that as it may, this study yielded important architectural data regarding all three common kiln types; 1. the circular

updraft type represented by Kiln B at the Loy site, 2. the circular downdraft type represented by Kiln A at the Loy site, and 3. the rectangular crossdraft groundhog kiln found at the Daniel Seagle site.

#### 5.2.1 Kiln Remnants

Kiln A at the Solomon Loy pottery site had a stone foundation which measured 17 feet in diameter on the exterior, 12 feet in diameter on the interior, with wall thickness of 2.5 feet (Figure 4.8). An interior floor space of 227 square feet was calculated, but interior height could not be determined. Broken fragments of stone and a "gap" in the circular foundation in the southeast quadrant was identified as a possible doorway. The buried remains of a brick-lined transept flue were found beneath the kiln floor and extending out beyond the southeast perimeter of the stone foundation. Dimensions of the underground flue were determined from an examination of the probe holes in the top. Height was 3.2 feet, width was 2.8 feet, and length was over 13 feet. No clear base of the detached exit chimney was found, but archaeological evidence suggested that the brick-lined flue and chimney may have been dismantled and the brick bats recycled elsewhere on the site. Three small brick "vents" were exposed on the interior floor of the round foundation. Their purpose was most likely related to increased circulation of hot air beneath a "false" floor created by stackable kiln furniture. An existing smokehouse structure prevented complete excavation of this feature, and therefore the northwest quadrant of the circle remains unexplored. A total of eight complete and five partial units were excavated in stratigraphic levels to reveal the architectural feature. Unfortunately, no intact firebox was found. Two hypotheses were formulated for this absence. One was that this kiln may have been built with a single firebox, specifically located opposite the doorway, which would have placed it underneath the smokehouse. If that's the case, it may still be there, buried and protected. The second theory related to the absence of a firebox may be due to site destruction. Unlike the slightly subterranean fireboxes located

around the perimeter of Kiln B, the fireports for Kiln A may have positioned higher up on the foundation wall and thus, destroyed when the feature was dismantled and the yard landscaped for new outbuildings.

In situ pieces of salt-glazed kiln furniture found on the floor verified that stonewares comprised the final load of vessels fired in Kiln A. Spatial distribution maps for artifacts recovered from Kiln A units revealed a total of 249 stoneware vessel fragments, 126 earthenware/stoneware vessel fragments, and 706 earthenware vessel sherds. Seven tobacco pipe fragments came from Kiln A units. A total of 125 pieces of kiln furniture was found during excavation of Kiln A, along with 1,244 architectural/ by-products fragments. Other historic artifacts from this area of the site included 59 European ceramic sherds (tablewares), some window glass, cut (N=52) and wire (N=62) nails. The occurrence of window glass and nails was not surprising given the immediate location of a wooden frame structure near, and on top of, the feature. The overall scarcity of bricks recovered from this kiln suggested that the primary construction material must have been stone. It is likely that the vault or dome of the kiln, if it was in fact a beehive (or arched crown) style of furnace, could have been constructed of brick, as was the subsurface exit flue. During firing and cooling down of the kiln, the brick dome would have provided enough expansion and contraction to prevent the furnace from cracking or collapsing. Fieldstone, though not extremely flexible, must have provided needed structural strength. Newlands encountered a similar kiln at the Egmondville Pottery in Ontario. It was constructed of large field stones at the base with one or two courses of brick used as a liner (1979:3). The Egmondville Pottery kiln dated from 1852 to early 1900s and was fired with wood. Beehive kilns of this type were often equipped with massive iron bands which encircled the structure and provided much needed stabilization during heating and cooling episodes. No bands, nor remnants of such, were found at the Loy site, but again, these items may also have been recycled during the continuous occupation of this farmstead.

Kiln B, located approximately 30 feet south of Kiln A, had identical foundation dimensions; 17 feet in exterior diameter, an interior diameter of 12 feet, and stone walls 2.5 feet thick (Figure 4.12). The interior area or floor space was calculated to be 227 square feet. The main difference between Kiln B and Kiln A was the four double-chambered fireboxes located equidistant around the perimeter of the circular stone foundation. Two of the fireboxes were completely excavated (the North and East fireboxes), while the South and West fireboxes remain intact, protected and preserved. Dimensions for these massive fireports measured four feet in width (both chambers) and six feet in length. The backwalls of the fireboxes, which abutted the stone foundation, were curved. The side walls and central "hob" wall were parallel, and then constricted slightly at the loading end. The outer sides of the firebox walls were buttressed with a whitish-gray clay which provided additional support. Stones were placed against the sides of the clay buttressing, again for support of the firebox walls. The North Firebox was somewhat more complete than the East Firebox and consequently contained deeper stratigraphic deposits of ash, charcoal, and clay. The North Firebox was 1.3 feet deep with five courses of brick wall intact. Clay mortar was used to fastened the brick bats in place and daub up the space between the back wall and the stone foundation. The chambers were each approximately two feet in width and the central hob wall was the length of one brick in width (or .7 foot). Large fieldstones and brick were used to narrow the firebox end which would have enhanced the draw or draft during firing. The interior bricks of the firebox were coated with a glaze residue, vitreous in appearance. A few pieces of unglazed earthenware tobacco pipe supports or spiles were found in the ash layers of the North Firebox. Soil and charcoal samples were recovered, but no analysis has yet been done to determine the type of wood used for fuel.

More of the East Firebox had been destroyed in landscaping activities and only the bottom two courses of brick remained intact. Architecturally, it was almost identical to the North Firebox except that mortar found on top of the southern wall indicated that the

fireports were partially covered by another course of brick which also abutted the stone foundation. The width of the chambers was slightly larger at 2.3 feet. Both sides of the firebox tapered to a width of 1.8 feet wide, created by an inset course of brick. Clay buttresses were discovered on the outer walls of the East Firebox. Figure 4.11 in section 4.1 of this study revealed the stratigraphic layers of ash, charcoal, and clay removed from this feature. In addition, several pieces of kiln furniture (shelf or slab fragments and part of a sagger), lead-glazed earthenware vessel fragments, and several large globs of molten glaze were found in the ash layers.

