SPATIAL ANALYSIS OF UNIT 6 AT THE CHUCALISSA SITE: EVALUATING THE LATE MISSISSIPPIAN PERIOD MAIN RESIDENTIAL AREA

by

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Abstract

In this thesis, I present a spatial analysis of the main residential area, Unit 6 at Chucalissa, a prehistoric Mississippian period site located in Southwest Tennessee. Unit 6 excavations were conducted from 1940-1987, and a data set was digitized for spatial analysis. The goals of this spatial analysis include intra-structural patterning, inter-structure, and the functional aspects of residential structures found within Unit 6. Of particular interest is House 10, which contains specialized artifacts. This thesis will contribute to our understanding of the culture dynamics during the Middle and Late Mississippian periods in the Central Mississippi River Valley.

Acknowledgements

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I would also like to thank all those involved in helping sort the massive collection of artifacts from the Unit 6 collection during our monthly volunteer days at Chucalissa. One person that has been invaluable to sorting the collection of artifact data was Anna Vo. Without her help, cataloging the full collection would not have been possible. I would like to thank my former boss, Melissa Buschner, who has been very understanding and helpful through the entire process. Also, I owe a debt of gratitude to Ron Brister, who's knowledge, inspiration, and constant humor made the entire process easier. I would like to thank the late Dr. Charles McNutt for his previous work on Unit 6 at the Chucalissa site. Dr. McNutt's research and passion to the archaeological community helped make this research possible. His knowledge, humor, and presence were always appreciated and are sorely missed. My thanks are also given to the earlier museum directors, staff, and past field school students for their impeccable record keeping and field notes which were vital to my research objectives. I would like to thank

former Chucalissa director Dr. Robert Connolly believing in me. For without the graduate assistantship opportunity offered by Dr. Connolly, this research would not have been possible.

Thanks to Charlie Phillips who assisted with photography of Unit 6 artifacts in Appendix B. Finally, I would like to thank my family and friends for their years of support throughout this entire academic process. I hope that I have made my friends, family, and those mentioned above proud, and that the data presented in this thesis will benefit to the overall understanding of past cultural history in the southeast region. All data presented in this thesis are discussed and displayed as accurately as possible. Any mistakes or misinterpretations in the data lie directly with this author and not with any of the people acknowledged above.

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1. Introduction

This thesis examines previously unanalyzed materials from Chucalissa Unit 6 excavations and employs a Geographic Information System (GIS) to conduct spatial analysis of artifact distributions across the unit. Modern excavations at Chucalissa began in 1940 under the direction Dr. T.M.N Lewis and George Lindberg of the Works Progress Administration (WPA) and continued through the late 1980s under the direction of Memphis State University, now The University of Memphis. Despite the intensive excavations carried out at Chucalissa, publications on the site are limited while those data have gone under-utilized (Smith 1993). This thesis seeks to correct the lack of published data, specifically regarding Unit 6.

The purpose of this thesis is a spatial analysis of Unit 6 artifacts and structures. This research examined nearly 70% of all artifacts recovered from past excavations at the Chucalissa site. The other 30% of artifacts were not used due to insufficient provenience data. Unit 6 was chosen due to the abundance of features present within a 70 x 90 ft (21 x 27 m) test block making it suitable for a spatial analysis. A significant amount of inter-spatial and residential pattern spacing was achieved through the use of distinguishable Walls phase materials, such as Walls Engraved ceramic types. Available radiocarbon dates from features and residential structures within the unit were also utilized. Results from this spatial analysis revealed several activity areas within Unit 6. Maps were generated for each artifact category, and the results are discussed associated with both the Boxtown and Walls components of Unit 6. Ultimately, this research aims to provide a clearer picture of Chucalissa during the Late Mississippian Period.

This thesis is organized in the following manner: Chapter 2 provides environmental and cultural background. Chapter 3 addresses the methods employed and the results of the Unit 6

collections. In chapter 4, I provide an analysis of the results from artifact density and cluster analysis. Finally, in chapter 5, I discuss the implications from the data presented.

2. Background

This chapter covers the geophysical, ecological, history of research, and cultural history for the study area.

Environmental Context

Chucalissa is a small Mississippi mound center situated on the Chickasaw Bluffs approximately 10/km southwest of downtown Memphis, Tennessee (Fig. 1). Chucalissa covers an area of about 5 hectares and overlooks the Mississippi River 3.2 km to the west, and the Ensley Bottom of the Mississippi Valley to the south (Childress 1992; Franklin 2005; Sharp 2005). Chucalissa predominately dates to the Boxtown (A.D. 1250-1350) and the Walls (A.D. 1350-1520) phases. However, two earlier phases are also present; The Mitchell Phase (A.D. 1200-1250) and the Ensley Phase (A.D. 800-1000) (Fig. 2). From a geophysical perspective, Chucalissa is located in the Central Mississippi River Valley (CMV). The CMV extends from northwestern Kentucky at the confluence of the Mississippi and the Ohio Rivers south to the confluence of the Mississippi and Arkansas Rivers (McNutt 2012).

From an ecological perspective, Chucalissa is located in the Mississippi Valley Alluvial Plains and bluffs ecotone region. The region contains level floodplains elevation consisting of loess, clay, sand, and gravel containing rich fertile land suitable for agriculture (Griffin et al 1998; Hobbs 2017). As floodwaters leave the river beds, rich sediments are deposited while substantial amounts of soil along the river beds form natural levees occasionally breaking through and forming new channels (Smith 1978). Variations in elevation are responsible for different soil types and drainage resulting in diverse types of vegetation, and a wide varieties of different

animal species capable of sustaining larger population densities with abundant seasonal resources that could be obtained with relatively low energy expenditure (Smith 1978).

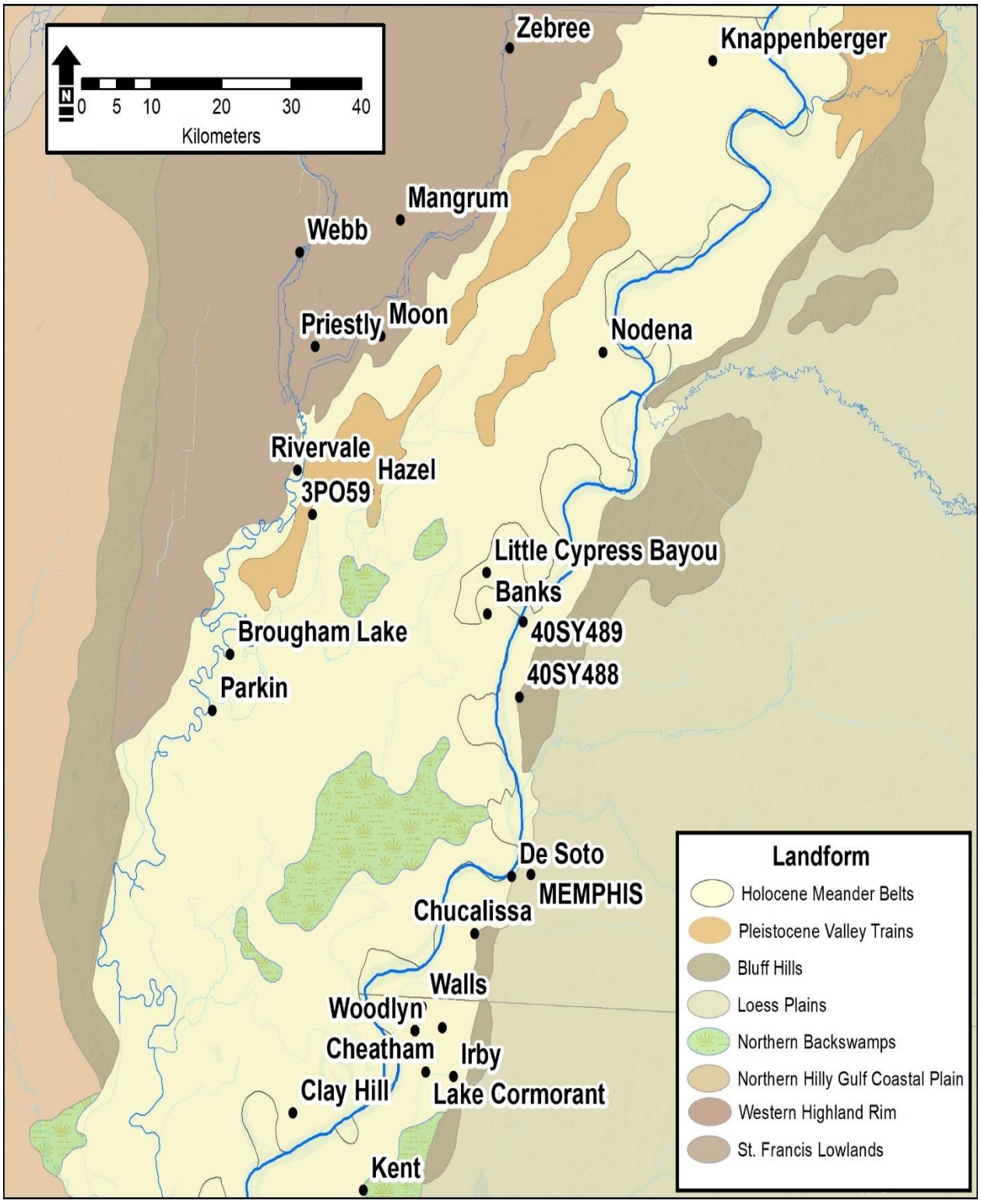

Figure 1. Key Late Mississippian Sites in relation to predominate ecological features and landforms.

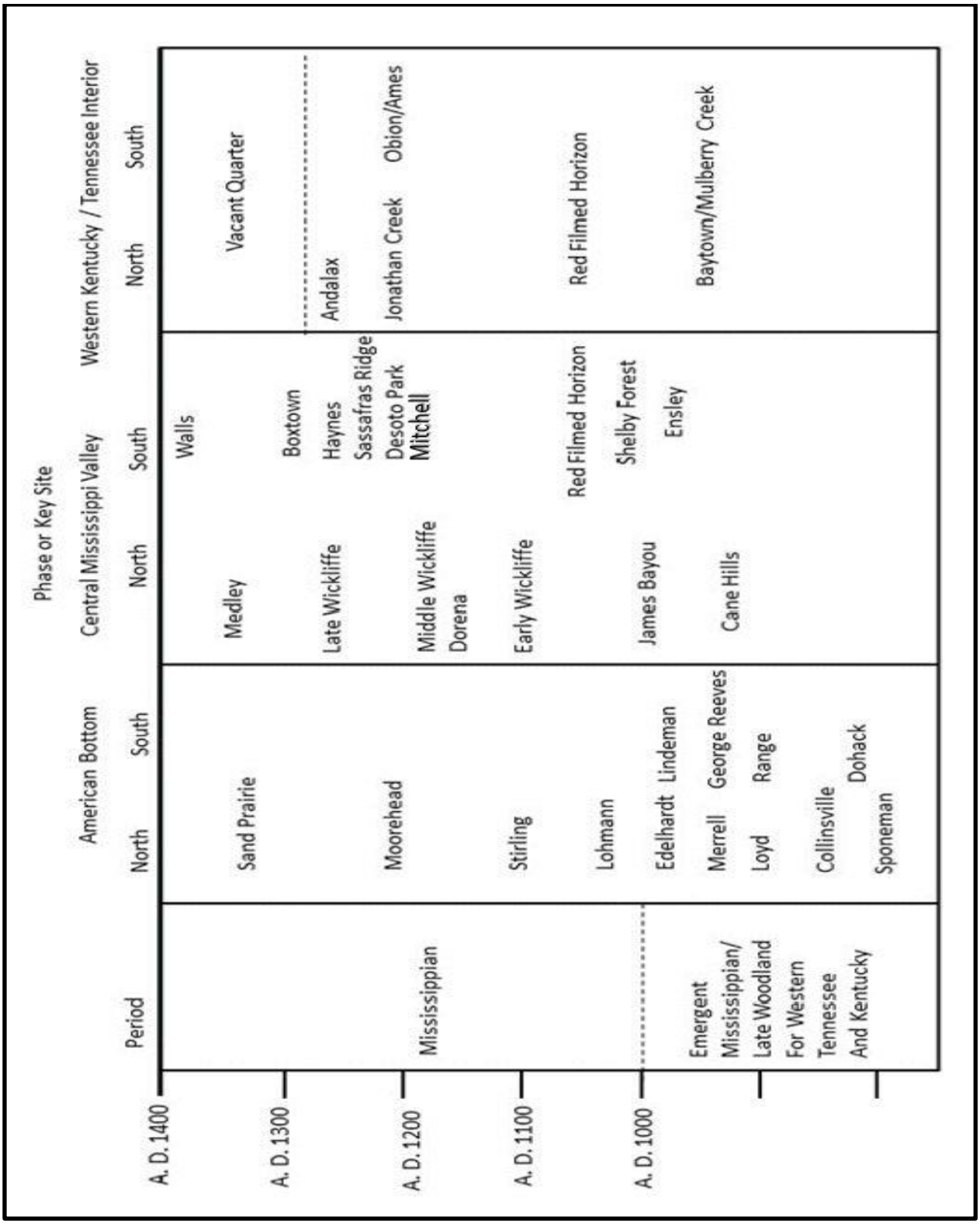

Figure 2. Example of varying Mississippian Cultural Phases in the Southeast and Midwest (Adapted from Mickelson 2018: Figure 3).

History of Research

Chucalissa was largely forgotten until it was rediscovered during the initial development of the T.O. Fuller State Park, just south of Memphis in the late 1930s (Lumb and McNutt 1988). The first excavations began around 1940, but ceased due to the beginning of WWII in 1942 (Nash and Gates 1962). After the war ended, interest in the site resumed and excavations by the Memphis Archaeological and Geological Society began in 1952 at Unit 6 (Beaudoin 1953; Smith 1993). Charles Nash directed research at Chucalissa from 1952 until his death in 1968, and tested all major portions of the site. Since the acquisition of the Chucalissa site by Memphis State University in 1962, the C.H. Nash Museum's purpose has been to heighten education and research. Summer field schools have also been held at the site since its acquisition by Nash and subsequently by Gerald Smith, a former associate professor of Memphis State University.

Archaeological research has demonstrated that Chucalissa had four distinct periods of occupation occurring between 1000-1500 A.D. The four phases of occupation at the site (Ensley, Mitchell, Boxtown, Walls) were defined by architecture, pottery, and stone tool type characteristics (Smith 1989). However, the only structures present at Chucalissa belong to the Mitchell, Boxtown, and Walls phase components (Ezell, Albertson, and McNutt 1997).

The main residential portion area (Unit 6) lies on the northern portion of the site, north of Mound A, a substantial platform mound at Chucalissa (Fig 3). The Unit 6 vicinity has been the focus of excavations since research began at Chucalissa. For instance, Lewis (n.d.) initial report to the State of Tennessee about the richness of the Chucalissa site, states that "Unit 6 contains a deposit 7 ft deep, the deepest midden ever found on a Tennessee Site." The primary occupation falls within the middle to late Mississippian phases from about A.D. 1250-1520. These phases

are comprised of the Boxtown component (ca. 1250-1350) and the Walls component (ca. 1350-1520).

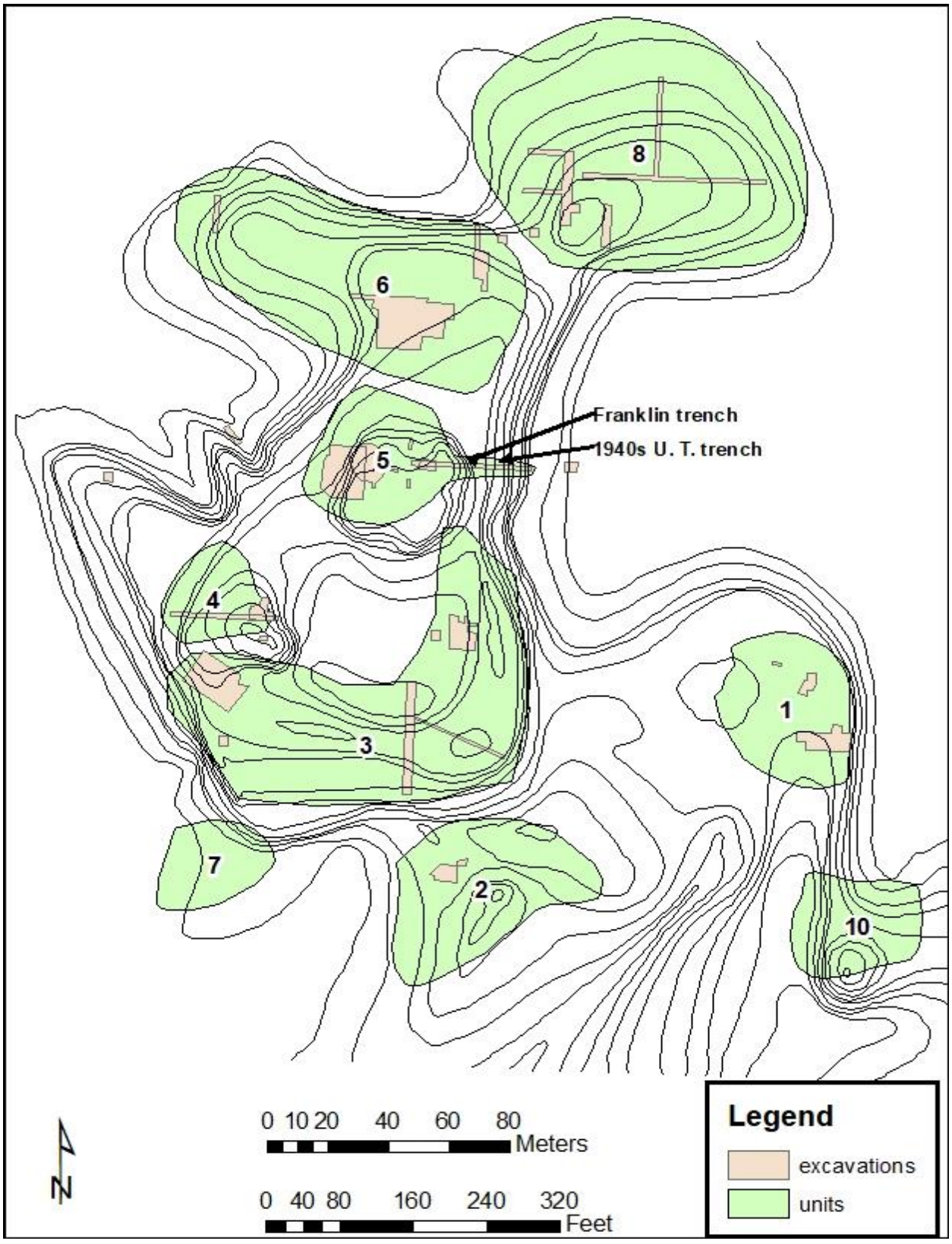

Figure 3. General Layout of Chucalissa (McNutt 2012: Figure 1).