The interior floor of Kiln B contained substantially more rubble than Kiln A. Mixed in with the large stones, glazed and unglazed, were large pieces of kiln furniture, such as slabs or shelves, mostly glazed. Rubble was mapped in place, then cleared away to reveal a baked clay floor. Several posthole tests were dug into the floor which proved to be solid baked clay. The interior surface of the stone foundation was glazed. Glaze globs and a few glazed brick bats were also recovered from the interior kiln rubble. Two (lead) glaze testers were found wedged between stones of the foundation interior. These testify to lead-glazed earthenwares as the last load of wares fired in Kiln B. Located between the East and South fireboxes, two large stones were positioned in the foundation perpendicular to all others. I have interpreted this to be the entrance or doorway in to the kiln. Again, it was almost identical in position and orientation to the suspected doorway of Kiln A, generally on the downhill side, but towards the logical cabin (or shop?). The width of this doorway was roughly two feet.

A total of 20 units were excavated to expose the remains of Kiln B. The South Firebox was only partially exposed, and West Firebox was probed and measured but not uncovered. Spatial distribution maps for artifacts found during the excavation of Kiln B revealed a dense concentration of debris. Almost equal proportions of stoneware and earthenware sherds were retrieved, 4,277 and 4,065, respectively. The transition body type of earthenware/stoneware was represented by 523 sherds. The greatest density of

vessel sherds came from units in the W40 and N25 rows, which appeared to have been the waster pile. Fewer artifacts were found on the south or downhill side of this kiln. A total of 650 pieces of kiln furniture were found in these units, with the densest concentrations found in units W30N15 and W30N10, within the foundation perimeter. An abundance (N=2,840) of architectural/by-product artifacts were retrieved from these 20 units, with concentrations in units W20N5, W30N25, and W40N30; units situated outside the perimeter of the foundation. Other historic artifacts were fewer in number than those found in Kiln A units. Historic European ceramics totaled 40 and were found outside the kiln perimeter within upper strata contexts. The mean ceramic date (of manufacture) for all historic ceramics from the site was calculated to be between 1833.15 and 1841.7 (the later date included obvious twentieth-century fragments). Fewer iron nails were found as well; wire types totaled 18 and cut nails totaled 14, combined equaled 32. Six fragments of tobacco smoking pipes were found in and around Kiln B, in addition to several pieces of pipe-related kiln furniture.

The structural interpretation of Kiln B, with its four double-chambered fireboxes around the foundation perimeter, was that of a circular updraft furnace. This type of kiln was typically associated with the production of glazed and unglazed earthenwares. The appearance of the above-ground portion of Kiln B remains conjecture, but several possibilities were considered. As mentioned in Chapter IV, the updraft bottle kiln was popular in England and other parts of Europe by the early 1700s. It became the predominant kiln type in the industrial pottery regions of central England, such as in Staffordshire. These kilns were very tall with central circular chimneys located at the top which gave them a bottle-shaped appearance. Bottle kilns were often two-storied or chambered; the lower chamber was used for firing glazed wares, and the upper chamber was reserved for unglazed or bisque firing. Structural problems were common with bottle kilns because of their height and lack of temperature control within the firing chambers. Another modified type of bottle kiln found in Europe was the hovel kiln. In this design a

hat-like structure was constructed over the circular firing chamber which reduced the upper story weight problems associated with bottle kilns. Hovel kilns were popular in the nineteenth century industrial pottery centers of England. Kiln expert Daniel Rhodes postulated that a common "rule of thumb" for the height of a kiln was directly proportional to the length of the flue or chimney (1968:117). Basically, he stated that each foot of horizontal flue must be compensated for by two feet of additional chimney (or vertical draft). For Kiln B the horizontal "flue" measurement would equal its diameter, or 17 feet. Therefore, according to Rhodes' theory, the height of the updraft chimney would have been 34 feet . . . an imposing structure on the nineteenth century rural landscape to be sure. But more brick, not fieldstone, would have been required to construct a bottle type kiln.

Another possibility for the original appearance of Kiln B was found in Newlands' study of Ontario kilns, and an example found near Quakertown, Pennsylvania. Newlands documented five circular updraft kilns which ranged in date from 1857 to the early 1900s (1974-1979). Of the five kilns recorded by him, the four earliest ones were used for the production of lead-glazed redwares (a term synonymous with earthenware), and the later one was used for stoneware. He described the kilns as modified bottle type structures with stone foundations with brick or stone bases and a brick superstructure. They ranged in height from 16 to 40 feet; the tallest ones were two-storied or double-chambered. Wood was used to fuel the earthenware kilns while coal was used in the stoneware kiln (1979: Table 1). Newlands also commented on the fact that temperature and heat distribution were problems for the tall kilns and the wares closest to the fire would end up baked sooner than those stacked to the crown. He noted "workshops with updraft kilns had a great amount of wastage" but as long as wood was plentiful and obtainable at low cost, fueling these behemoths was of no concern (1979:2).

Another circular updraft kiln built almost entirely of stone was described by Elizabeth Powell in her booklet, *Pennsylvania Pottery: Tools and Processes* (1972). Powell's

description and illustrations of the Jessiah Diehl kiln, located in Richland Township near Quakertown, Pennsylvania, showed a domed vault (or beehive) type of stone kiln. She stated that it was built of fieldstone and lined with brick. A door was located at ground level for access into the chamber and a small opening was positioned over the door for access to the upper portion. Evidence of two large reinforcement bands made of interlocked strips of hand-forged iron was visible. These bands encircled the kiln and "rested on pins driven into the chinks between the stones" (1972:16). Small ports were observed in the upper portion which were used to extract draw trials from the burning kiln. Iron rods supported the doorway lintel. Unfortunately no dimensions were given for the height and diameter of the furnace, so I guesstimated from the photographs that it was approximately 12 to 15 feet in diameter and 15 to 20 feet in height. A hole in the center of the dome functioned as the exhaust flue. Powell indicated that wood was the main fuel source for this earthenware kiln. The construction techniques used by this German potter may have been common in the Bucks County region of Pennsylvania as well as other parts of the state. The late eighteenth-century potter ancestors of Solomon Loy may have worked at other Pennsylvania kilns of similar construction. More information regarding the temporal and regional kiln variations in Pennsylvania is needed for further comparative research, but Jessiah Diehl's relict kiln could prove to be a prototype for Solomon Loy's earthenware furnace and perhaps others not yet discovered in North Carolina.

At 31Ln59 excavations revealed the rectangular brick and stone foundation of Daniel Seagle's groundhog kiln. A total of 20 five-foot square units was excavated to expose the ruins. Chapter IV presented a discussion of the excavation procedures and sequence of recovery; here I wish to examine the architectural details of the ruin and offer comparative examples from other North Carolina sites. The groundhog kiln, as previously discussed, is a crossdraft type of furnace with a firebox at one end and a chimney or exhaust at the other end. The Seagle kiln, and others of its type, was positioned on a gradual slope with the chimney end located uphill which increased the draft or flow of heated air through the

chamber. The doorway into the ware chamber was located in the center of the chimney on the uphill side. This trait, along with several others, varied from region to region.

Groundhog kilns in the central piedmont area of Moore, Randolph, Chatham, and Alamance counties had entries positioned at the firebox end or side of the rectangular kilns. The Seagle kiln measured 23 feet in overall length, 21 feet on the interior length, and ten feet in width (Figure 4.19). Wall thickness, composed of brick, measured one foot. Only the bottom two courses of brick which formed the side walls of the kiln remained intact. Demolition of the kiln and subsequent grading for agricultural use had almost erased the kiln foundation. The doorway measured slightly less than two feet in width (1.75 feet). The chimney end, constructed of fieldstones, measured approximately two feet in length by ten feet in width. The interior spatial area was calculated at 210 feet. An estimated vault height of 30 inches would provide 525 cubic feet of chamber space. The interior floor surface was coated with a layer of crushed quartz, possibly extracted from the nearby streambed. As stated earlier, the dimensions for the archaeological kiln were almost identical to a nearby extant kiln built by Harvey Reinhardt in 1936, and used today by Burlon Craig. This kiln measured 24.9 feet in overall length, 20 feet in interior length, 11.5 feet in exterior width, and ten feet in interior width. The chimney on this kiln was built of brick rather than fieldstone but the doorway width was two feet. During a 1989 survey of pottery sites in Buncombe County, the rectangular remains of a groundhog kiln were discovered at the Rutherford Pottery site (31Bn389) (Carnes-McNaughton 1995:34-35). This kiln was constructed entirely of brick and measured 22 feet in overall length, 15 feet exterior width, 12 feet interior width, with walls 1.5 feet thick. The doorway appeared to be located at the firebox end. Like Seagle's kiln, Rutherford built his furnace on a slope. During the Alamance County archaeological survey in 1986, two rectangular kilns were mapped and measured (Carnes 1986). The Albert Loy kiln had a side-loading access at the firebox end. The chimney was made of stone, but the side walls and firebox were a mixture of stone and brick. It measured 19 feet in exterior length, 16

feet interior length, five feet in interior width, with a 12-foot long access ramp. The Boggs kiln (31Am199) located east of the Loy site, was also a side-loading style of groundhog kiln. The chimney and side walls were made of fieldstone and lined with brick. It measured 24 feet in overall length and was approximately ten feet in width.

Nancy Sweezy provided useful comparative information regarding the type of groundhog kiln found in the Seagrove pottery region in Moore County (1984:60-64). These groundhog kilns were typically built more into the ground with only the arch, kiln face, and upper chimney exposed. They tended to be somewhat smaller in overall size compared to the ones found in western North Carolina; ranging in width from six to eight feet and ten to 12 feet in length. The doorway was most often located at the firebox end. Brick was the most common construction fabric, but stones were used to buttress the kiln face and upper side walls. The floor of the firebox was built 18 to 24 inches below ground surface. The chimneys were generally larger and taller on the Seagrove kilns, which may have been needed for greater draft to compensate for a bag wall built to protect the wares from the flames. In the Catawba Valley, groundhog kilns were built with deeper fireboxes which reduced the direct contact of flame-to-pot. Vault height ranged from 30 to 36 inches, but was flatter in arch because the side walls were taller. Overall the ware chamber of the eastern piedmont groundhog kilns was taller. Because of this and the use of salt to glaze the stonewares, pots were sometimes stacked in these kilns. With alkaline-glazed pots, which were coated before being loaded in to the kiln, a more open kiln was needed. Zug attributed the regional variations of groundhog kilns to the different requirements of the glazing techniques and to Old World influences (1986:223). He correlated the design and use of the eastern piedmont groundhog kiln to the English style Newcastle kiln, and the Catawba Valley style of groundhog kiln to the German Cassel kiln (Figure 4.23 from Rhodes 1968:44-45). And, he noted, the ethnic origin of these New World potters also reflected their choices of kiln design. The English immigrants who

settled in the eastern piedmont chose to construct a groundhog kiln similar to the "one back home," as did the German immigrant potters of the Catawba Valley.

Spatial distribution maps for the artifacts recovered from the Seagle kiln site revealed a concentration of artifacts from the uphill side of the kiln where a waster pile was thought to have been located. The majority of vessel sherds found at the site came from excavated context, although surface collected artifacts from the surrounding graded area augmented the total assemblage. Vessels fragments from the excavated units totaled 1,775, and architectural/by-products (mostly brick bats) totaled 1,013 pieces. Most of the vessel fragments (83%) were alkaline-glazed stonewares and the remainder were unglazed stonewares or lead-glazed earthenwares. Two whole unglazed earthenware tobacco pipe heads were found in situ on the kiln floor, and another fragment of a different style came from excavated soil. Not unexpectedly, no kiln furniture was found with this kiln. Other historic artifacts described in Chapter IV, such as ceramics, window glass, and iron nails were retrieved from the surface and kiln context. Most came from the area north of the kiln where a workshop/house may have been located. Building debris recovered at the site is discussed below.