Culture History

Chucalissa is the most extensively studied Mississippian site on the East side of the Mississippi River between the Wickliffe and Adams sites in northwestern Kentucky and Winterville and Lake George to the south in the central Mississippi. The Mississippian period (ca. 900-1500 AD) was first defined by W. H. Holmes in 1886 and in 1914, Holmes refined his original concept of "Mississippian" from a simple description of shell tempered pottery to include earthen mounds and wattle-and daub houses (Holmes 1914). The key Mississippian cultural traits are towns with mounds and central plazas surrounded by houses and protected by a defensive palisade, maize-based agriculture, wattle-and-daub houses, shell tempered pottery, and long-distance trade (Holmes 1914; Phillips, Ford, and Griffin 1952). Phillips et al (1952) suggest that the traits such as the practice of fortifying villages, single primary extended burials with grave goods, the effigy complex, and negative painting also be included as defining traits in the Mississippian culture. The earliest ceramic complexes in the CMV are similar to the earlier Baytown period, until shell-tempering pottery appears about A.D. 1000. The following section will cover; (1) town architecture; (2) settlement patterns; and (3) subsistence practices.

Town-scale organization and Use of Space

Mississippian period settlement patterns are characterized by the appearance of large towns and ceremonial centers throughout the Southeast and Midwest. Typical Mississippian settlements had major regional centers surrounded by smaller satellite towns each with one or two mounds (Weaver 1982). A Mississippian town's main architectural features include plazas, platform mounds, entryways, various means of segregating space and activities, defensive

works, and the utilization of natural terrain features for agriculture (Lewis, Stout, and Wesson 1998).

Mounds are typically found located along the edges of the central plaza. These mounds can be classified as either conical, ridge-topped, or platform types. The conical and ridge-topped types were often burial mounds, while the platform mounds usually were the location for the dwellings of the elite or built for religious structures (Lewis, Stout, and Wesson 1998). On multiple mound sites, one mound is typically larger and flanks the plaza (Lewis, Stout, and Wesson 1998).

Plazas were civic-ceremonial communal spaces used for games, ceremonies, and social gatherings (Lewis, Stout, and Wesson 1998). Plazas are often devoid of archaeological materials, implying the space was kept clean of debris. Feasts were often held in the plaza communal space.

The construction of small housing mounds was where higher status residents resided, separating them from individuals of lesser status. Thus, separate residential areas were usually located across a site. At Chucalissa, the main residential area was located just north of the platform mound, with elevated housing mounds in between and around the plaza area. People of higher status lived on small mounds constructed in a circular pattern around the larger platform and burial mounds. In addition, a small elite population lived near the platform mounds constructed for the Chief's residence and ceremonial temple and surrounding the main plaza area of the site.

Regional-scale Settlement Patterns

The regional scale Mississippian settlement pattern consisted of large town centers, outlying smaller towns, hamlets, and farmsteads. Centers were larger towns where people gathered to hold rituals, feasts, trade goods, and games. Additionally, centers became important to outlaying populations occupying hamlets during times of social environmental stress e.g. economic drought and economic warfare. Hamlets are defined as small outlying residential structures, usually three to five clustered households who remain mostly self-sufficient. Hamlets were strategically organized and located to provide a "balance of labor demands, resource distribution, and defensive needs" (Cross 2016:10; Milner 2004:145). However, hamlets would often contribute to a larger town or center at certain times of the year or during times of economic stress. Additionally, small individual single-family farmsteads were also common across the western Tennessee countryside (Cross 2016).

During the Mississippian period, most of the population resided along the Mississippi river bluffs and floodplains. The basic settlement pattern was large centers with substantial resident populations with outlying hamlets scattered along the neighboring stream systems (Smith, 1979). As Smith (1978:481) points out "these restrictions of Mississippian populations were not simply because of the availability of easily tilled alluvial soils, but rather a complex adaptation of the Mississippian populations to circumscribed agricultural lands and concentrated biotic resources." Smith (1978:484) termed this the" Mississippian Niche."

During the Middle-Late Mississippian period, there is a sudden increase in cultural complexity throughout the region as reflected by the increase of ritual practice, social

organization, and long-distance trade. With the increase of cultural complexity during this period, there is an increase in warfare reflected in both ritual practice and burial practices.

In Central to the Lower Mississippi Valley, populations moved towards larger centers which were often palisaded. These centers were also established on the bluffs to offer additional protection, as is the case of Chucalissa. Some polities, such as those along the Lower Tennessee River, established towns on islands while others situated themselves within meander bends (Dye 2004b). The trend among meander bends is also apparent along the CMV with sites like Toltec Mounds in Arkansas to the west. The movement of populations towards larger centers may have afforded the protection of a more powerful and persuasive chief (Dye 2004b). Competition between neighboring polities created large vacant areas often referred to as buffer zones beginning in the early thirteenth century (Dye 2004b). The result of constant waring between neighboring polities left large vacant areas of suitable agricultural land for upwards of 200 years (Dye 2004b).

The Mississippian Social Component

The increase of warfare and concern for the afterlife during the Middle Mississippian period were reflected by motifs found on distinct ceramic vessels, regalia, shell gorgets, and ritual paraphernalia. According to Dye (2004a), “the connection of war trophy symbolism with elites and the chiefly pursuit of war honors reinforced the role of warfare in confirming honor and prestige upon those individuals who gained preeminent political and ritual positions.” Hence, leaders are elected based on war honors and military achievements.

Social stratification is inferred through the increase of burials during the Middle Mississippian period containing grave goods among certain individuals within the total

population. Patterns are further displayed in the selection of certain locations used for burials, such as specific mounds, chosen for those members of higher social status. Specific positions of the deceased, like flexed, seated, or partially flexed burials were oriented to certain cardinal directions (Green 1975).

The Late Mississippian period is also characterized by an increase in elite burials with accompanying grave goods and specialized elite housing sectors. For example, Chucalissa contains a few later Walls period burials inserted into the earlier small conical mound (refer to figure 4). One such burial contained three trophy skulls (one of which was painted red). Following the Middle Mississippian period, theocratic elites seem to lose power as evident by the decline in use of sites of Moundville, Etowah, and Winterville. While the importance of cultural and ritual practice continues, there is a switch in the Mississippian ritual leaders overall hierarchical influence. Larger sites like those mentioned above still retain some significance as sacred or ceremonial grounds bringing together people from many towns throughout the countryside (Steponaitis 2017).

Walls Phase-Regional Settlement Pattern

The Late Mississippian period Walls phase is confined to the extreme southwest Tennessee, and northwestern Mississippian. Sites attributed to the Walls phase include Chucalissa, Cheatham, Irby, Lake Cormorant, Norfolk, Walls, and Woodlyn (Brock 2012) (Fig. 4). Other adjacent phases include Jones Bayou, Nodena, Parkin, Tipton, Horseshoe Lake, and Kent (Fig. 5). Although Chucalissa contains a total of four phases, the late Mississippian component of the site is attributed to the Walls phase cultural complex. However, of all the sites incorporated in the Walls phase, Chucalissa is by far the most extensively studied. Despite research on the Walls phase polity, the major regional center, if there ever was one, remains elusive. Single-

platform mound Walls phase sites include Chucalissa, 40SY28, Cheatham, Irby, Lake Cormorant, Norfolk, Walls, and Woodlyn (Smith 1985). Only three surviving Walls Phase town centers survive: Chucalissa, Cheatham, and Woodlyn. These three sites all had their central platform mound located at the northern portion of the site. Thus, the platform mound had a southern orientation overlooking their plaza area. Various hamlets and other smaller sites containing no mounds are found scattered throughout the Mississippi River floodplain, suggesting a use of natural levee soils in the Mississippi River floodplain and use of the uplands as hunting grounds (Smith 1985). Secondary centers located in the floodplain occur within 2-3 mile intervals with the exception of Norfolk and Woodlyn situated about 1 mile apart (Smith 1990).

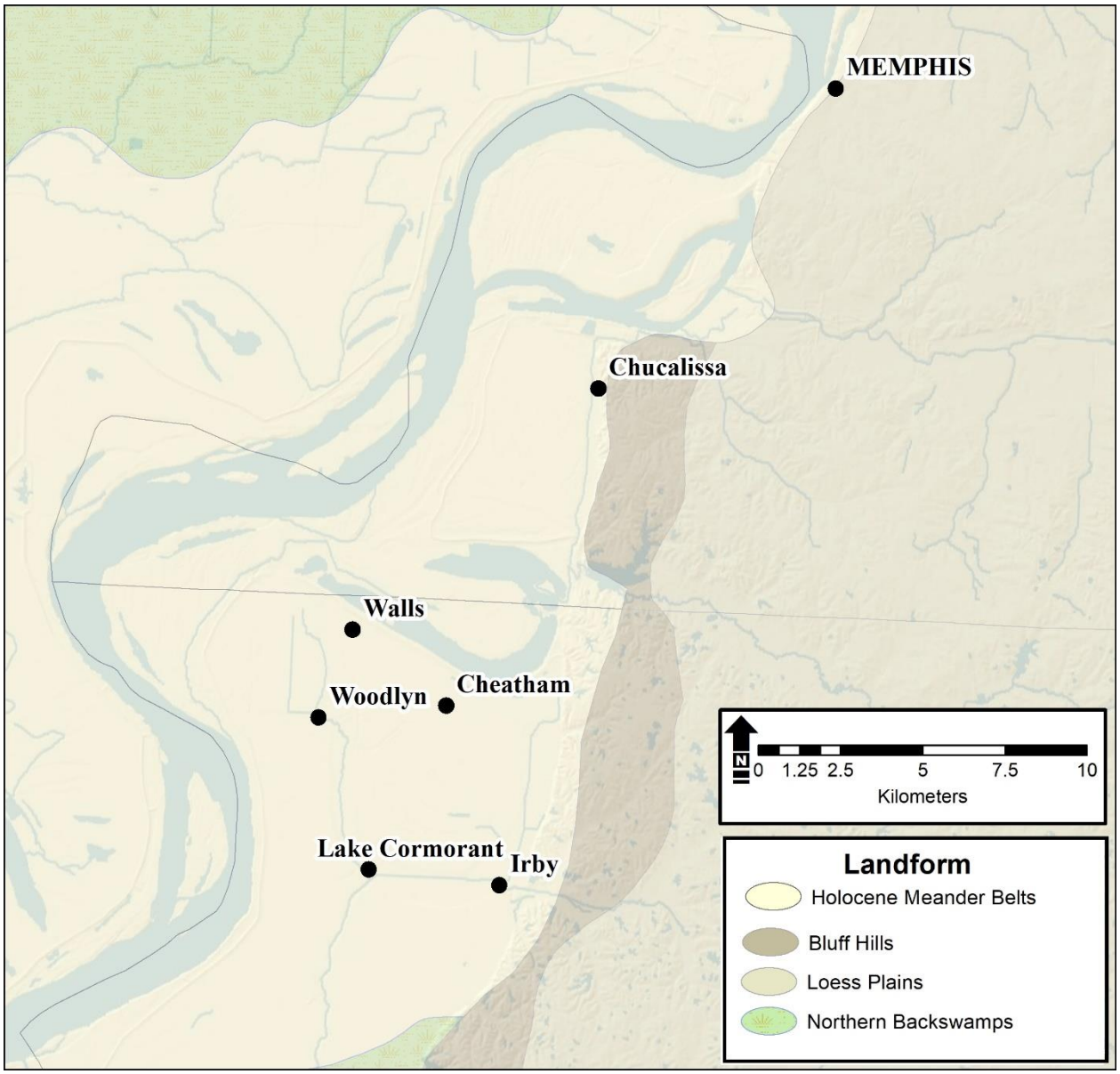

Figure 4. Late Mississippian Walls Phase Sites.

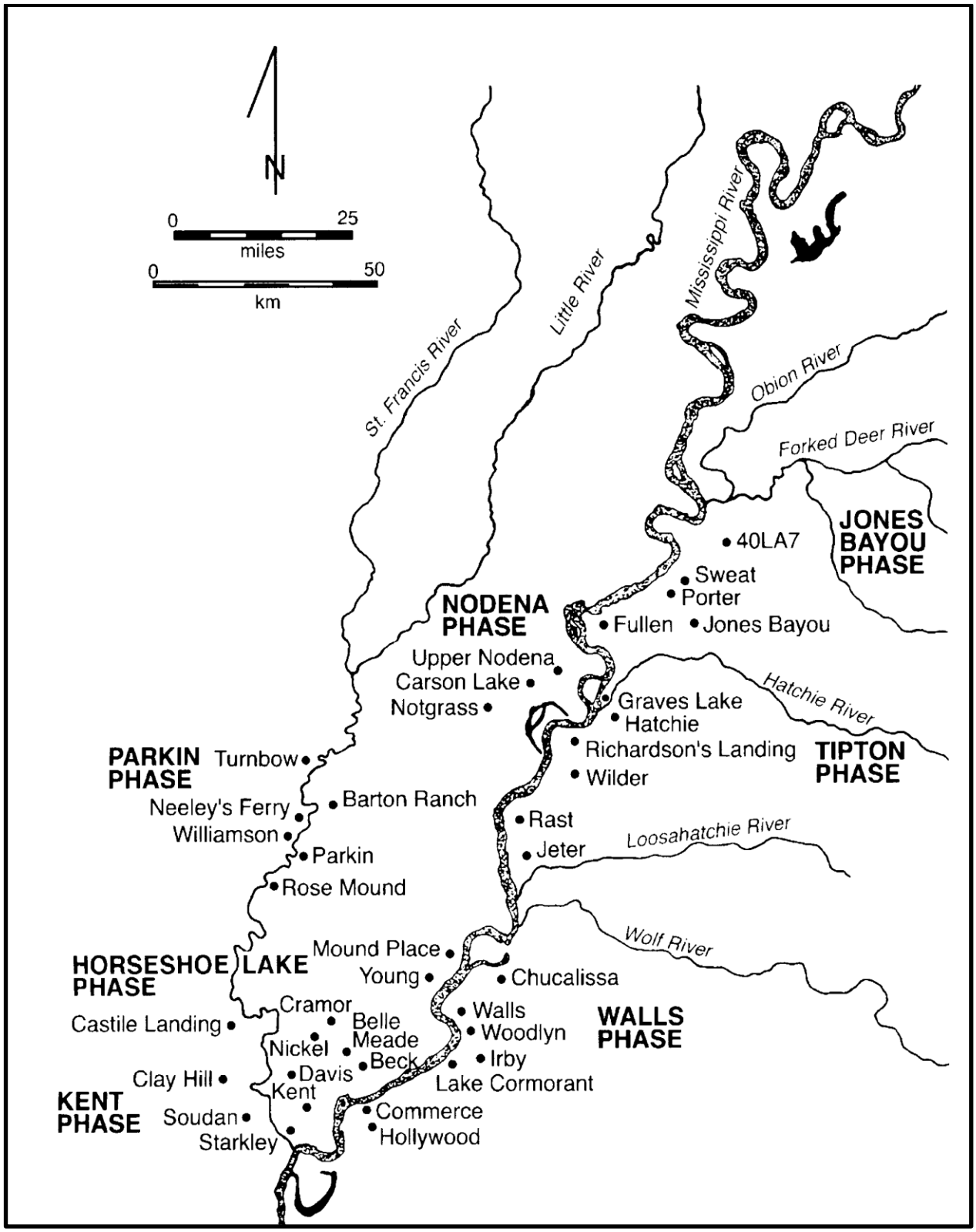

Figure 5. Map of Late Mississippian period Phases (Mainfort 1999: Figure 1).

Subsistence

Mississippian populations were primarily Agriculturalists who extensively farmed corn, beans, and squash. Mississippians also relied on other domesticated plants such as sunflower and chenopod, and wild resources such as persimmons, acorns, and walnuts. Important fauna included the white-tailed deer, raccoon, fish, migratory waterfowl, wild turkey, beaver, opossum, rabbit, snapping turtle, aboriginal dog, squirrel, black bear, and elk (Smith 1975:155). Large mammals are also represented in the faunal assemblage from Chucalissa, and include white-tailed deer, black bear, mountain lion, wolf, and bison. Small mammals include gray squirrel, eastern cottontail rabbit, opossum, racoons as well as avian species such as turkey, ruffled grouse, prairie chicken, and Passenger pigeon (Ezell, Albertson, and McNutt 1997).

The most prevalent fauna species found at Chucalissa is the white-tailed deer, whose bones are found in abundance in excavated middens and pits. Deer bones were also modified into tools, weapons, clothing, and gaming dice. Black bears were sometimes hunted for their rich oils used in cooking, and for their fur/hides for clothing and blankets. Fishing was also an important part of the diet at Chucalissa. Aquatic species like gar were used for food and their scales were also utilized as projectile points.

The growth of many Mississippian communities is largely attributed to the cultivation of domesticated plant species. The most important component of Mississippian agriculture was the cultivation of maize. Larger mounds centers with outlier hamlets exhibit an increase in populations making a drastic subsistence switch to increased agricultural activities. Direct evidence of this change was found during previous archaeological excavations at Chucalissa. Corn from storage and midden pits exhibit a diversification of the crop by experimenting with different row types of corn, as 14, 12, 10, 8, and 6 row corn cobs are all present (Blake n.d.).

However, wild plant species still made up a substantial portion of the diet. A continued use in wild plant species were indicated at Chucalissa by the presence of charred hickory nuts and persimmon seeds in the archaeological record.

Social Organization

During the Middle-Late Mississippian period, Chucalissa was a chiefdom. As defined by King (2003), "Chiefdoms are essentially political economies in which surplus labor and produce are mobilized, in some manner funneled through the political structure, and "spent" in ways that serve to reproduce that political structure" (Fig 6). Simple chiefdoms have only one level of political office with little distinct markers between elite and commoner status, and complex chiefdoms usually having two or more levels in a political hierarchy with distinct markers between elite and commoner statuses reflected in architecture, grave goods, and burial practices (King 2003; Steponaitis 1978). Sites containing a platform mound were administrative centers while the number of mounds at a site were in direct relation to its position in a political hierarchy (Dye 2004b).

The economy at Chucalissa during the Middle and Late Mississippian periods reflect simple markers of architecture difference and burial practices. Fewer grave goods occur with burials during the Middle Mississippian period occupation while the Late Mississippian occupation shows a marked increase of burials containing grave goods.