### 5.2.2 Building Debris

The following discussion will examine the kiln-related materials, debris, and architectural elements recovered from excavations at each site and what this evidence reflects about the life and death of these furnaces. These items include samples of brick, clay, and mortar from various proveniences, as well as glaze globs, crushed quartz, and other building pieces. All the artifacts in this category represented 34.6% of all items cataloged and analyzed from both sites. Table 5.5 provides a summary of the architectural debris and kiln residue by type and frequency for each site. At the Loy site the total debris was further divided by kiln context; from Kiln A came 1,244 pieces, from Kiln B came 2,840 items, and 159 came from posthole tests or surface.

**TABLE 5.5**  
**SUMMARY OF ARCHITECTURAL DEBRIS AND KILN RESIDUE**  
**FOR THE SEAGLE AND LOY SITES**

**SEAGLE SITE**

TYPE	COUNT	PERCENTAGE
Fire clay fragments	24	2
Glazed brick	488	48
Glazed mortar	262	26
Glazed rock	12	2
Gravel floor	9	1
Indeterminate	15	2
Unglazed brick	59	6
Unglazed mortar	18	3
Waste glaze globs	126	12
SUM	1,013	100 %

**LOY SITE**

TYPE	COUNT	PERCENTAGE
Clay sample	92	2
Fired clay fragment	368	9
Glazed brick	832	20
Glazed mortar	321	8
Glazed rock	92	2
Gravel floor	27	1
Indeterminate	11	1
Unglazed brick	51	1
Unglazed mortar	1636	39
Waste glaze glob	813	19
SUM	4,243	100%

All bricks, glazed and unglazed, were sorted by size, e.g., whole, nearly whole, fragments (any with angular faces), and rubble (no finished surface present). Glazed bricks constituted the large sub category of architectural debris from the Seagle site with 48% of the total. At the Loy site glazed brick totaled 20%. All bricks appear to have been made by hand; no evidence of machine or extruder production was apparent. At the Seagle site, which was excavated during winter months, the thermally-altered brick quickly began to crumble from freezing and thawing episodes. Still they comprised the most frequent architectural item. Unique to the groundhog kiln, a few wedge-shaped bricks were recovered from the kiln interior (Figure 4.20). These specially-formed bricks formed the spine of the arched vault, similar to the keystone brick of window and doorway openings on buildings. The header end of each wedge shaped brick was glazed from exposure to the kiln interior.

Mortar samples were recovered in glazed and unglazed condition from both sites. The mortar pieces from the Loy site comprised the largest sub category with 1,636 unglazed and 321 glazed pieces for a total of 1,957. The same was true at the Seagle site where mortar pieces totaled 280; 262 glazed and 18 unglazed. Mortar was required for brick and stone construction and for daubing any undesired fissures or gaps in the structures. A close examination of the mortar pieces from the Seagle site revealed a high sand content in the mixture. Mortar from the Loy site was more homogeneous in composition and texture. Samples of the floor materials were retrieved from each kiln. The floor of the Seagle groundhog kiln was coated with a layer of crushed quartz which prevented glazed wares from sticking to the bottom. Large pieces of white quartz pebbles and gravel were also found in the floor of Kiln A, the downdraft kiln, at the Loy site. A few of these white chunks were fused to other pieces of kiln furniture.

Large molten globs of melted debris and glaze were found embedded in the fireboxes of Kiln B which strongly suggested that the vault of this structure may have collapsed. Over 800 pieces of glaze waste were found at the Loy site, and 126 pieces of waster glaze

came from the Seagle kiln. Evidence of kiln misfirings from the Loy site was documented by the numerous pieces of overheated, underheated, fused, and warped fragments of pottery and kiln furniture. Figure 5.36 offers a sample of fused, collapsed, and underfired pieces from the Loy site. At the Seagle site, the problems appeared to have been with their clay mixture. A high portion of the alkaline-glazed stoneware sherds contained large pockets or bubbles created from escaping gases present in the clay, a condition called "bloating" by most potters (Dodd 1967:28, and Greer 1981:227).

Evidence of flyash on the pottery was present at both sites. Flyash occurred when a sudden rush of air or draft fanned ashes from the firebox into the chamber and onto the wares. At the Loy site examples of underfired salt-glazed stonewares decorated with cobalt resulted in a dark muted blue or gray. Brick drips were common on the salt-glazed stonewares from Kiln A. This trait appeared at the Loy and Boggs kilns, where potters heavily salted their wares. The thick salt deposits found at the Boggs kiln, and seen at the Loy kiln ruins, indicated that their kiln vaults were melting from the inside due to the profuse and corrosive salt vapors. During the hottest point in the firing, it literally rained drops of glass onto the pots (Figure 5.41). The destructive chloride vapors would also have quickly deteriorated the vault and required some rebuilding on a regular basis. Of the three glaze types examined in this study (lead, alkaline, and salt), salt glazing was by far the most destructive to the kiln architecture and furniture, while lead glazing was ultimately more destructive to the potter and the consumer.

**CHAPTER VI**  
**TRANSITIONS TRANSLATED,**  
**CONTINUITY CONSIDERED**

This remaining chapter provides the research summary and concluding concepts of this study on nineteenth century pottery production in North Carolina, with a focus on kiln excavations at the Solomon Loy and Daniel Seagle sites. The discussion centers on the **technological transitions** experienced by the potters in their craft and expressed in their wares and kilns, as well as the **continuity of their craft** witnessed through subsequent generations of potters. The purpose of this chapter is to reflect on the findings by carefully and thoughtfully examining what was found, in addition to what was found out.

6.1 Summary

The research design for this interdisciplinary study of nineteenth century pottery production in North Carolina incorporated multi-evidential materials gathered from anthropology, archaeology, history, geography, genealogy, folklore, and the study of economic resources. Anthropologically, the effects of culture change and adaptation were examined as the ancestors of the Loy and Seagle families migrated into the Carolina piedmont from Pennsylvania and their homeland of Central Europe. How the potters and their families adapted to the new surroundings, their frontier communities and physical environments were discussed through the mechanisms employed by cultural geographers. Social chronicles, architectural histories, demographic censuses, and political reports were studied for relevant information to re-create the cultural milieu of the nineteenth century farmer-potter. Economically, pottery making in the nineteenth century was examined as a

form of cottage industry, where craft production most often occurred on a seasonal basis, the market exchange was more direct between creator and consumer, and the method of exchange was often goods bartered for other goods or services. Genealogically, the potters and their families formed clan dynasties centered around the clay industry where intermarriage to other clay clans was common; these clans served to create a sense of community solidarity, secured a labor force, provided access to natural resources, and protection of craft secrets. Elements of the pottery industry which started in the mid-eighteenth century persist today, two and a-half centuries later. This valuable research gathered through oral testimonies and families histories and recorded by folklorists provided a rich social fabric with which to understand the archaeological record. Archaeologically, two pottery sites were scientifically excavated and yielded the architectural remnants of three remarkable kilns, almost 20,000 artifacts (e.g., earthenware and stoneware sherds, kiln furniture, and associated debris), and other geomorphological features related to the specialized activities which took place on these sites. In addition, efforts were made to compare the pottery sites to others within the region where they were located in order to understand more of the regional dynamics particular to each.

The Solomon Loy pottery site (31Am191) was located in southern Alamance County, which was until 1897 a portion of Chatham County. The site is near the community of Snow Camp, an area settled by English Quakers in the mid-eighteenth century. Solomon was born in 1805 and died during the mid-1860s, but his death date remains unconfirmed and no will was recorded. Solomon and three of his brothers were known to be potters, and his older brother William was undoubtedly involved in the entrepreneurship of one shop. Solomon was the second son of Henry Loy and Sophia Albright, with an ancestry that traces its heritage back to the Palatine region of Europe. There was a strong indication that Henry was a potter as well and may have taught his sons the craft. The direct connections between the family and its early homeplace in Berks County, Pennsylvania, have not been fully explored but remain fodder for future research. Initially,

I set out to prove that Solomon Loy and his ancestors were of English Quaker origin, and therefore, found a welcomed hearth in the community of Snow Camp and of Friends in the area. This was not the case, however, as I dug deeper into the genealogical strata to find common patterns of immigration from Germany and early settlement in Pennsylvania between the Loy and Seagle families. It does appear likely that the Loys may have been non-conformist German Quakers who were readily accepted into the frontier settlement of northern Chatham County. The Loys' intermarriage with the Holt and Albright families, prominent landowners in the new county, also provided social stability and solidarity in their decisions to settle in the region. In summary, evolutionary information regarding three generations of Loy potters was incorporated into this study of pottery production in nineteenth-century North Carolina.

The early pottery shop of Joseph Loy, Solomon's brother, also was located in Person County and archaeologically tested during this study. The ruins of another kiln thought to be John Loy's, Solomon's other brother, was found in Alamance County. Other kiln sites in the surrounding community, such as Albert Loy's (Solomon's grandson), William H. Loy's (Solomon's grandson), Mabe Loy's (Solomon's nephew), John M. Loy's second kiln (Solomon's son), and an earlier site believed to be Solomon's first kiln (on Stephen's land) were recorded and examined for comparative data. These sites, their potters, and the wares produced by them formed valuable comparative data for this study.

The Solomon Loy pottery site is located on a privately-owned farmstead that has been continuously occupied since the early nineteenth century. An extant log structure, believed to date to the mid-nineteenth century and a nearby log barn of the same vintage bear witness to the longevity of occupation at the site. The log structure may have functioned as the potters' shop or home at one time. Excavations at 31Am191 uncovered two large circular kiln foundations made of stone and 16,731 artifacts of which 65.9% were pottery sherds. Both kilns measured 17 feet in diameter with wall thicknesses of 2.5 feet for interior diameter of 12 feet. The first kiln, designated Kiln A, was excavated

adjacent to an existing smokehouse/shop. Only three-fourths of the kiln foundation was exposed, but enough to determine it functioned as a downdraft type of furnace, which had a subsurface transept flue. Archaeological evidence verified that salt-glazed stonewares were the last type of ceramics fired in the kiln. The second kiln, located 30 feet to the south, was designated Kiln B, and was equipped with four double-chambered fireboxes located equidistant around the perimeter of the foundation. Only two of the four fireboxes were completely exposed and the fill excavated; the other two remain buried and protected. These fireboxes indicate that Kiln B functioned as an updraft furnace and was used to burn lead-glazed and bisque earthenwares. Archaeological evidence also suggested that the vault of Kiln B may have collapsed which caused its subsequent abandonment. The superstructure for both kilns was discussed in detail and comparative data from outside the state and region suggested that Kiln A may have been a beehive shaped structure, while, Kiln B was two-storied and either a bottle-shaped kiln or domed vault (beehive?). These two round kilns represented only the second and third such kiln excavated in this state, where rectangular groundhog kilns were thought to be the most common furnace used by stoneware potters.

The ceramics and kiln furniture from the Loy site provided a wealth of technological and functional data regarding the state's early indigenous industry. Evidence is available to show that Solomon Loy was a skilled earthenware potter who used a variety of decorative motifs and techniques on his vessels. Moreover, he used a variety of techniques to sign his wares (incising, slipping, and stamping), indicating he was literate and proud of his abilities. His son John M. and nephew Mebane, who worked at this site, also stamped their wares. Similarities in slip-trailed motifs and forms have previously resulted in many of Solomon Loy's elaborately decorated earthenwares being attributed to the Moravian potters of Old Salem and Bethabara. This research contributes to a much broader understanding of the non-Moravian potters who worked in the central piedmont region and who were highly skilled at replicating the same decorative motifs as those used by

Wachovian potters, as well as the creation of their own unique patterns. Furthermore, the production of anthropomorphic tobacco pipes were found to be manufactured at the Loy and Seagle sites, which demonstrated that many, if not most, early potters across the state participated in this activity as a standard side-line production. More importantly, many vessel sherds of what I refer to as transition wares were found. These wares document the conscious efforts by Solomon and his son to learn production of higher-fired stoneware ceramics. Many of these transition pieces were coated with typical stoneware types of decorations and glaze, such as iron oxide or cobalt decoration under a salt type of glaze. Still a continuity of certain decorative motifs are expressed on both the earlier lead-glazed earthenwares and later salt-glazed stonewares. Vessel forms changed in size and function as the Loys perfected their stoneware body and eventually built a new downdraft kiln, uphill from the updraft earthenware kiln. The latter may have indeed collapsed from being forced into commission for the production of higher fired stonewares. The fact that both kilns are so identical in construction size and fabric, but not firing method, strongly suggested that they were built by the same architect/potter. It is also likely that they functioned contemporaneously for a period when the potters were experimenting with stoneware clays and temperatures. The uniqueness of their construction, particularly the double-chambered fireboxes, and their sheer size, will probably remain unsurpassed in archaeological research of the southeast potteries for some time to come. Clearly, this study forms the foundation for much needed research on the regional basis of eighteenth- and nineteenth-century kilns in North Carolina and the South in general.