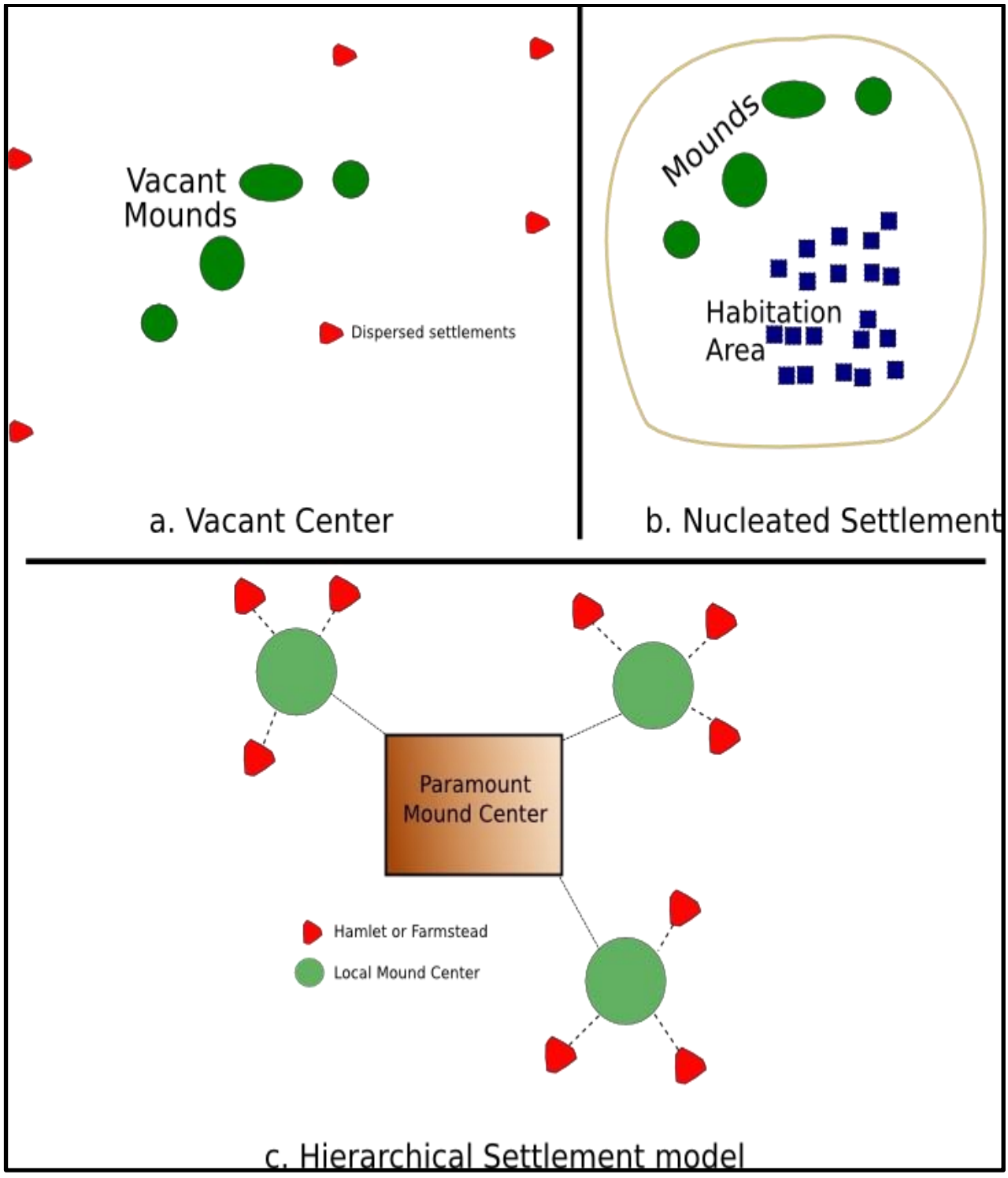

Figure 6. Hypothetical settlement pattern models (Goddard 2011: Figure 3).

Ideology

During the Middle Mississippian period, there is lots of changes in ideology throughout the Southeast. Evidence of a change in ritual practices are found within artworks and in burial contexts previously referred to as the Southeastern Ceremonial Complex. However regional variations occur in ideologies resulting in different artistic expressions (Knight 2007). These variations are characteristic in designs on highly crafted ceramic, copper, shell, and stone materials. These characteristics were likely also expressed on organic materials i.e. textiles or wood, but most were destroyed by the high rate of soil acidity throughout the region. Artistic expressions on these materials reflect an upper world, an underworld, and a middle world e.g., (Brown 1997). Also, these cultural materials reflect an ideology influenced by cultural heroes, godly ancestors, and nature (Dye 2014).

Celestial alignments were also important to the Mississippian culture. These alignments were reflected in the arrangement of mounds, plazas, and site orientation in the region (Guidry 2013; Mickelson 2018). Also, an alignment to cardinal directions were present in the orientation of burials and residential or ritual structures. Celestial alignments were also important to the agricultural practices of the Mississippians, particularly those reflecting the summer and winter solstices (Brown 1997).

History of Research at Chucalissa

Although Chucalissa is the most extensively excavated site in western Tennessee, little has been published regarding the artifact assemblage from the main residential portion of the site (Unit 6) which comprised the largest set of residential structures for the site. Most publications directly focus on data surrounding either the burials, ceramic assemblages, the excavation

trench, the sites two mounds, or take data from multiple units (Nash and Gates 1966; Nash 1972; Green 1975; Smith 1985, 1989; Childress 1992; Childress and Wharey 1996; Franklin and McCurdy 2005; Sharp 2005; Hartman 2010; McNutt 1996; McNutt et al 2012).

1940s Trench Excavation

One of the most significant early excavations at Chucalissa was the 1940-1942 excavation trench by The University of Tennessee, Knoxville (UTK) under the direction of T.M. Lewis (Franklin 2005). A 1.5 x 15 m long trench was dug into the eastern side of the large platform mound (Unit 5, Mound A). However, other material was also collected by UTK from other portions of the site (Franklin 2005). The shaded areas (refer to Fig. 3) show the locations of these excavations later designated as Units 2, 4, 5, 6, and 8 by Nash (refer to Fig. 3). However, due to the loss of original records and some of the artifacts from the 1940s excavation, the results were never published (Franklin 2005). The only remaining materials are 30 boxes of curated materials from the McClung Museum at UTK. These materials are now housed at the C.H. Nash museum, however most of these artifacts lack provenience (Franklin 2005).

1952 Memphis Archaeological and Geological Society (MAGS) Excavation

In 1952, the Memphis Archaeological and Geological Society (MAGS) performed excavations in Unit 6 at Chucalissa under the direction of Kenneth Beaudoin. Excavations were in direct response to the recommendations of Dr. T.M.N. Lewis regarding the potential of the site in understanding regional late period prehistory. Lewis felt the depth of the midden, unusual features of the site, and evidence for prehistoric terracing along the bluffs warranted further study (Beaudoin 1953). A spot was selected 197 feet north of the eastern trench dug into the platform mound during the 1940s excavation. Beaudoin (1953:7) states that “ten squares

were excavated in 10 ft blocks and laid out in relation to a small elm used as the NE corner of block 2." Each square was carried down to different levels based on the amount of disturbance present in each block, and each level was represented as 5 inches. Excavation block 1 was carried down seven levels, block 2 was carried down five levels, blocks 3 and 4 were carried down six levels, and blocks 6,7, and 8 were carried down one level before encountering disturbance. Only the undisturbed parts of blocks 6,7, and 8 were carried down five levels (Beaudoin 1953). During the excavation, portions of several houses were uncovered, including one large residential structure spanning almost all eight excavation blocks. Attempts were made by Beaudoin to fully define the entire housing pattern of the large structure which included the addition of blocks 9 and 10 to the excavation. Lumb and McNutt (1988:50) refers to this large structure as Structure 2 and believed it to be an early chief's residence. Also discovered during the excavation were three refuge pits, a hearth occurring slightly off center, and additional post molds. These features outlined at least five other structures present in the area (Beaudoin 1953). Finally, a midden present in Block 5 went down 13 levels, or 65 inches.

Artifact and Records Collection

Collections held at the Chucalissa Museum still have much to yield regarding the Mississippian period in the Southeast. The entire collection includes materials from the 1940 trench excavation, the 11 recorded unit excavations from the 1950s-1980s, and surface collections. Total artifacts recovered from these excavations number in the hundreds of thousands. For this thesis, only materials from Unit 6 excavations were analyzed. Most of the human remains excavated are excluded from the total artifact count for Unit 6. However, a few remains previously unaccessioned before this thesis and not attributed to a burial number may be included in the overall Unit 6 total. Any missing objects as well as artifacts sent off for

radiocarbon dating were not included in the overall artifact total for Unit 6. However, radiocarbon dates taken from organic materials associated with features related to residential structures are discussed in both the analysis and conclusion portions of this thesis.

Summary of Previous Work

Previous analysis work performed at Chucalissa primarily deal with ceramic analysis, burial analysis, and site layout. This work was done to establish site temporal and spatial chronology. Given that Chucalissa is the most extensively excavated Late Mississippian site in western Tennessee, an establishment of site chronology was important from a regional standpoint. Previous settlement pattern work at Chucalissa briefly discussed the elite population being housed in Unit 3 while Units 1 and 2 were hamlets and Unit 6 housed the lower-class population. The placing of two unusual residential structures, one just north of the platform mound and the other in the extreme NE portion Unit 6, are a potential anomaly to the original interpretation of the site. These structures are referred to as House 6 and House 10 in original field records, as well as in this thesis.

Unit 6 Excavations

A total of ten residential structures were excavated within the Unit 6 excavation block. Residential structures from Unit 6 span the Boxtown and Walls phase components of the site (Ezell, Albertson, and McNutt 1997). The *structures* are referred to in this thesis as *houses* in order to maintain a consistency with original accession records. However, I do not suggest that each structure referred to in this analysis, was residential in function. All available radiocarbon dates and housing forms were used in the following descriptions of each structure. Unfortunately, no housing forms were ever recorded for Houses 7-10. Therefore, all

descriptions regarding Houses 7-10 made in this thesis utilized past excavation maps and associated features.

Description of Structures

House 1

Portions of House 1 from Unit 6 were excavated in July of 1963. However, it was determined that most of the house was destroyed during the 1940s trench excavation. The house was discovered in Level 5 at a depth of 18.3 to 19.1 ft below datum. The only excavated section of House 1 covered the N590 R20 excavation block and extended into the N590 R10 excavation block. Post Molds range between 0.3 to 0.7 ft in diameter and reach a depth of 0.5 to 0.9 ft. No central hearth was discovered due to the middle part of the house falling within the 1940 excavation trench limits. The southside portion of the house measures to roughly 15 ft, however the actual dimensions of the structure are indeterminate due to the lack of available data.

House 2

The south wall of House 2 was originally excavated by Nash in 1963. The wall was excavated in Level 9 at a depth of 21 ft. The south wall extended from excavation block N590 R40 eastward into the N590 R30 block and measured 14 ft.

House 2 post molds range 0.2 to 0.3 ft in diameter and reach a depth of 1.3 ft. Interior features in House 2 include; Feature 24 a square 1.1 x 2 ft fire basin 0.4 ft deep, and Feature 139 a large pit extending down from the original 21 ft floor level to a depth of 21.5 ft making the pit at least 0.5 ft deep. Unfortunately, most of the house has eroded away due to a washout

from a nearby drainage ditch. However, a radiocarbon sample was taken from Post Mold 28 and sent off for dating.

House 3

House 3 was excavated from 1963 to 1965 and from 1975 to 1977. The original field data was used from these excavations to create a map of the structure. The House 3 floor was excavated in level 2 at a depth of 17.5 ft. The full extent of the house covered excavation blocks N560-580 R40-70 and has a NE orientation. Post Molds are 0.8 to 1.0 ft in diameter and are 1.8 ft deep. The entire structure measured 22 x 20 ft. This structure also intrudes into an earlier house, later accessioned as House 4. Associated features found within House 3 include a circular fire pit containing ash and a post mold contain corn cobs.

House 4

House 4 was excavated from 1964 to 1967. A fired clay floor was excavated at a depth of 17.6 to 18 ft. The building spans the N560-580 R40-50 excavation blocks along a NE orientation resulting in a ca. 20 x 20 ft structure. Post molds average 0.25 to 0.4 ft in diameter and were 1.4 to 2.0 ft deep. Internal features in House 4 include; Feature 57 a circular pit extending to a depth of 18.4 ft, and Feature 62A a central circular fire basin. No Wall Trenches was discovered during the excavation.

An anomaly was also found during initial excavations where concentrations of daub were found outside the house floor area. Smith re-excavated House 4 during the 1975 through 1976 seasons and suggested a prior building was present in the same location. The housing records shows a similar episode occurring in a Unit 3 house constructed on top of a shallow pit. This

building sequence resulted in the collapse of walls outward, as opposed to inward from the floor during its destruction.

House 5

House 5 was discovered at the end of the 1966 field season and was subsequently excavated in 1967. The structure is in level 8 with the floor located 21.8 ft deep. House 5 was found mostly in the N570-580 R20 excavation blocks and oriented in a NE direction. The wall patterns reflect an overall structure size of 12.5 x 13.0 ft. The wall trench runs between 0.4 to 0.5 ft, and post molds range between 0.2 to 0.3 ft. Associated features include a circular pit and a circular fire basin. Both features have a diameter of 1.7 ft and are 0.25 ft deep.

House 6

House 6 was excavated in 1967 in level 7 which included the remains of a fired clay floor 19.8 to 20.1 ft in extent. The northern part of this structure covers the N540-560 R15-40 excavation blocks. The length of the northern wall is 25.5 feet. The structure also contained a wall trench with an average width of 1 foot and is 2.3 to 2.7 ft deep. Post molds are 0.4 to 0.6 ft in diameter and are 2.3 to 2.7 ft deep. Internal features in House 6 include; Feature 142 a circular pit 3.2 ft in diameter and 0.4 ft deep with sloping sides and a flat bottom, and Feature 155 a circular fire basin. This residential structure is also larger than the five previously mentioned houses and contains a deeper wall trench.

House 7

House 7 was originally excavated during the 1966 field season. The structure was then re-examined by Smith during the 1975 field season. Due to the rebuilding sequence of Houses 3, 4, 7, and 8, only minimal data is available for this discussion. Also, a portion of House 7 was

disturbed during the 1940s trench excavation. The only data available on House 7 are based on a composite map drawn by Smith in 1983.

A portion of the western wall stub was excavated and assigned as Feature 80 in the original records. A small portion of the southern wall trench was also excavated and labeled as Feature 93 in the original records. A yellow clay floor was uncovered at a depth of 18.35 to 18.38 ft. Features 57 and 66 are both attributed to House 7. Both features were circular fire hearths. There are also approximately 40 post molds associated with this structure. Based on these excavated features, Smith estimated House 7 was roughly 16 x 19 ft.

House 8

House 8 was excavated during the 1975 field season directed by Smith. Due to the rebuilding sequence of Houses 3, 4, 7, and 8, only minimal data was available for this discussion as well. All data presented in this House 8 discussion were drawn from a composite map drawn by Smith in 1981. However, the disruption caused by the rebuilding of structures caused Smith to even question the data's accuracy.

Only a small portion of the western wall stub was available for excavation located at a depth of 18.63 to 19.02 ft. This wall stub was assigned as Feature 91 in the original records. An even smaller portion of the southern wall trench was available for excavation located at a depth of 18.51 to 19.01 ft. The southern wall trench is labeled as Feature 94 in the original records. Portions of the clay floor were excavated at a depth of 18.5 to 18.7 ft. Features attributed to this structure are labeled as Features 97 and 98 in the original records. Both features are circular fire basins. A total of 29 post molds are also attributed to the structure. Based on the questionable data available from the House 8 excavation, the structure appears to be approximately 20 x 20 ft.

House 9

House 9 will be omitted from this analysis. The only available evidence of its existence was a fire basin in the cluster of Houses 3,4,7, and 8.

House 10

House 10 was excavated during the 1986 and 1987 field seasons (Fig. 9). An almost complete structure was uncovered by the field crew. This structure contains a central circular fire hearth and at least three pits. Also, one large burial pit occurs within House 10 and two are located just outside the structure. Post molds were also uncovered in abundance and associated with the structure. House 10 was roughly 15 x 15 ft square and was oriented in a NE direction.

Excavated materials from Unit 6 were found in abundance in or around House 10. In fact, the rarest artifactual material occurs in a higher frequency associated with this structure than any other house in Unit 6. Given that no data was ever published about this structure or these rare artifacts, House 10 is a main focal point of this thesis.

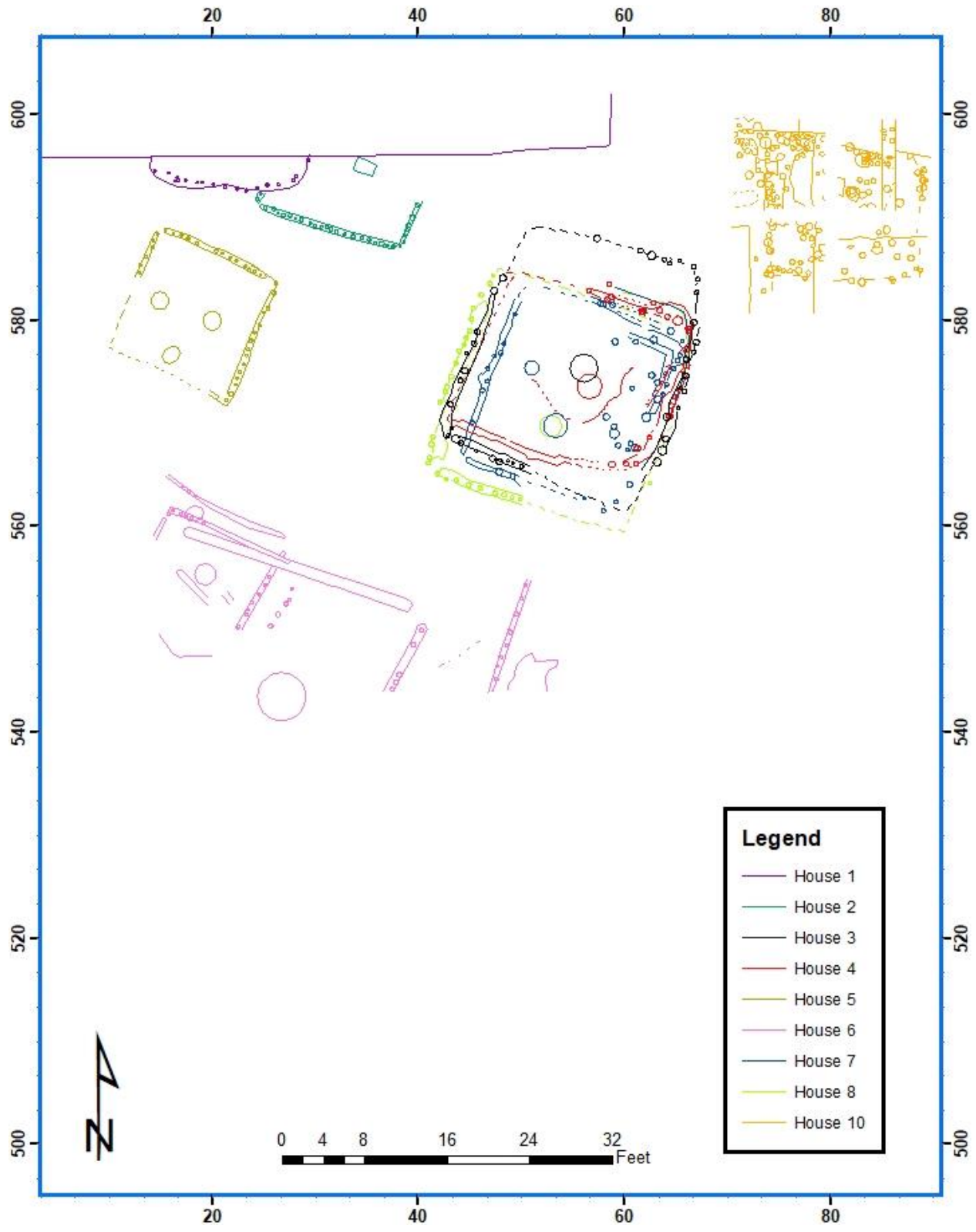

Figure 7. Plan view of structures exposed in Unit 6.