Evidence for elaborately decorated cobalt salt-glazed stonewares found at this site also forms a valuable comparative collection for other ceramic studies. As Zug has pointed out (1986:46), only a few nineteenth-century potters in the state were known to decorate their salt-glazed stonewares with cobalt, or iron oxide, both of which were found in excess at the Loy kiln site and on extant pieces. The variety of vessel forms, grave markers, pipes, and other ceramic forms further testified to the pottery skills expressed by

Solomon Loy and his descendants. Local exhibitions of the Loys' pottery sponsored by county and state museums have brought many marked and unmarked pots "out of the cupboards" and into the sight of researchers like myself who learned more about the diversity and profusion of wares made during the nineteenth century in rural Alamance and Chatham counties than would ever have been thought possible based on the thin descriptions found in historical documents.

At the Daniel Seagle site, 31Ln59, other surprises awaited archaeological discovery. Finding the site was the first challenge as it lay buried beneath dense underbrush and debris from recent timbering. Unlike the Loy site, this abandoned pottery kiln and shop were no longer associated with an active farmstead, though both are still privately owned. Archaeological and historical evidence verified that this pottery was abandoned sometime in the late 1800s. And though land ownership changed several times, the kiln had stood until the 1960s when the owner remembered his father "pushed it off downhill into the ravine" (William Hoyle, personal communication 1988). Before fieldwork could begin, the site was cleared off using a small front-end loader on rubber tires. Like the Loy site, the ruins of the kiln were discovered just beneath the ground level and all excavation was done with small hand tools. The rectangular brick and stone foundation of a large groundhog type of kiln was uncovered along with 2,891 artifacts, and 62.2% of those were pottery sherds.

Daniel Seagle's birth date was calculated from census records to be 1805 and his death date was recorded in a will as 1867. He was the fourth child of Adam and Eve Seagle whose ancestors had also migrated south from Pennsylvania where they had lived for awhile after their arrival from Germany. Corroborative accounts also indicated that Adam Seagle, like Henry Loy, was crafted in earthenware pottery production and was instrumental in training his son in the business. One striking difference between the earthenwares produced by the two pottery families was the lack of slip-trail decoration used on the Seagle earthenwares, though truly very few pieces exist for comparative

purposes. On the lead-glazed earthenware pieces known to have been made by Daniel Seagle (two of them were intact jug forms), he used a cogged wheel to impress a geometric design into the shoulder of the vessel rather than slip-trail decoration. Of the 1,797 pottery fragments recovered at the kiln excavation, only 98 pieces were lead-glazed earthenware; the remainder were alkaline-glazed or unglazed stonewares. The scarcity of confirmed lead-glazed earthenwares from the Daniel Seagle kiln could be a result of several factors such as: (1) the low survival rate of earthenware ceramics in general; (2) the lower frequency of production of this type of ware as compared to that at the Loy site and other eastern piedmonts shops; (3) mis-identification of the any unmarked pieces which may have been attributed to potteries from Virginia; or (4) a separate kiln specifically designed for earthenware production, located somewhere else and awaiting discovery. Oral testimony from traditional potters familiar with the principles of operating a groundhog kiln and research by ceramic historians concur that low-fired earthenwares could have been fired in a kiln of this type simply by placing them in "cool" spots and lowering the overall temperature of the burn. However, so few were archaeologically found proportionate to the quantity of stonewares that it seems this was not the case at the Seagle site. Rather, it is postulated that a second kiln exists somewhere else on Daniel Seagle's original tract, perhaps nearby or on the "east side of Howards Creek" as noted in various deed records. It is possible that the undiscovered earlier kiln may have been his father's furnace where he received his training, and the kiln I excavated was the stoneware kiln he built for himself when he set up his own shop. When he apprenticed Daniel Holly in 1820 it was to learn earthenware production, so his transition to stonewares and possible construction of a new kiln would have occurred in the mid-to-late 1820s (Zug 1986:21). Be that as it may, the groundhog kiln excavated at 31Ln59 belonged to Daniel Seagle and later, his son James Franklin. At this site, several other potters were trained and worked, such as John Goodman, Isaac Lefever, and Daniel Holly. It was a busy place

with considerable economic output according to the 1850 and 1860 business gazettes (Zug 1986:266-267).

The artifacts and architectural information gathered from the excavations at the Daniel Seagle site provided a rich assemblage of comparative materials with which to explore other early nineteenth-century pottery sites in the state. Dimensions and construction attributes of this kiln were compared to two extant groundhog kilns in the Catawba Valley and found to be nearly identical. This fact alone speaks loudly of the continuity of this pottery tradition, its kilns and its wares, and how it survived into the mid-twentieth century. The stoneware sherds from the site provided examples of two types of alkaline glaze now known to have been used by Daniel Seagle and his workers: the crushed iron ore/slag variety and the crushed glass variety. The crushed iron ore/slag variety may have slightly preceded the use of crushed glass at the site, but firm conclusions could not be drawn from the sample. Decorations were limited to incising and melted glass runs on the Seagle pots; no examples of the coggled geometric design, visible on his lead-glazed earthenwares, were recovered. Over 25 pieces were found with the maker's stamp visible. These data were compared to whole pieces of DS and JFS wares from private collections. A chronology of DS stamps is postulated which reflects the sequential use of at least four different stamps by this master potter. Changes in the vessel forms produced by Daniel, and later by his son Frank, reflected changes in home food preparation, commercialization, and market demands which beset cottage industries in the 1870s in rural North Carolina.

In his research of the traditional potters of North Carolina, Zug summarized the state's indigenous ceramic industry into four broad periods of production: (1) The Creation Period of 1750s to 1820s; (2) The Crucial Period of 1820s to 1850s; (3) The Climax Period of 1850s to 1900s; and (4) The Closing Period of 1900s to 1940s. These periods of transition were characterized by significant changes in either production, marketing, and/or personnel. The Creation Period marked the beginning of immigrant

European potters into the central Carolina piedmont with the earliest shops set in the Moravian communities of Salem and Bethabara. Based on what we have now learned, however, a market was established for other non-Moravian potters who also migrated into different parts of the piedmont and set up their own shops. Early potters like Henry Loy and Adam Seagle came to North Carolina and probably operated earthenware kilns in their separate communities of Snow Camp and Howards Creek, respectively. Henry's son Solomon Loy, and Adam's son Daniel Seagle, would both have been active during The Crucial Period when they set up shops of their own and developed their own variety of stoneware with its specific glaze: salt glaze for the Loy stonewares, and alkaline glaze for the Seagle stonewares. During Solomon's and Daniel's turn at master potter, the transition from lead-glazed earthenwares to stonewares occurred and each potter responded to this challenge in different ways. Daniel appears to have completely abandoned his production of earthenwares, while Solomon continued a line of earthenware forms alongside his stoneware production. During the next period, The Climax Period, the next generation of potters, now fully trained in the production of stonewares, took over as patriarchs of their family shops. Zug characterized this period as the peak of stoneware production across the state, although a decline in quality also was noted. Solomon's son, John M. Loy, worked at his father's shop along with his cousin, Mebane Loy, and a neighbor, Tim Boggs. John's wares reflected some stylistic and decorative elements of his father's early work, but also his own designs and stamps. John M. eventually moved away and bought his own land to set up residence and build his own kiln. At the Seagle site James Franklin, Daniel's son, worked with his brother-in-law John Goodman until the late 1880s, several years after his father died. Issac LeFever worked with Frank and John until his death in 1864. For the Seagle pottery tradition, this was the final phase of this clay clan, as no other Seagle descendants followed in the business. The Closing Period of pottery production was represented by the grandsons of Solomon, Albert and William H. Loy, who operated shops in Alamance County until the early 1950s. The Closing Period of

hand-crafted pottery was marked by the sharp decline of strictly utilitarian wares and replaced by the transition to production of miniatures and other decorative forms used to capture a "roadside" tourists' market.

## 6.2 Conclusions

The goals of this research were to examine the technological transitions from earthenware to stoneware pottery production which occurred during the early nineteenth century and to consider the continuity of this craft through a careful look at subsequent generations of potters. The transition from earthenware to stoneware production was expressed in the archaeological and historical records. It was manifested in the artifacts, features, and site morphologies of each pottery location examined in this study. Changes in the ceramic bodies resulted in changes in glazes, forms, decorations, furnaces, and ultimately, the market.

An in-depth investigation of the archaeological pottery sites for two prominent potters, Daniel Seagle and Solomon Loy, yielded critical data used to address the aforesaid goals. This study served to demonstrate what essential factors were needed for successful pottery centers or jugtowns to arise. The abundance of fine clays, sufficient wood for fuel, an increase in population, an economy dominated by small, self-sufficient farms, and a relative isolation from larger outside markets created ideal conditions for the traditional potters of early North Carolina. In addition, the vessel form analysis conducted on the artifacts recovered from each site yielded clues about the particular regional foodways integral to the two backcountry communities of Snow Camp and Vale. These regional foodways were directly correlated to the land forms and land usage in each section of the piedmont (eastern vs. western) where the pottery shops were located. Further research on domestic farmsteads within each region would provide valuable information regarding which vessel forms were selected for and elaborated on in the backcountry homes. Local and global market variables, and the availability of industrial-

produced tablewares (plates, cups, bowls, etc.), appear to have directly affected to production of certain vessel forms by traditional potters towards the last quarter of the nineteenth century. Again, archaeological and historical research on contemporaneous house sites in the surrounding areas of the pottery shop sites could provide useful comparative data regarding the context of hand-made traditional ceramics in a domestic setting. The frequency and functional context of mass-produced industrial tablewares (primarily used for food preparation and consumption) could be compared to that of locally-made traditional pottery forms (used primarily for storage).

In hindsight it is apparent that more research is needed on the early formation of traditional pottery shops throughout the state and their evolution as a viable cottage industry in the backcountry regions. Far more needs to be done to fully understand the development of kiln construction in the state during the eighteenth and nineteenth centuries, as well as, the introduction of particular glaze types (such as alkaline glaze), decorative treatments (such as the use of cobalt and iron oxides, and melted glass runs), and vessel forms. The migration pattern of permanent and itinerant potters throughout the state could also enhance our understanding of early craft exchanges and production techniques between, and apart from, other recognized pottery-producing areas (such as the Edgefield District of South Carolina, or the Shenandoah Valley region of Virginia and Pennsylvania). Kinship information regarding other clay clans may reveal which potters evolved from an earthenware tradition into stoneware production and which ones ceased the trade altogether. Or, additional research may reveal which potters came into the pottery making business from another craft training and excelled in the production of stonewares.

Although the previous paragraph outlined topics for future research and certain limitations of this subject, below are listed the important discoveries and accomplishments achieved through this dissertation project:

- The discovery and excavation of two large circular kilns, one updraft and one downdraft; only the second and third circular kilns found in the state thus far.
- Complete excavation of a nineteenth-century groundhog kiln, and associated architectural details.
- Significant historical and genealogical data for two master potters of the nineteenth-century.
- A thorough documentation of vessel forms, glazes, decorations, and maker's marks for each potter and their sons.
- For the Loy site, evocative artifacts to document the transition from earthenware to stoneware production.
- For the Loy site, diagnostic examples of kiln furniture used to stack and separate earthenwares and stonewares in the furnace.
- The discovery of tobacco pipe manufacture at each site, particularly anthropomorphic styles, and related kiln furniture (Loy site).
- Evidence of the devolution of particular forms, and decorative elements, from one generation to the other (or father to son).
- The attribution of other non-vessel forms to the potters (such as the salt-glazed stoneware grave marker in Cane Creek Friends Church Cemetery made by Solomon Loy).
- Evidence for the proliferation of elaborate slip-trail decorations on lead-glazed earthenwares by backcountry potters of non-Moravian affiliation.