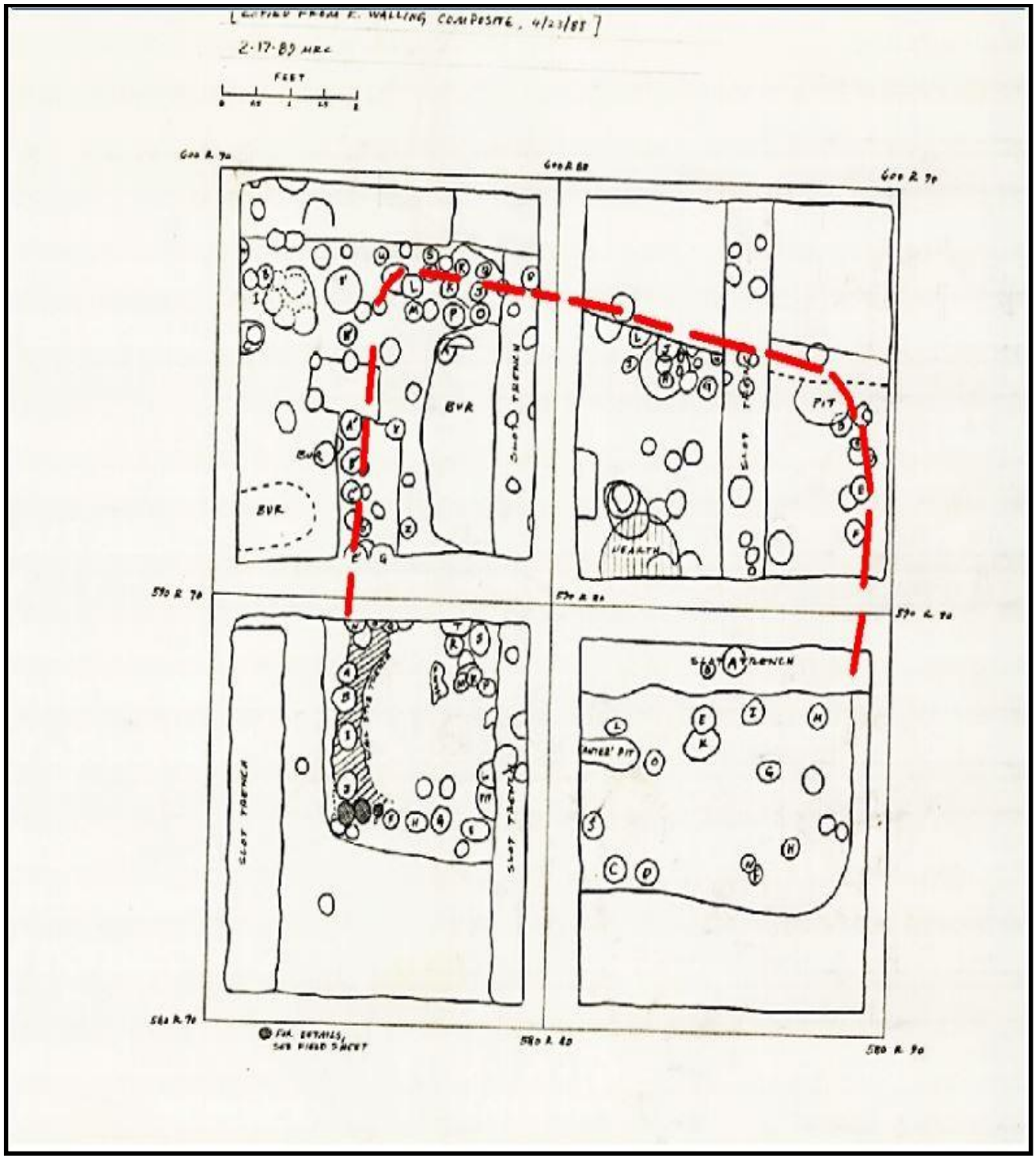

Figure 8. House 10 located in excavation blocks N570-590, R 70-90.

Structures Dating to the Boxtown Phase (A.D. 1350-1450)

The Boxtown and Walls phases are culturally distinct from one another mainly in the ceramic and architectural complexes (Nash 1972). The Neeley's Ferry Plain Boxtown component contains crushed shell of only about 10% to 20% paste, and the exterior is partly polished to burnished. This is in direct opposition to the smooth Walls Phase Neeley's Ferry Plain ceramics. Low-rimmed globular jars with slightly everted rims are the primary vessel form, and water bottles have globular bodies and necks roughly equal in height and diameter.

Boxtown houses consist of long poles set into narrow trenches along the house walls and usually were 18 to 20 ft on each side. Hearths contained in housing structures were square or rectangular measuring one to two feet on a side and one to three-tenths of foot deep. These hearths were normally in the center of a house floor (Nash 1972). Houses during the Boxtown period were roughly square with walls oriented to cardinal directions and range from 10 to 16 feet on a side. Though open-corner wall trenches were constructed, wall trenches were not much wider than the posts and only one-third to half the depth of the post molds (Nash 1972). Houses assigned to the Boxtown phase from the Chucalissa site are shown in (Fig 10).

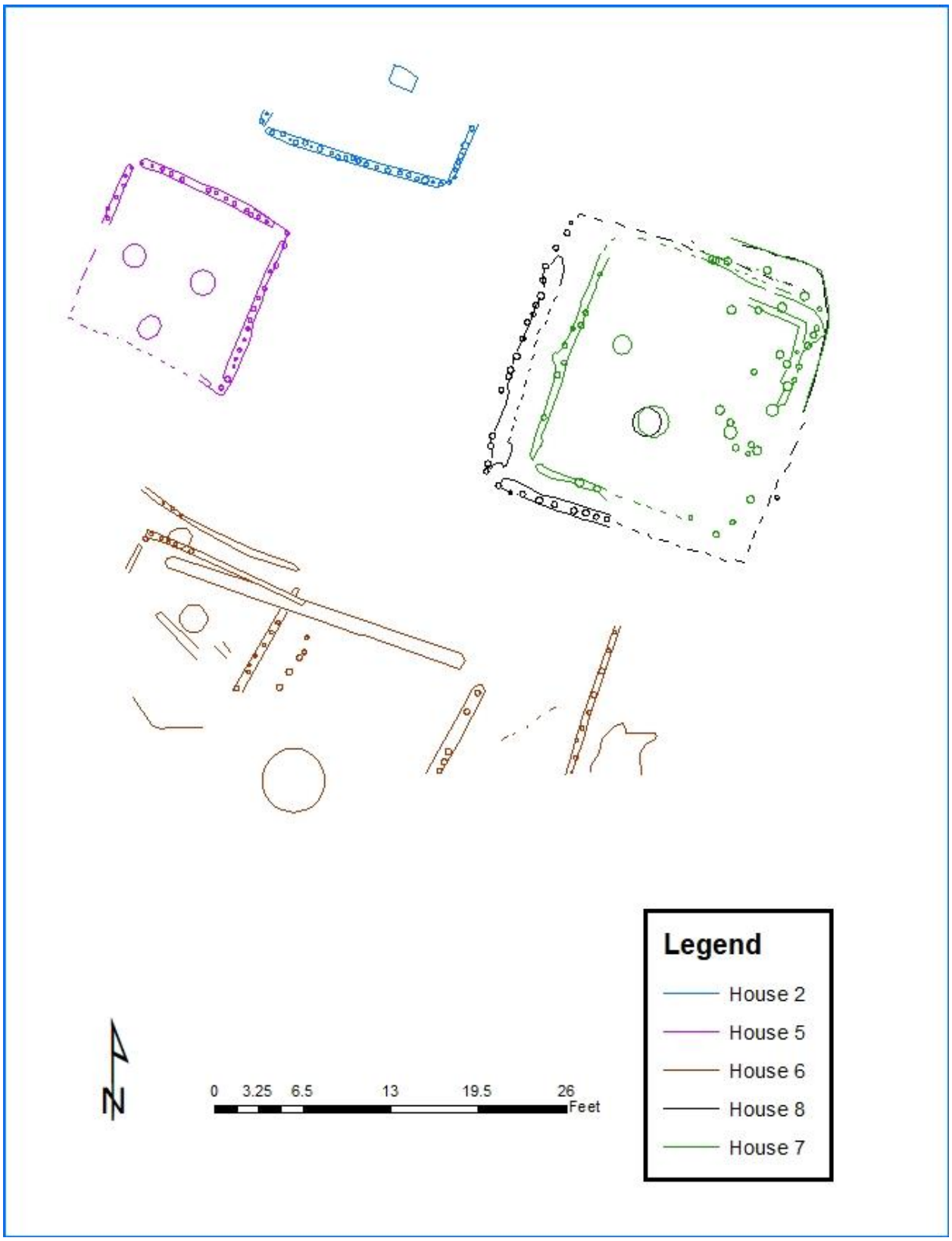

Figure 9. Houses assigned to the Boxtown Phase.

Structures Dating to the Walls Phase (A.D. 1450-1520)

The Walls Phase is originally defined as the Walls-Pecan Point Phase by Griffin (1951:233-236) and later refined by Phillips (1970:936-938). The separation of the Walls and Pecan Point phases were based on different ceramic assemblages. According to Smith (1972), only the Walls component present at Chucalissa, Woodlyn, Cheatham, Irby, Walls, and Norfolk still fit into Griffin's (1951) Walls-Pecan Point Phase category.

Residential structures constructed during the Walls Phase at Chucalissa contain individual wall posts 5 to 8 inches in diameter and usually were 14 to 18 inches deep. Walls phase residential structures constructed in Unit 6 range from 14 to 20 ft square and those in Unit 3 range 18 to 22 ft square (Nash 1972). Residential structures from Unit 3 and Unit 6 were usually built with individual post construction (Nash 1972). These residential structures contain hearths that change from square or rectangular during the Boxtown phase to circular during the Walls phase (Nash 1972). Houses assigned to the Walls phase occupation of Chucalissa (Fig 11). Also, burial patterns tend to change from a designated communal spot to locations surrounding individual housing structures (Smith 1989).

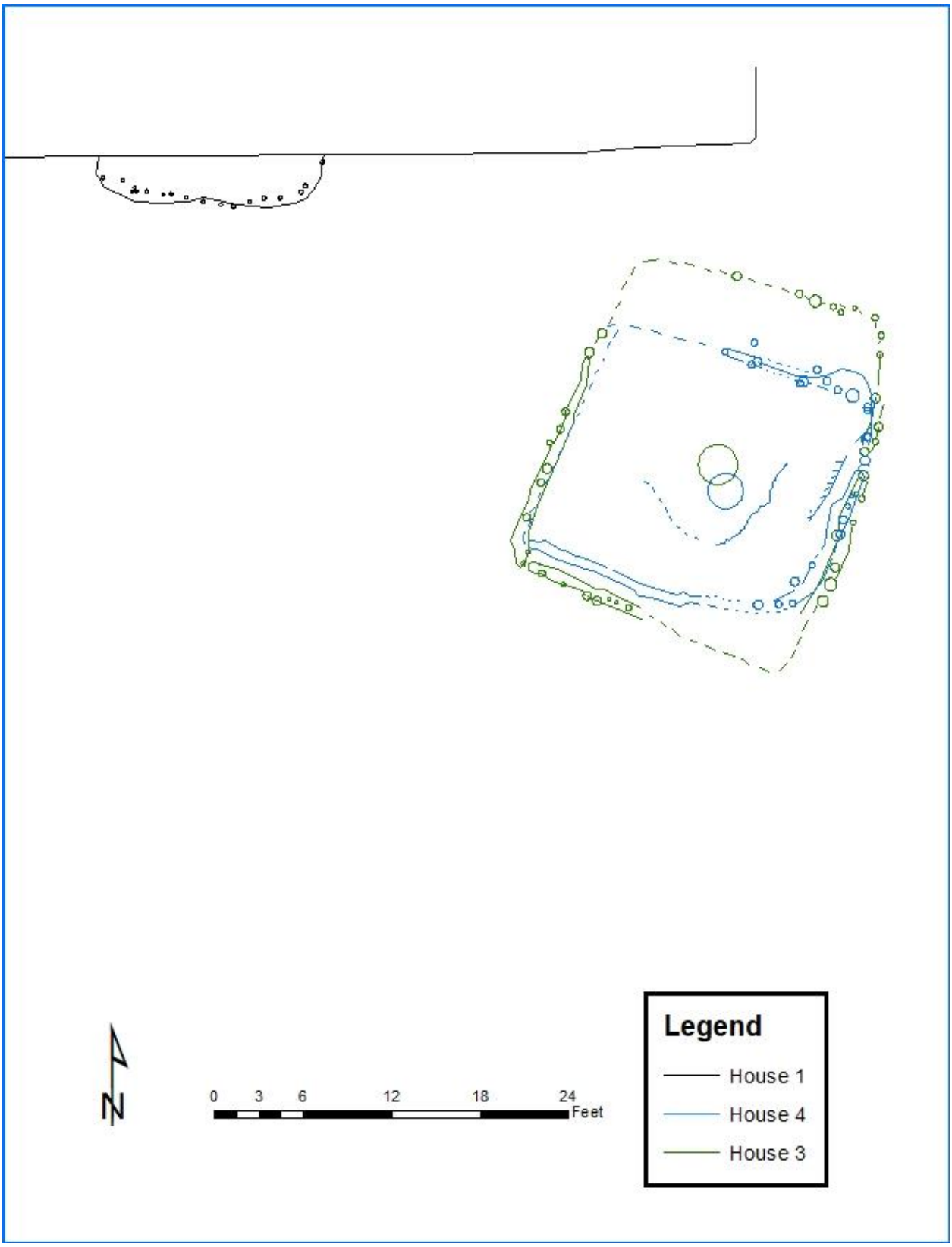

Figure 10. Houses assigned to the Walls Phase.

3. **Methods and Results**

This research was undertaken to gain a better understanding of the main residential portion of Chucalissa Unit 6 using the spatial distribution of artifacts in relation to residential structures and features. This was achieved using GIS performing an artifact density analysis to a maximization of 5 x 5 ft squares. Only the artifacts that could be providenced to a 10 x 10 ft block were utilized in this analysis. Artifacts that lacked provenience to a 10 x 10 ft block or provenience data were not used. A complete breakdown of artifacts by 10 ft block, or available data, is presented in the appendix of this thesis. Each 10 x 10 ft block is referenced to the SW corner. Several issues hindering this analysis as well as the materials used in this analysis are discussed in the next few sections.

Unit 6 Materials

The first step in this analysis required the sorting of materials recovered from previous Unit 6 excavations. However, the Unit 6 materials were largely disorganized in the C. H. Nash Museum repository. Aside from a simple box label stating that these materials were excavated from Unit 6, there was no real organization to the collection. Approximately three hundred clear plastic totes containing over 130,000 artifacts were sorted. All artifacts were analyzed, classified, counted, weighed and entered in an Excel spreadsheet. The Excel spreadsheet was then uploaded in the ArcGIS program for spatial analysis.

Excavation Maps

Hand-drawn Unit 6 excavation maps located at the Chucalissa museum were scanned and digitized. These maps provided a basis for understanding the residential structures and features previously excavated from Unit 6. The process involved integrating paper maps and defining

their spatial coordinates to properly position and scale (Conolly and Lake 2006). These maps were georeferenced to a site grid using an X, Y format. The X, Y, format describes an east-west distance or easting, followed by a north-south distance or northing. These maps were georeferenced by establishing four control points tying the paper map to exact X, Y coordinate points in ArcGIS. This created a map overlay which could be cross-referenced and used to create a complete map of Unit 6 (Clarke 2003). Using the rectification tool, each map was manually positioned to the proper ArcGIS map coordinates (Conolly and Lake 2006).

Digital Spatial Referencing of Data for Spatial Analysis

The fishnet tool in ArcMap was utilized to create a 10 x 10 ft cell-size grid corresponding to the Chucalissa site coordinate system. It was then possible to georeference scanned excavation plan maps and to create raster (grid cell layers) of artifact distributions for each 10 x 10 ft block that had artifacts recorded for it. A spatial relational database file linked to the 10 x 10 ft cell-size fishnet layer was then created by importing an Excel spreadsheet-based artifact data into the database.

Once the relational database was created, point data representing artifact classes were then converted to raster layers interpolated to 5 x 5 ft cells of artifact distributions across Unit 6. The point data represented the quantity of artifacts related to each point and calculated statistically in the ArcGIS program.

Fieldnotes

Original field notes regarding excavations directed by Nash were utilized. These notes had already been digitized and were on file in the Museum Collection Manger's office. Field notes from excavations directed by Smith were harder to locate. Some of Smith's notes were stored

in a personal filing cabinet in the museum repository while other field notes were largely unavailable. No field notes were ever digitized until this analysis regarding excavations directed by Smith. Many of Smith's field notes are still not digitized at the time of writing this thesis.

Excavations directed by Nash and Smith were slightly different in the way artifacts were recorded. This provided an even bigger challenge to understanding all of the available excavation data. Hours of careful analysis of the excavation notes showed that Nash excavated by tenths of a foot and labeled them according to "Levels" while Smith dug strictly by stratigraphic profile and recorded the data as "depth below datum." A basic breakdown of the features excavated by Nash are shown in Fig 11. A breakdown of levels designated as Walls Phase and Boxtown phase components are shown in Figures 12 and 13.

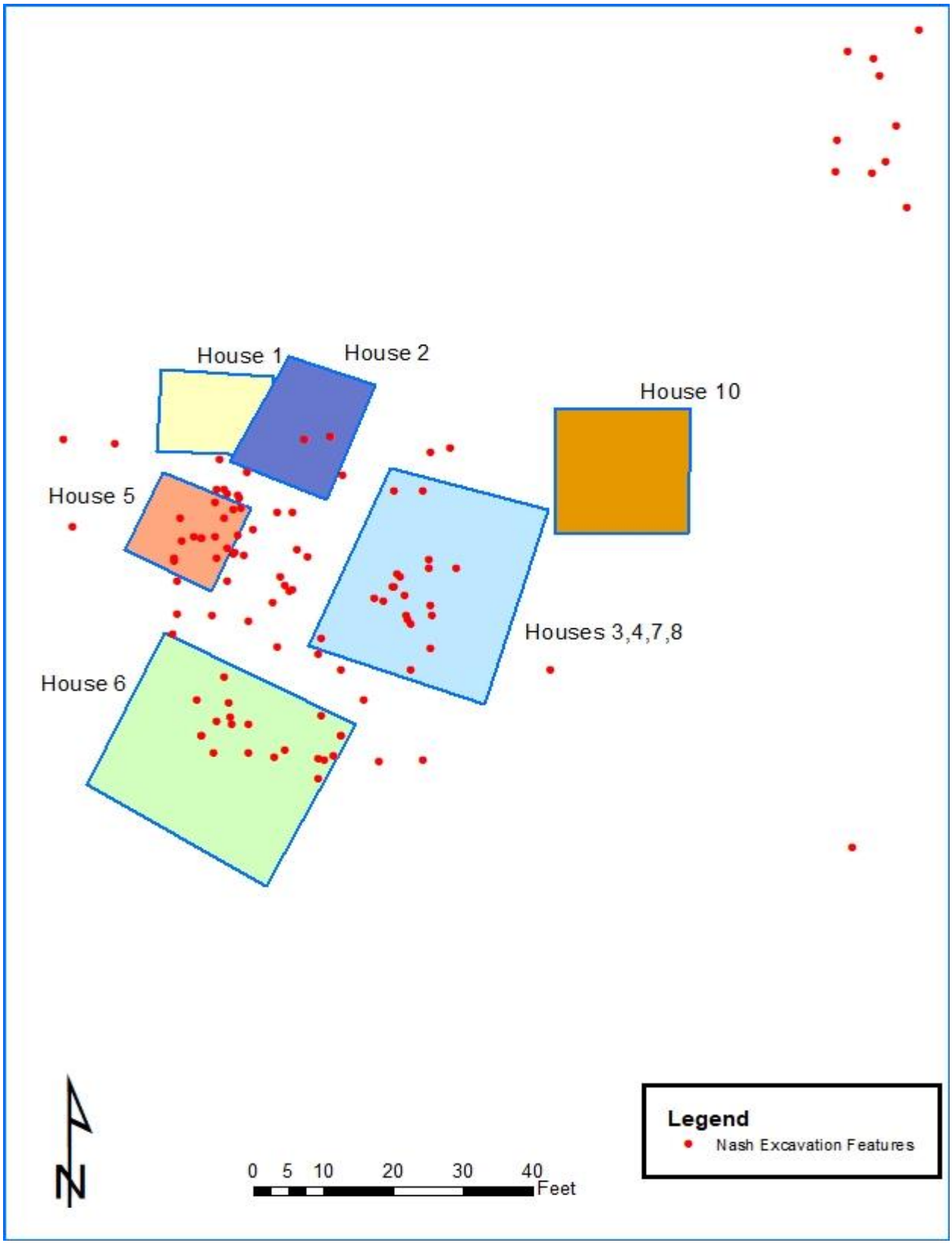

Figure 11. Unit 6 Nash Excavation Features.

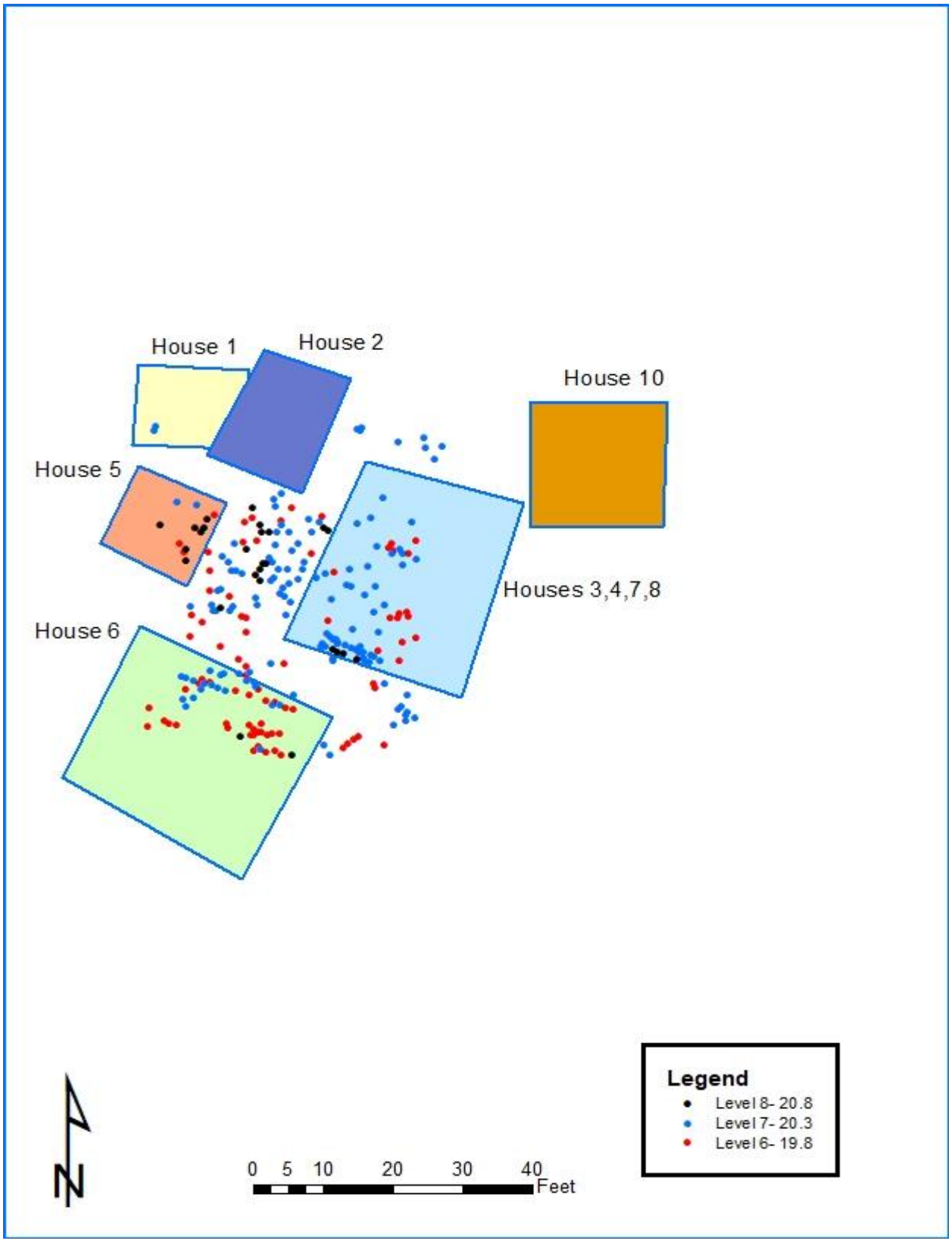

Figure 12. Unit 6 levels and features assigned to the Boxtown Phase.

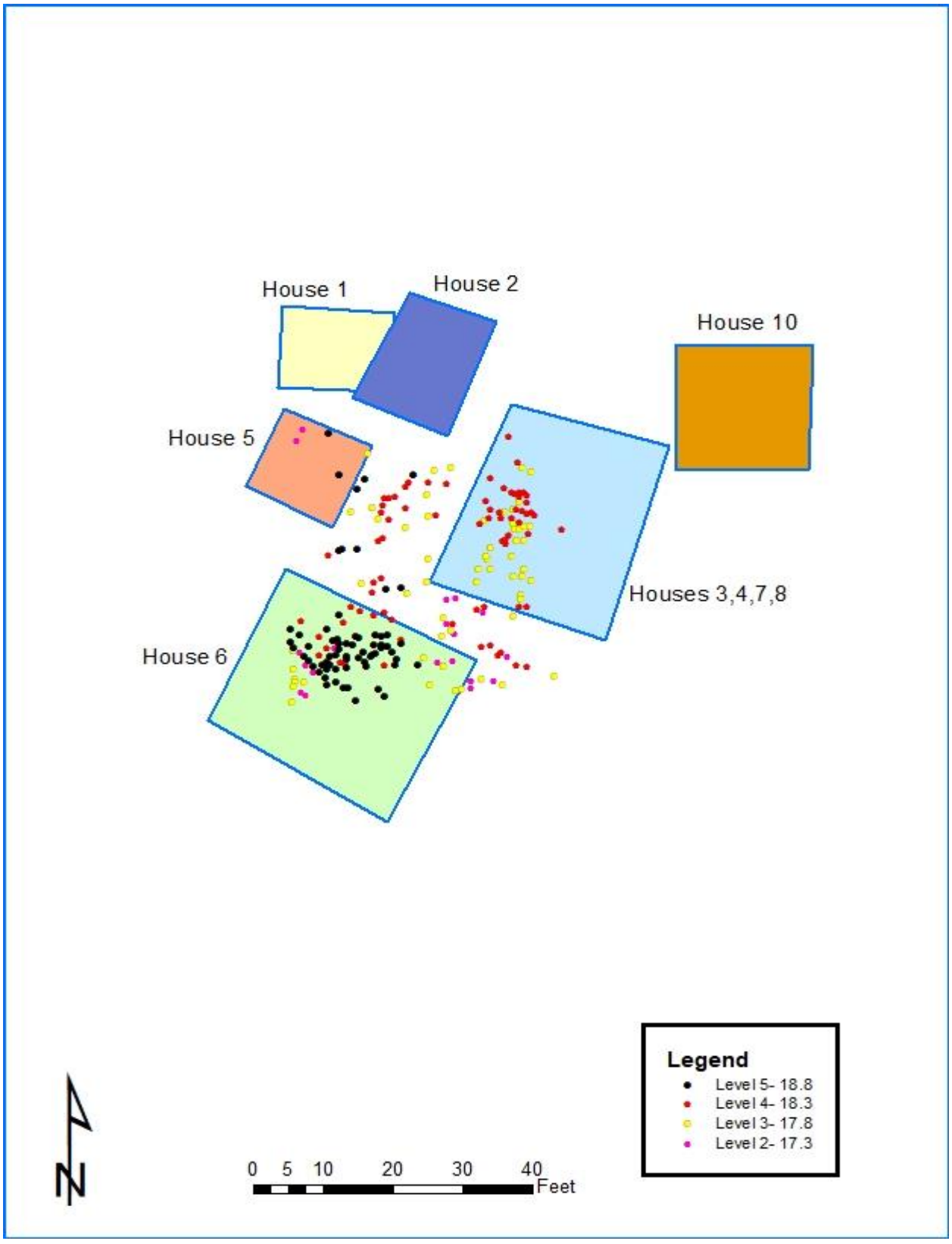

Figure 13. Unit 6 levels and features assigned to the Walls Phase.

The rest of this chapter will be devoted to breaking down the methods employed in this analysis in the following order; (1) An explanation of previously excavated materials, (2) maps utilized, (3) and artifacts studied.

This analysis incorporates over 130,000 artifacts from previous excavation during the 1950s through 1980s. Data not utilized in this study include materials from initial testing, the 1940s trench excavation, and the 1952 MAGS excavations. Phase 1 materials were not utilized due to the lack of provenience data. The 1940s materials were not utilized due to a lack of provenience data, and the difficulty in interpreting the coordinate system used during the excavation. This problem was also mentioned in the Lumb & McNutt (1988) publication. Also, the loss of many materials from the MAGS excavation prevented the use of those materials in this analysis (Lumb and McNutt 1988). Materials not utilized in the 5 x 5 ft analysis of this thesis include those without a clear recording of provenience or artifacts unable to be geographically coordinated to a 10 x 10 ft excavation block. However, all the 130,000 artifacts sorted are displayed according to the original accession records in the appendix section in tables.

Artifacts were separated into Excel spreadsheets and then uploaded as a data table into ArcGIS. Next, the table was then set to display the X, Y coordinate system of the Chucalissa sit grid established in the original artifact accession records. Once the X, Y coordinates were set to display, an individual polygon shapefile was created. Using the ArcGIS catalogue, new folders were created and saved for each individual category of artifact. Once a polygon shapefile was created, a raster dataset was created. Each 10 x 10ft blocks were interpolated to 5 x 5 ft cells. The raster dataset was set to display artifact type and quantity calculating the overall distribution of the artifact across Unit 6.

Map Scales

Most scales used in this analysis were set to a ratio of 1:150, however a few examples of higher or lower ratios were used depending on the distribution of artifacts across Unit 6. North arrows, ratio scales, and legends were then added to each map. A few artifact categories were combined whenever appropriate to cut down on the number of maps utilized in this analysis. The following paragraph explains the artifact classification system used in this analysis.

Artifact Classificatory System

Artifact materials were first broken down using a simple traditional classificatory system employing designations used in the original records such as ceramic, daub, animal bone, stone, shell, and historic material. An additional split of some categories was undertaken to incorporate materials such as bone tools, stone tools, effigies, ceramic discs, walls engraved ceramics, and some rarer artifact assemblages in the analysis. Also, a complete breakdown of lithic debitage and stone tools were split to show their relation to House 10. These categories were broken down to better understand House 10 in relation to the other structures labeled as houses in Unit 6. Results from each category are presented in the following analysis.

4. **Analysis**

This chapter covers the spatial distribution of each 10 x 10 ft excavation block within Unit 6 through the artifact distribution across 5 x 5 ft grid cells. A focus was on the excavation blocks located between the horizontal locus of N540-100 R30-100. These excavation blocks cover all the residential structures excavated in Unit 6. Excavation blocks N620-670 R110-130 were also used in this analysis (refer to Fig. 7). The N620-670 R110-130 blocks were incorporated in spatial analysis because they also contain features. Data for other excavation blocks not used in this analysis are provided in the appendix section. The breakdown of data by squares are displayed according to basic artifact type, quantity, and weight. The raw data are presented in tables in the Appendix A section. Also, pictures were taken of select artifacts and are presented in Appendix B. A simple explanation of the analysis section is explained in the following paragraph.

This chapter covers the analysis of artifact distribution from Unit 6. The subsequent paragraphs contain a comparison of artifact density in relation to residential structures and features. Comparisons are made between types of materials, features, and structures. This analysis clearly shows a distinction between House 10 from all the other houses using the distribution of artifact density across 5 x 5 ft grid cells.

The first map displayed (refer to Fig. 7) is the complete reconstruction of residential structures labeled houses in Unit 6. Although ten houses are recorded in the original housing records, evidence for House 9 is scantly based on a fire basin not associated with any of the other structures. Given that the fire basin is found in the rebuilding cluster of Houses 8,7, 3, and 4, I have chosen to omit it from this analysis. This building sequence begins with House 8, then House 7, followed by House 4, and finally House 3. House 8 is the oldest and is recorded at the

deepest depth, while House 3 is the newest and recorded at the highest depth. For the rest of the analysis, houses are displayed as simple square or rectangular structures based on their dimensions to prevent distraction from the actual artifact analysis.

Artifact Density Analysis

The rest of this analysis breaks down artifact density across Unit 6 using 5 x 5 ft grid cells. Each class of artifact is categorized according to their original classification in the accession records. The original classification system was kept to prevent a mistranslation of the original records with my own classificatory system. Categories are first separated by simple typologies such as Animal Bone, Bone Tools, Shell, Daub, Ceramic, Historic Material, Stone Debitage, Stone Tools, and Rare Artifacts. Each category is then broken down further to include more specific artifact type assemblages. Artifacts labeled as stone were classified the most to show the high frequency of material in or around House 10. Artifacts assigned to the category of Rare Artifacts are also broken down further to illustrate their relation to House 10. This was done to illustrate the general lack of these materials across the rest of Unit 6. It must be noted that some of the material used in this analysis could not be assigned to accurate depths. Furthermore, the sheer amount of material examined, and the general mixing of levels due to the building of structures made determining an accurate time period classification for each artifact improbable at this time.

Animal Bone

The first category of artifacts analyzed are classified as Animal Bone. This category is defined in this thesis as material recovered during excavations belonging to any animal species. However, most animal bones in this analysis were deer. Figure 14 shows the entire animal bone

density across Unit 6 per 5 x 5 ft grid cell. Results show that House 10 has the highest number of animal bones occurring within any residential structure. However, a large quantity of animal bone occurs outside of House 5, and a small percentage is found within House 6. The only sub-category of animal species analyzed in this thesis separately are labeled as fish bones.

Fish Bone

The sub-category labeled as fish bone are defined in this thesis as bone relating to any species of fish. The only separation of fish bones in the accession records prior to 1968 were gar scales. Gar scales were separated based on their classification as a projectile point in the original accession records. Figure 15 shows fish bone density across Unit 6 per 5 x 5 ft grid cell. The highest amount of fish bone occurs within House 10 at a ratio of 2:1 when compared to other residential structures. Also, the N580, R60-80 portions of House 10 contain twice the amount of fish bones as any other block within Unit 6. However, it must be noted that many of the earlier excavations directed by Nash prior to 1968 may have grouped fish bone into the category of animal bone. This might account for the higher number of fish bones within House 10.