Throughout this study pottery making was examined as a form of cottage industry which endured certain technological transitions of its products. The communities where the potters chose to live formed cultural hearths of various ethnic and regional traditions. And though the tenacity of these early potters' blended cultural traditions, and their material manifestations will remain the topic of continued research, this present work explored and answered some basic questions. Transitions and continuity are inextricably wedded to the study of any human behavior, because change through time is one of the few constants in life. As de Saussure remarked, "What predominates in all change is the persistence of the old substance; disregard for the past is only relative. . .for the principles of change are based on the principles of continuity" (1959:74).

**APPENDIX 1:**

**The Allen Letters**

JOEL ALLEN (1798- )

Inscription on back of the folded sheet:

To William  
Allen orange  
County, N.C.

Fayettevill 1 mo 9th 1829

Brother I received thy letter by thompson  
which give me to under stand that the ware  
was ready, thew reason why I did not go to the  
West was the man that was to take us loft  
two of his horses and Could not go and I shall  
remain here untill Next fall and when  
thee Can make it Convienient to Come  
and Bring the ware, I will try to be reddy  
to pay the Hundred wate of Coffee at any  
time, and as for Loy, say that I must Be  
there to recieve the ware, it was not  
my Contract he was to deliver the ware  
at thy house and to thee and receive the coffee  
at thy house, also and if he wants to Be Con  
trary about the ware, just go and receive  
ware to the amount of the lead and send  
or fetch it and quit him rather than have  
any fuss and I will sadisfy thee for thy  
truble. But tell Loy that I would like to  
have the amount of ware and it would  
Be the means of his selling a large quantity  
of ware in Town.

Seed is 90 Cents, wheat \$1.30 Cents flour fine \$6.50  
today. I am very mutch ingaged at present  
Building a house --- and am not verry well  
with a pain in the Brest — — —  
I want thee to stay two or three days  
when thee Come.

Joel Allen

JOEL ALLEN (1798- )

Inscription on back of the folded sheet:

to William Allen  
orange County  
Cane Creek

By Robert  
Atkinson

Brother William. if thee has not got  
the Erthing ware of Loy, dont get it all  
just git what the lead comes to and I will  
sadsify you for it. and send and fetch it down  
for I have maid my araingements so that  
without Loy, will take Smiths note I cannot  
make my araingements so as to pay for  
it untill I can finish two jobs which will  
take me two months. I had one hundred wate  
of coffee and kept it untill about Crismas  
and Expected to sell some land But did not  
and hit has thrown me out of my araingements  
that I would rather not take all if it can  
soot Loy and if thee has got it and doth Bring  
it purhaps I can make the araingements  
with the ware By looseing the amount of  
the lead - January 28 - 1829 - -

Joel Allen

Brother James Smith

JOEL ALLEN (1798- )

all Arrangements that lays in my power to get  
the plan in operation. Every spare sent [cent]  
that I can I intend to let Come up to  
you in some thing in your name and I want you  
to keep all in your name I want you to  
write me an answer as soon as you receive this  
for I am impatient to hear from you all  
I have got about one hundred wate of lead  
that I do in tend to give Loy when he  
gets out of hart. the ware is all sold at  
Sheriff Sale to pay Blake- my corn is  
hard a nuff to grit and my watter millins is  
a heep Bigger than my head, yes hat and all  
and is not wripe yet But to morrow I want  
to pull one and see and if thee will Come I  
will pull the Bigist one of that vine that  
I did shew thee in the collard Bed has run all over  
the yard and is full nothing more at this time  
only remain thy Brother

Joel Allen

Inscription on back of the folded sheet:

William Allen	to the care of
Orange County	Wm Albright
N.C.	Favourd by fox
Near Cain Creek	
Meeting house	

September the 12 [no year]

Mr. William Allen I write to you afew lines to let [you] know that  
I am well my Self but Mr. Allen At this time is verry SiCK  
And I expeCt it is yellow fever I am at this time ateaChing  
SChool & Joel wants to know whether Smith is agoing to  
Send him that money or what arrangements has he made  
he Says he would bee verry glad he would Contrive and Send it  
with out any further trouble & give my best reSpeCts to Elizabeth green  
nomore at preasant but remaining yours until Death &

Mrs Margaret Allen

JOEL ALLEN (1798- )

Inscription on back of the folded sheet:

Solomon Allen  
orange County  
N.C. to Sandy  
Grove in Chatham County  
William Albright's  
Office

Red-stamped cancellation:

FAYETE NC. Jul 23

Fayetteville July 18th 1829

Dear Brother,

I wish to let thee know that I am yet alive But have Been Verry low, and Margret also, we have lost the daughter. she dyed last thirday at the age of two months and five day. we have ben low health at this time. I wish to let thee know that I have got A tin Shop arected in that largeist house on front street and Expect to put a Black Smith Shop in the little one. Mr Watson has joined with me in the tin, he finds the tools and I the shop and Each one works on his own footting, now if it is confistant with thy araingements, I should like to have the corrispondence with thee and William also that we was a talking a Bout I have made the araingment so that I hold nothing and I have a fiew good friends one of them is gordon Howe that keeps in the Brick ----- which is a verry good friend. all I now lack is one Box of tin plate to work up and send first up. I would Be glad But so mutch sickness has run me out of money But I have the promiss of three Boxes of tin plate towards the land in the fall But if Joseph would put in his five dollars as he promis to do it would with ten more get me a start if there is any prospect of getting that Note that thee took up it will help and if there is not the money that is Comeing from Smith or Herman will give us a start for I could have Bought Coffee last week at 9 cents By the fifty wate I am a making

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