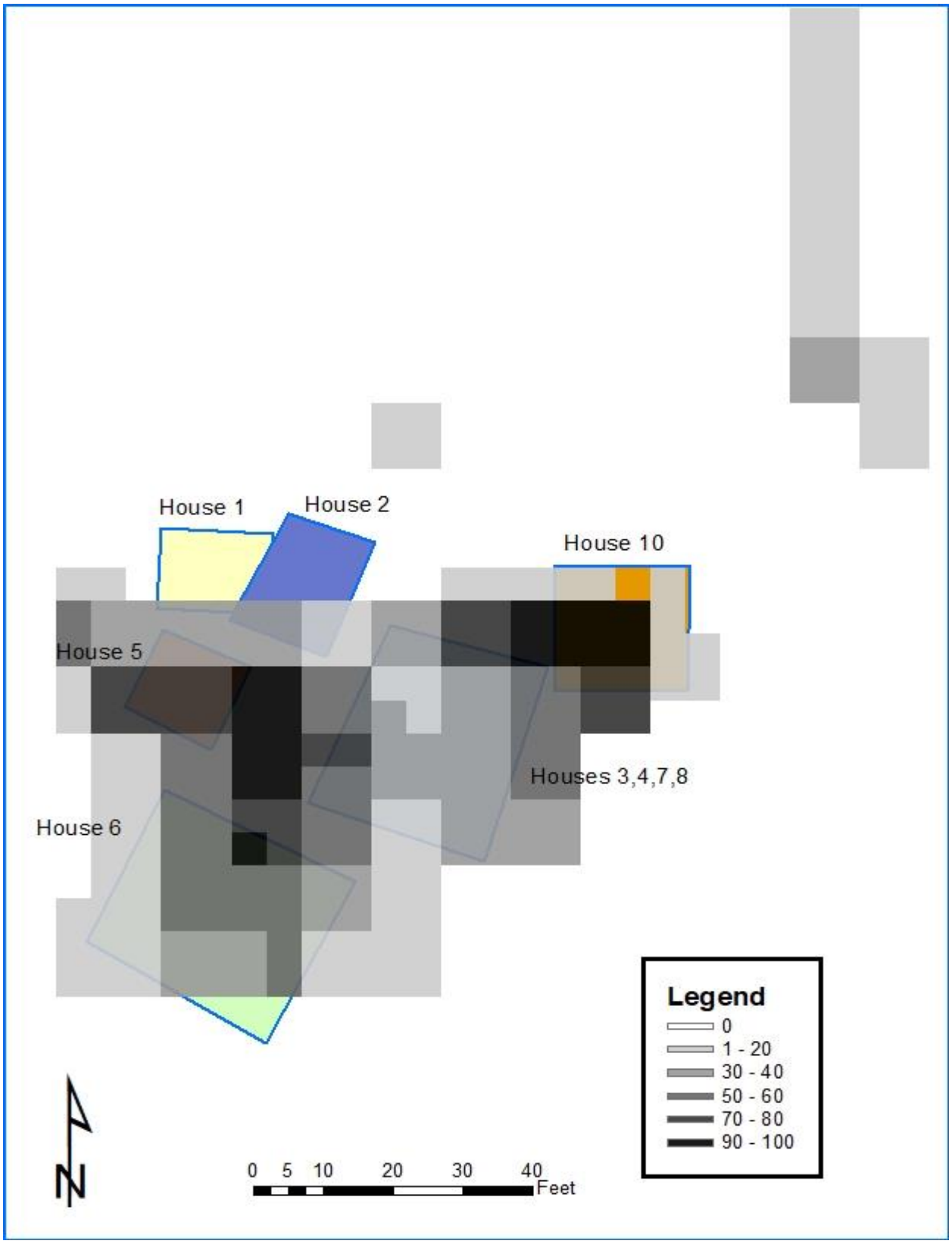

Figure 14. Animal Bone artifact density per 5 x 5 ft grid cell.

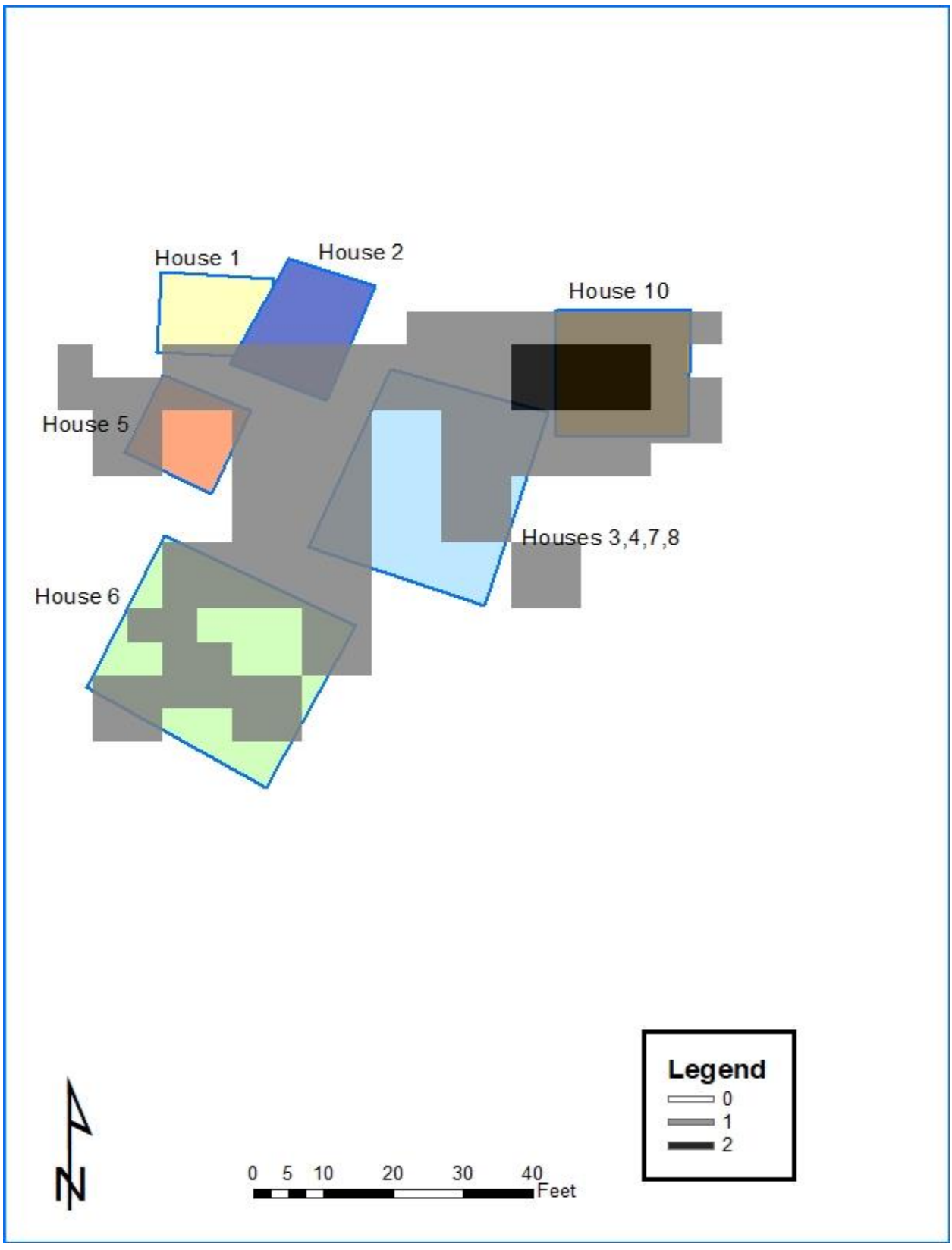

Figure 15. Fish Bone artifact density per 5 x 5 ft grid cell.

Bone Tools

The next analysis presents the spatial distribution of artifacts classified as Bone Tools. Bone tools are classified in this thesis as any modified animal bone used for any utilitarian purpose instead of just simply discarded material. A breakdown of the different types of Bone Tools was not performed in this analysis, but simply mapped to show their distribution across Unit 6 (Figure 16). Results from this analysis show bone tools scattered consistently across Unit 6 in relation to all houses. When this map was generated, fishing bone tools were still incorporated into the entire category likely accounting for some of the distribution recorded within House 10.

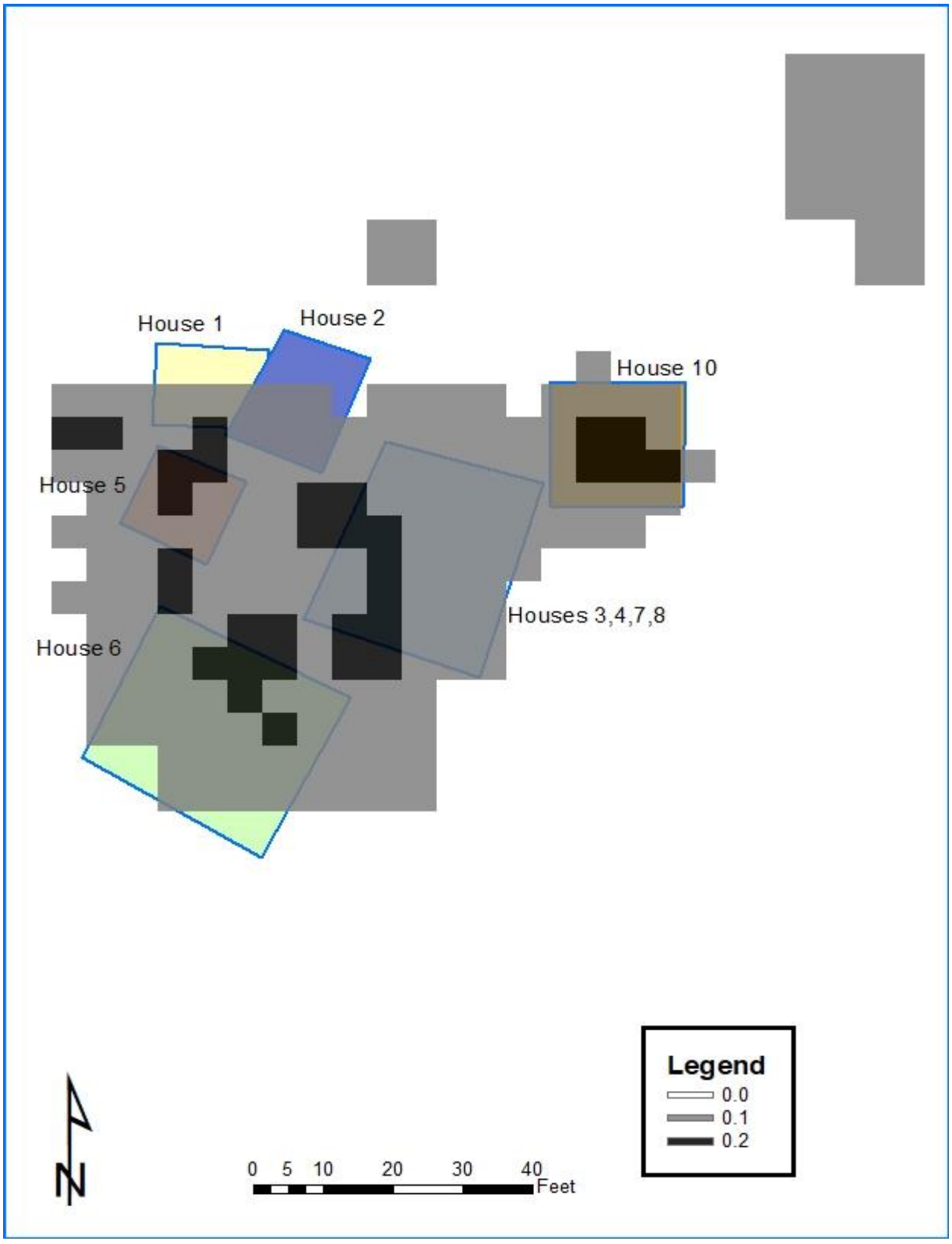

Figure 16. Bone Tool artifact density per 5 x 5 ft grid cell.

Shell

Shell is defined in this analysis as either being mussel shell or land snail shell. The purpose or function of each shell were not considered, but rather used material labeled as either mussel shell or land snail shell in the original accession records. Also, turtle plastrons (shells) were not incorporated in the overall shell count and were separated into their own sub-category. Figure 17 shows the distribution of shell artifact density across Unit 6 in 5 x 5 ft grid cells. The highest portion of shell materials were found within aggregate of Houses 3, 4, 7, and 8.

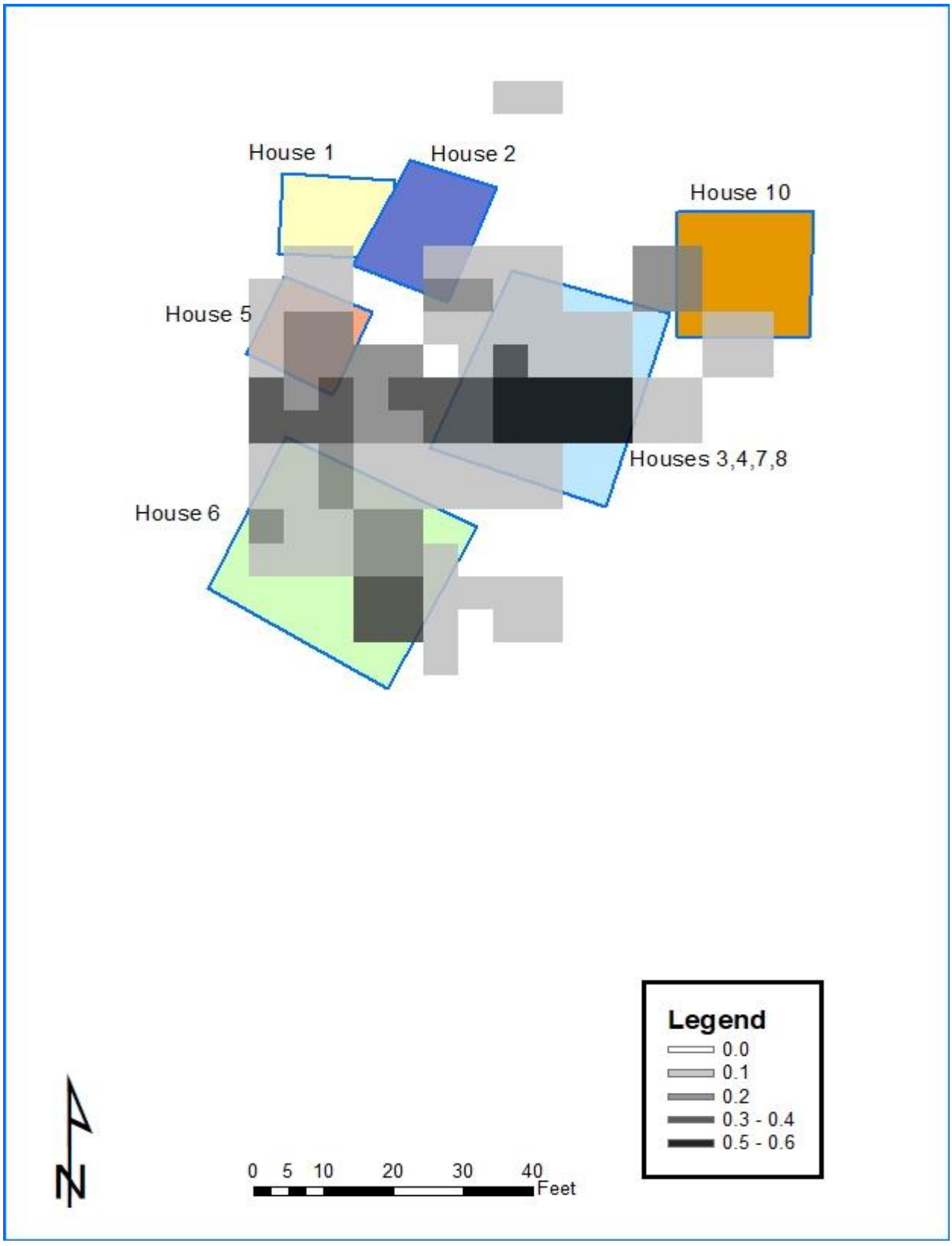

Figure 17. Shell artifact density per 5 x 5 ft grid cell.

Turtle Plastron

The only shell category analyzed separately in this thesis is labeled turtle plastron. Whether the turtle plastron was worked is not considered in this analysis. However, a substantial amount of turtle plastron appears worked and labeled accordingly in the original artifact accession records. The distribution of turtle plastron across Unit 6 is shown in (Fig. 18). A high occurrence of Turtle plastron is found in House 10 at a ratio of 2:1. This analysis reflects the majority of Turtle plastron occurs at a ratio of 3:1 in the N570-580, R60-70 blocks which contains a portion of House 10.

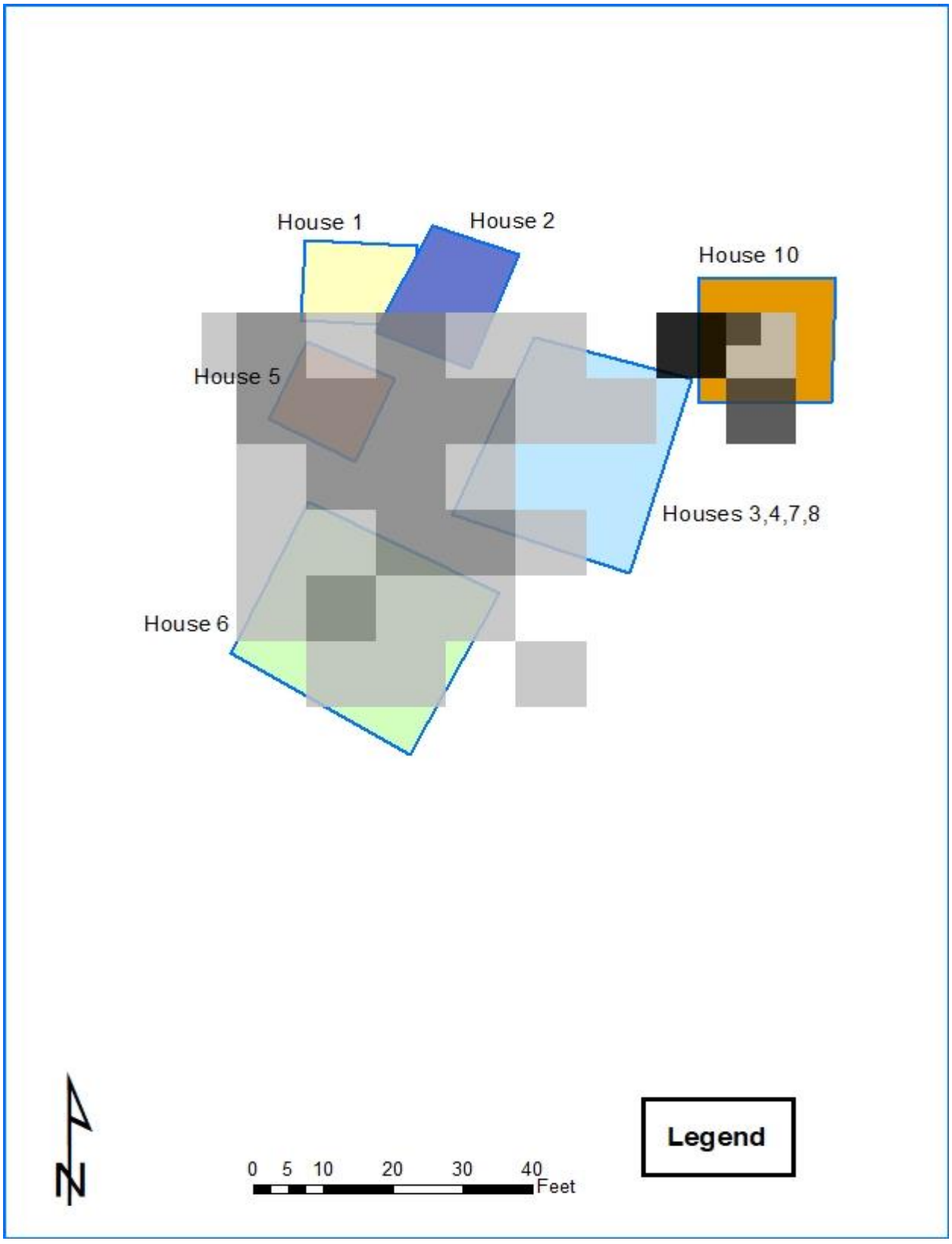

Figure 18. Turtle Shell artifact density per 5 x 5 ft grid cell.

Daub

The category assigned to daub in this analysis included artifacts labeled as either daub and fired clay (Fig. 19). Also, the total weight per 5 x 5 ft grid cell was analyzed (Fig. 20) Wattle and daub were used in the construction of Mississippian period residential structures. Once daub is fired, it creates a reddish/orange powder. This reddish/orange pattern is visible in soil layers and often indicates the presence of a prehistoric structure. While daub is spread consistently throughout Unit 6, the highest amounts occur outside of House 10, and the rebuilding sequence of Houses 3, 4, 7, and 8.

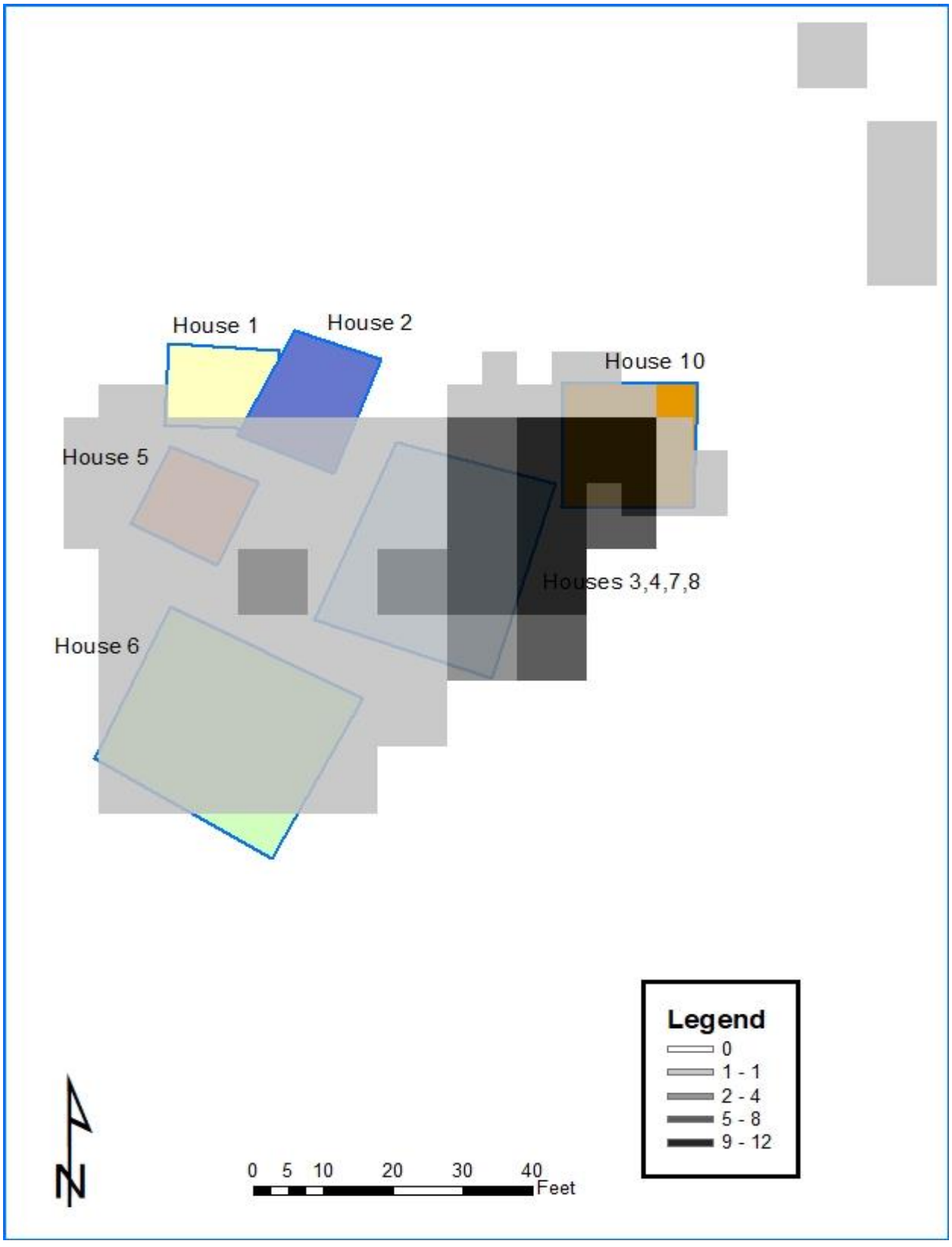

Figure 19. Daub artifact density per 5 x 5 ft grid cell.

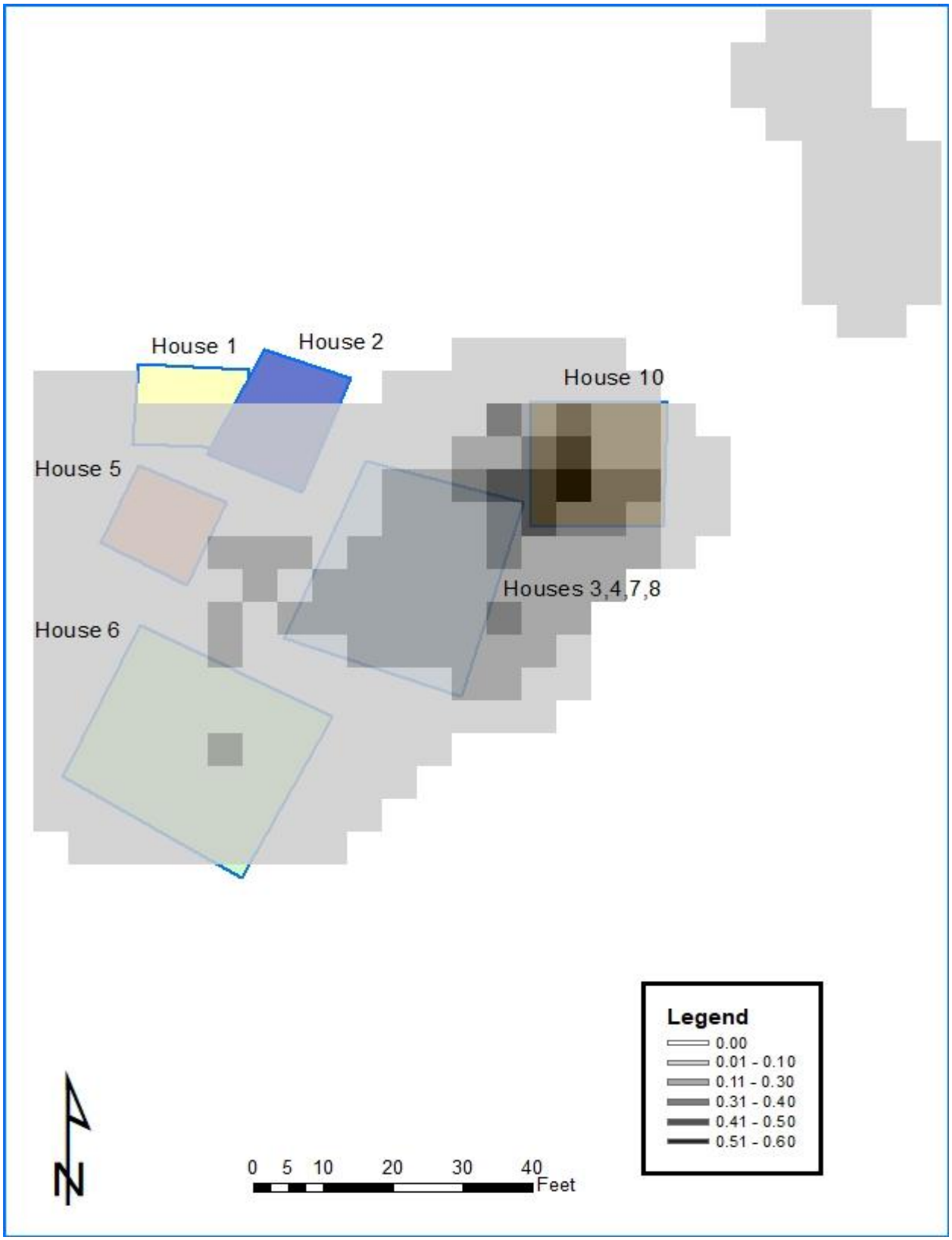

Figure 20. Daub weight per 5 x 5 ft grid cell.

Ceramics

Figure 21 depicts the distribution of ceramic artifact density per 5 x 5 ft grid cell across Unit 6. Additionally, the only artifacts included in the category of ceramics in this analysis are strictly labeled as sherds. Ceramics are not broken down in this analysis according to typology, except for Walls Engraved, but instead by vessel element. The sub-category breakdowns incorporated in this thesis are as follows; Ceramic Handles, Discs, Effigies, and Vessels. As previously mentioned above, the only ceramic type separated out and discussed at length are Walls Engraved type. An analysis of Walls Engraved ceramics is undertaken in this analysis because of the direct relation to the Walls Phase period in the CMV region.

Ceramic Handles

The first category analyzed were Ceramic Handles (Fig. 22). As expected, these handles are found throughout the entire unit likely used as a utilitarian item. These handles were displayed to show their relation to all residential structures. Different handle forms were not separated in this thesis. However, a further breakdown of different handle types could potential help ascribe them to the different cultural phases at Chucalissa.

Ceramic Disc

The next category analyzed were Ceramic Discs (Fig. 23). Ceramic discs are defined in this thesis as any ceramic material intentionally modified into a circular or oval shape. When discussing ceramic disc, a clearer picture is known regarding their timespan in the region. Ceramic discs primarily date to the Middle Mississippian period in the CMV. A total of 368 ceramic disc were used in this analysis. High distributions of Ceramic disc are located around both House 5 and House 6. Both houses are assigned to the Boxtown period based on their

open-trench architectural constructure and their relative depth when excavated. However, the highest proportion of ceramic discs are found within House 10, which has never been fully assigned to either the Boxtown or Walls Phases at the site. House 10 has open-trench wall construction leaning the structure towards the Late Mississippian period Walls phase based on architecture alone. However, ceramic disc only date to the Middle Mississippian period in the CMV.

Ceramic Effigies

The next category of ceramics analyzed were those labeled as Ceramic Effigies (Fig 24). Effigies are defined in this thesis as being either faunal or anthropomorphic engraved on ceramic materials. However, effigies were not separated in this analysis as to whether they accompanied burials. A total of 77 effigies were plotted in this analysis. As expected, these effigies are found throughout Unit 6 and sometimes accompany burials. Many elaborate effigies were obviously crafted for a special purpose, such as those placed on vessels accompanying burials. However, House 10 is almost devoid of effigies. Many effigies were found accompanying burials assigned to the Walls Phase period occupation of Unit 6. Due to the lack of effigies present in Unit 6, these artifacts were grouped with the next sub-category of ceramic vessels to generate one map.

Ceramic Vessels

The next category analyzed were labeled as Ceramic Vessels (Fig. 24). Ceramic Vessels are distributed throughout most of Unit 6, however the area around House 10 contains very few. A total of 15 vessels were used in this analysis. Most vessels included in this category were complete vessels and found accompanying burials. Vessels were also more frequently

associated with burials during the Walls Phase occupation of Unit 6. Given the lack of complete vessels from Unit 6, ceramic vessels were grouped with the previously discussed ceramic effigies.

Walls Engraved

The last ceramic category analyzed in this thesis were Walls Engraved type ceramics. Walls Engraved types were chosen as the only ceramic typology to breakdown in this analysis to illustrate the Walls Phase occupation period in Unit 6 (Fig. 25). A total of 123 Walls Engraved sherds were used in this analysis. There is a lack of Walls Engraved ceramics in relation to House 10 when compared to the rest of Unit 6. Only 4 to 5 sherds were found in the area around House 10. These sherds were likely due to a disruption from the construction of a historical period structure over part of the excavation blocks containing House 10.

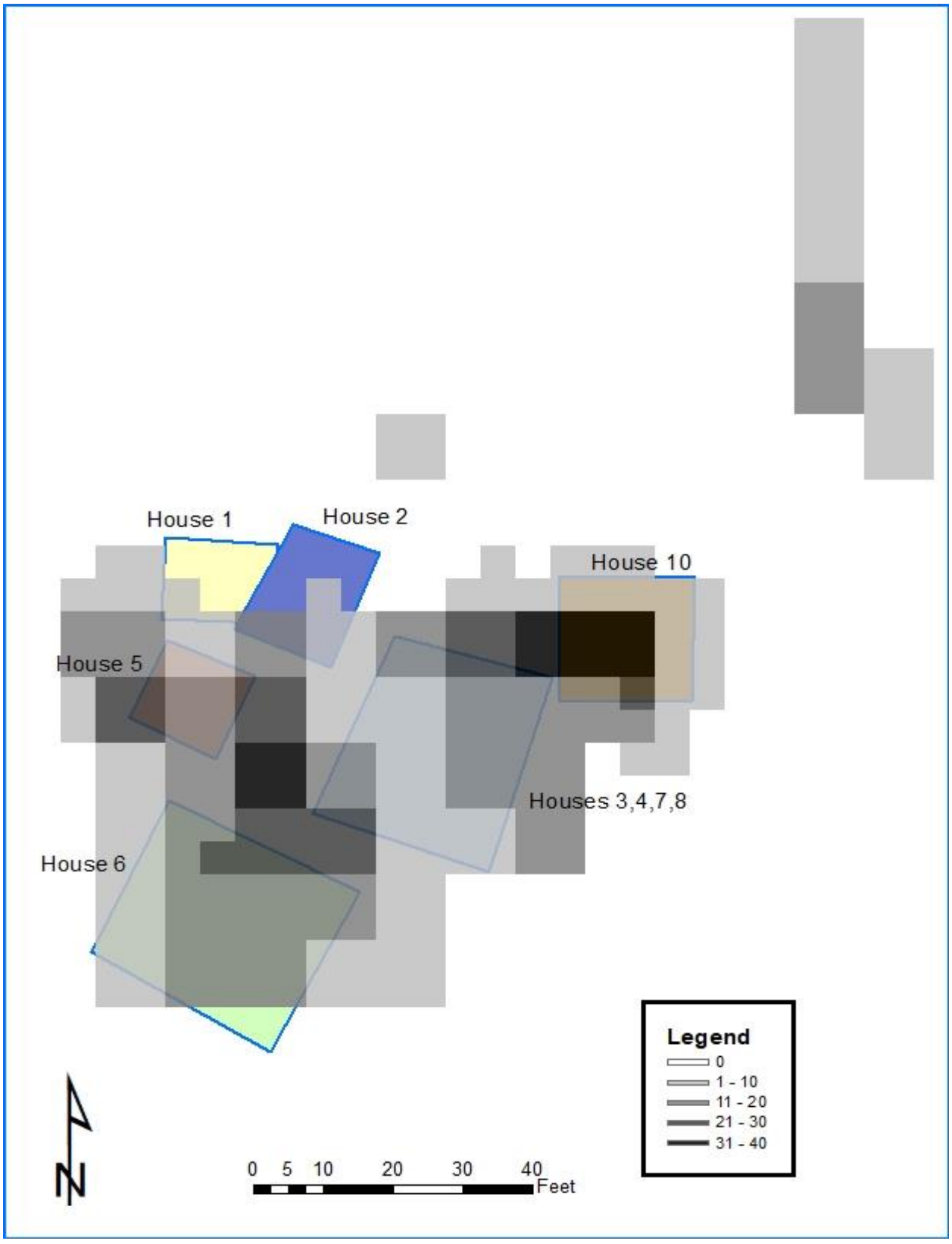

Figure 21. Ceramic artifact density per 5 x 5 ft grid cell.

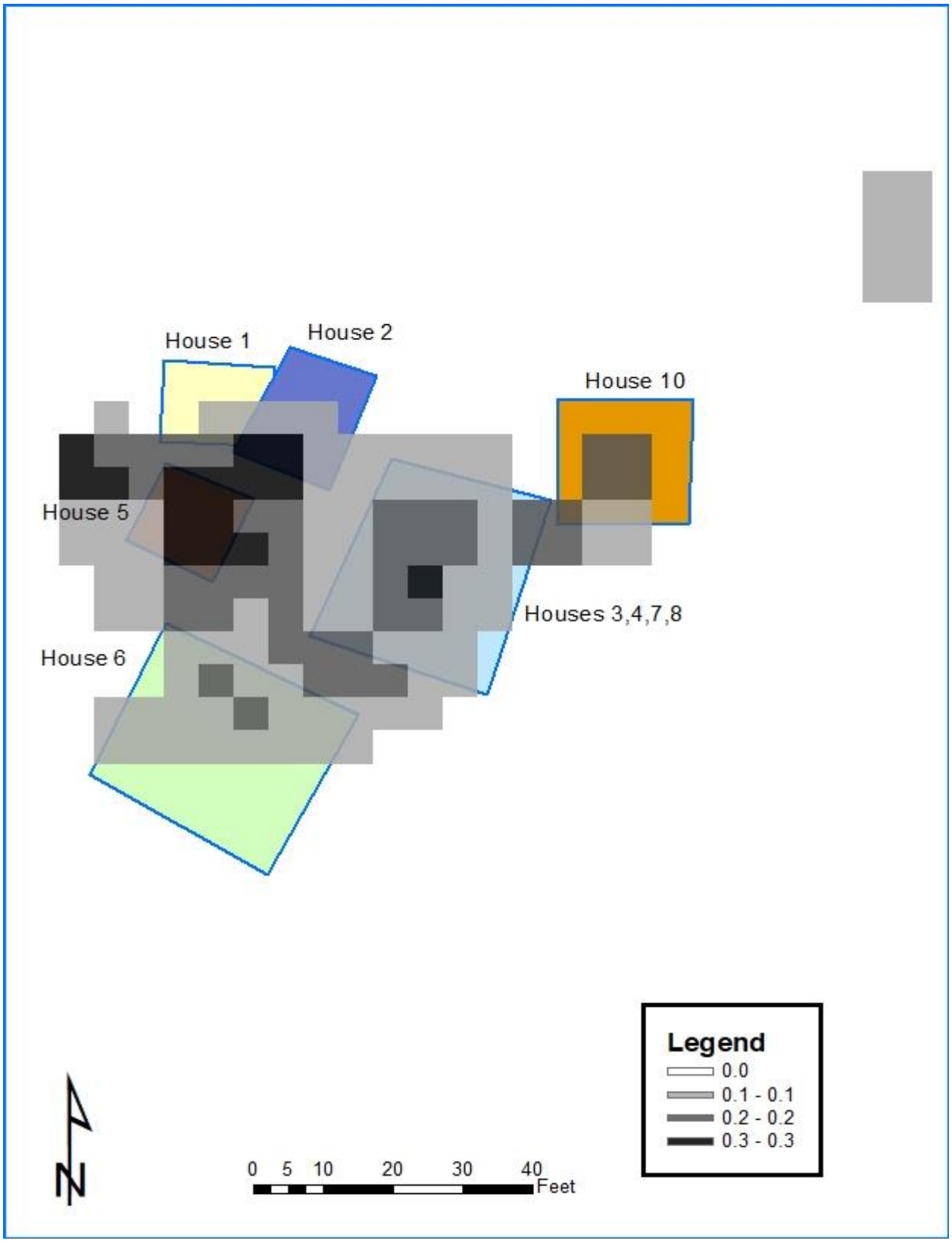

Figure 22. Ceramic Handle artifact density per 5 x 5 ft grid cell.

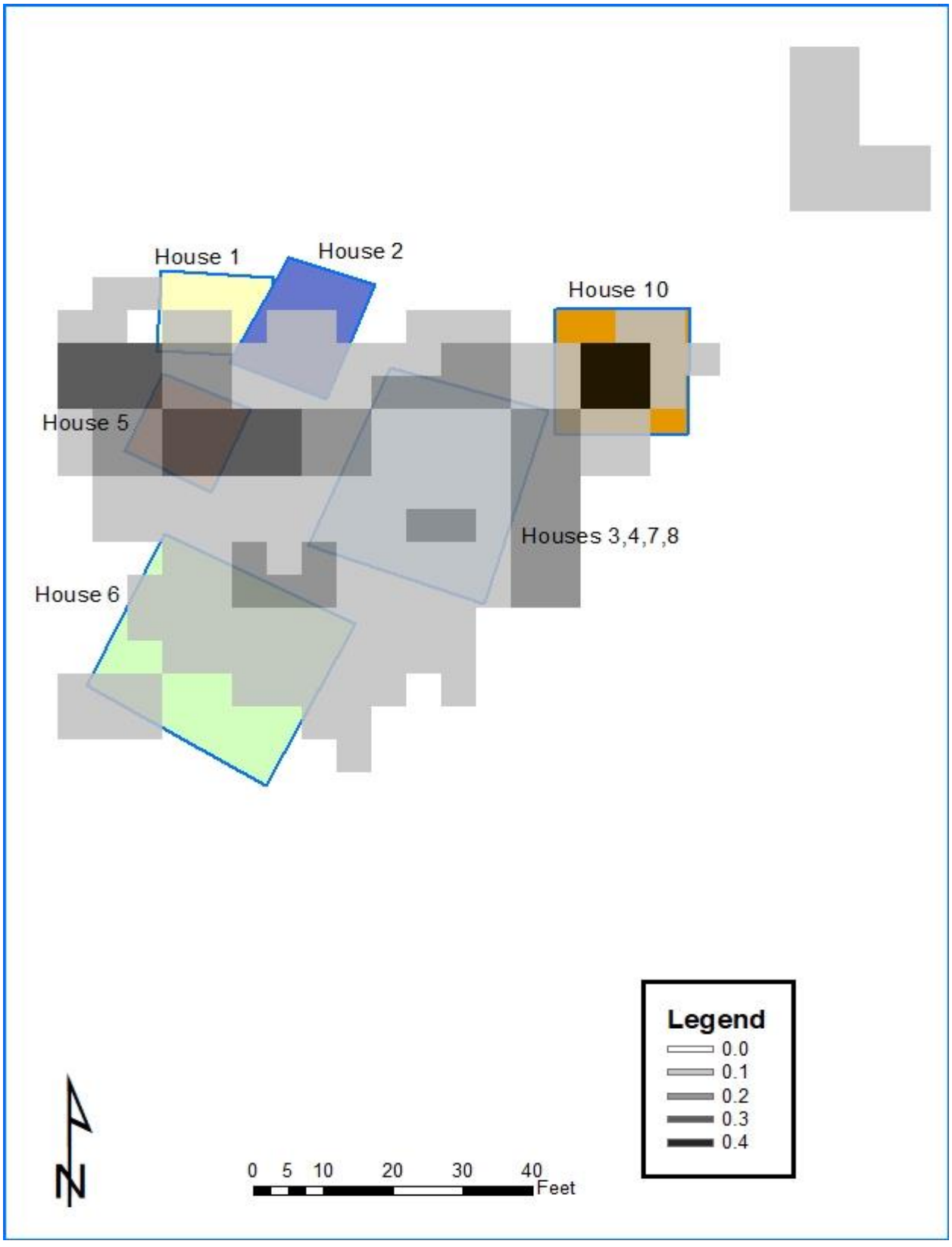

Figure 23. Ceramic Disc artifact density per 5 x 5 ft grid cell.

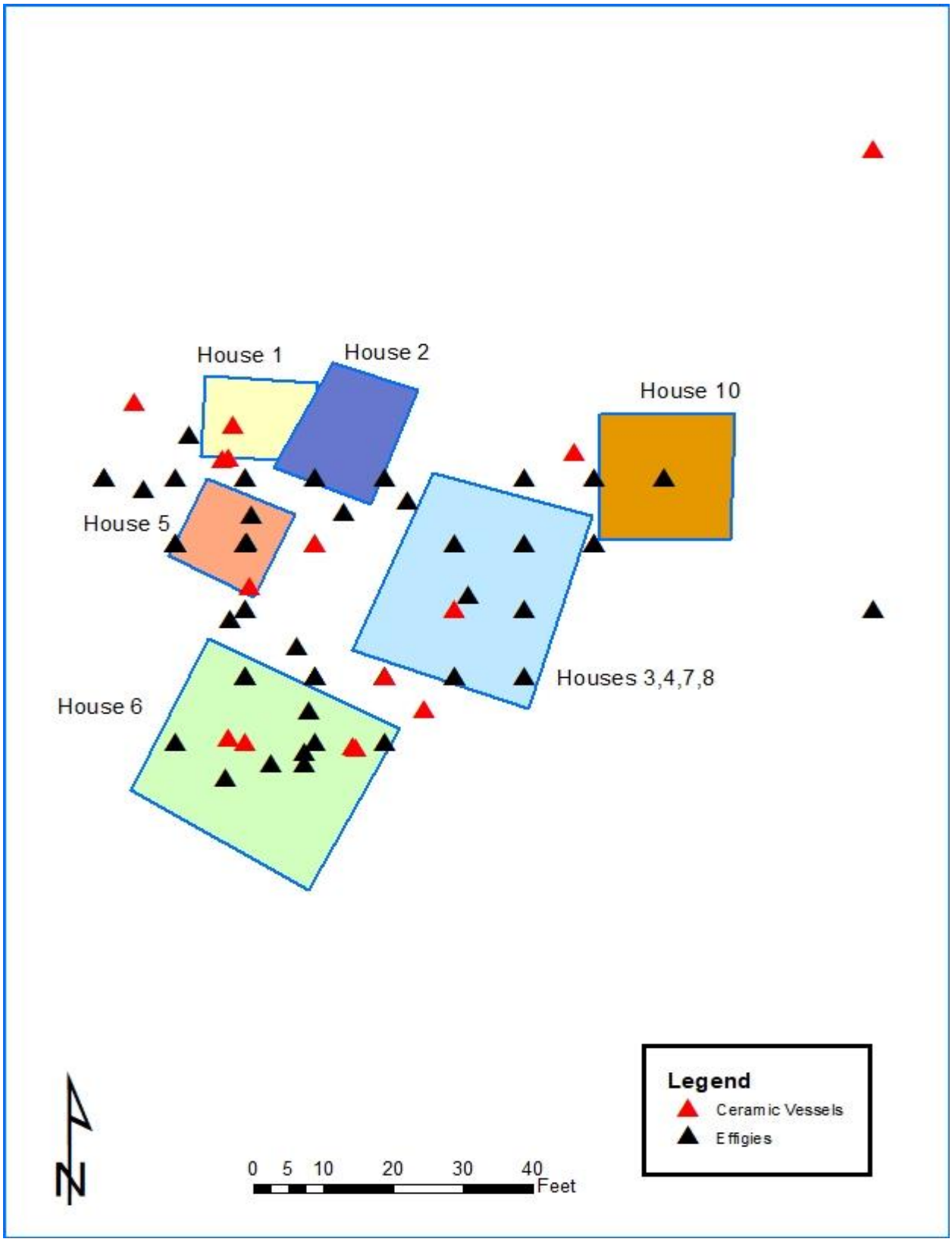

Figure 24. Ceramic Vessels and Effigies distribution across Unit 6.

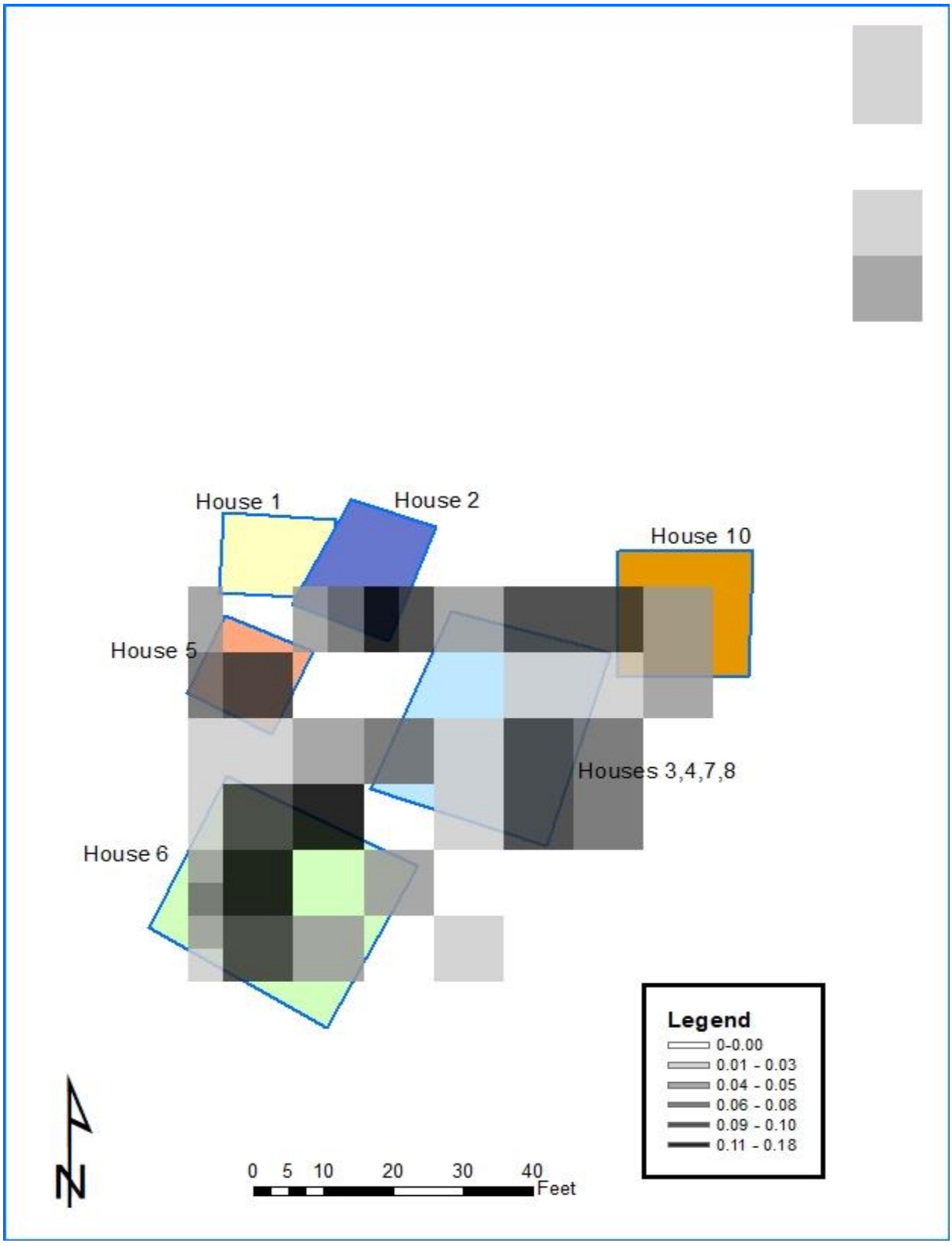

Figure 25. Walls Engraved ceramic artifact density per 5 x 5 ft grid cell.

Historic Material

Spatial analysis included all the historic materials excavated from Unit 6. Basically, historic material is defined in this thesis as any material not found during the prehistoric period. Items included in this category were historic ceramic, glassware, metal, plastic, and rubber. Also, a few examples of historic bone were included. All historic materials were analyzed together with historic materials not separated into sub-categories (Fig. 26). The highest proportion of historic materials occur in the lower southwest portion of House 10, and the rest are mainly scattered among the rebuilding sequence of Houses 3, 4, 7, and 8.

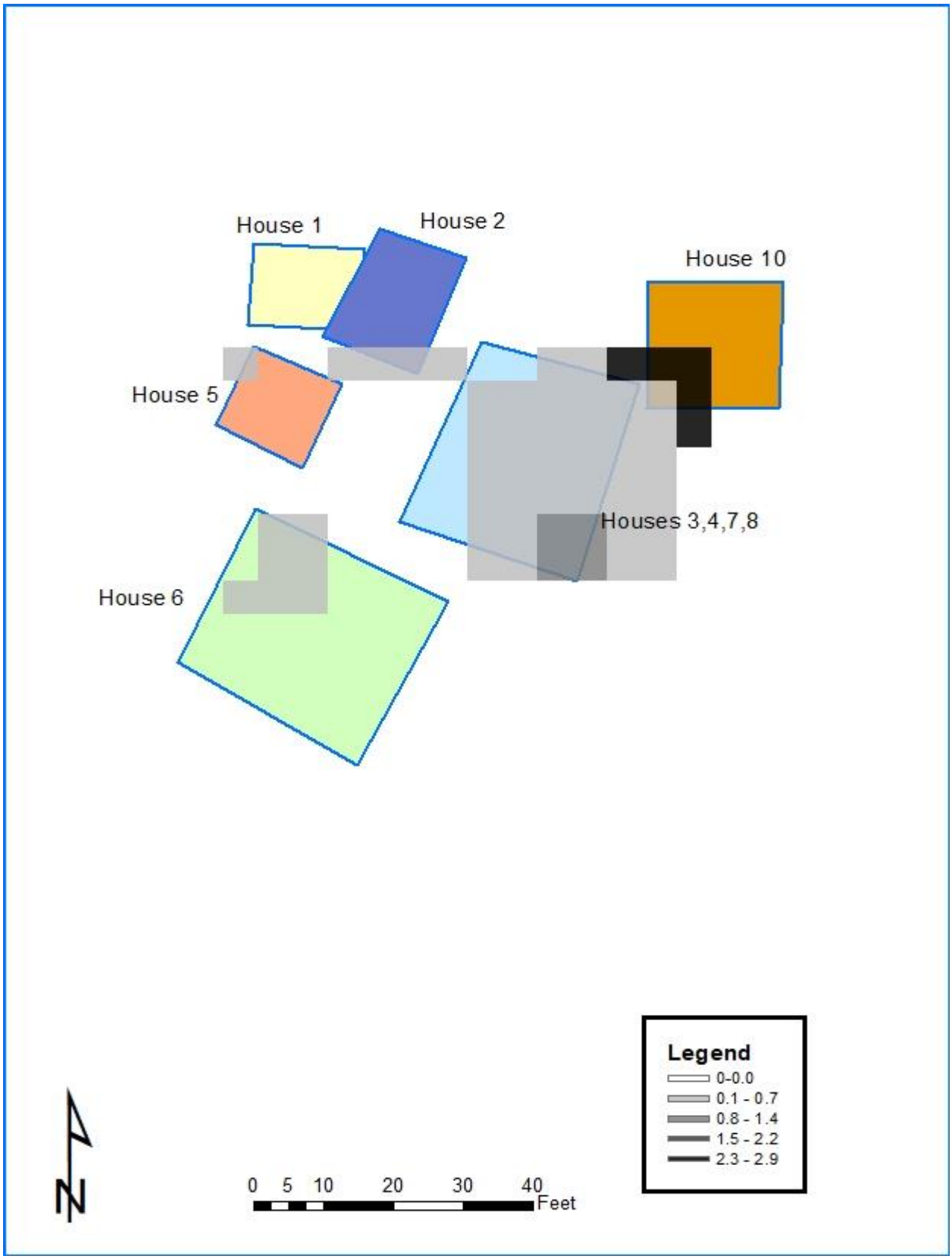

Figure 26. Historic Material artifact density per 5 x 5 ft grid cell.

Stone Debitage

The next portion of this analysis covers stone debitage. Sub-categories covered in this portion include raw stone, chipping shatter, fired stone, flakes, and cores. Sub-categories were utilized to show the extensive working of stone material in or near House 10. Raw Stone are shown in figure 27, Chipping shatter are shown in figure 28, fired stone are shown in figure 29, flakes are shown in figure 30, and cores are shown in figure 31. This analysis showed the highest degree of each sub-category of stone occurred in or around House 10. Furthermore, the highest amount of lithic debitage were usually located just outside residential structures in all other portions of Unit 6 except for House 10. Each individual category of stone debitage were separated into sub-categories and are discussed in the following sections.

Raw Stone

Artifacts assigned as raw stone in this thesis are in direct relation to the original accession records. Materials included in this category were labeled as stone, mainly chert, broken rocks, miscellaneous stone, and pebbles in the original records. However, a note must be mentioned on the category labeled stone from unit 6. The earliest excavations directed by Nash rarely separated raw lithic materials from the basic classification of stone. Only stone tools were separated out with only a slight separation of categories defined as flakes or chipping shatter. Later excavations directed by Smith after 1968 separated out stone materials and assigned them more accordingly. A future analysis of the lithic materials labeled simply as stone may yield slightly different results than those presented in this thesis.

Chipping Shatter

Artifacts assigned as chipping shatter in this thesis include those labeled as shatter or chipping shatter in the original accession records. Chipping stone was defined as debitage by Andrefsky (1998:17, 81) as "detached material from an objective piece, i.e. a core, showing no type of pattern, no recognizable striking platform, or were broken during the detachment process." The highest proportion of chipping shatter occurs in or around House 10. Only a few examples were present throughout the rest of Unit 6. As previously mentioned, a further analysis of all lithic materials from Nash excavations may produce a slightly different artifact distribution of chipping shatter across Unit 6.

Fired Stone

Artifacts assigned to the category of fired stone in this analysis include those labeled as fired stone or fire shatter. These artifacts show signs of heating however, whether intentionally or unintentionally heated are not considered nor listed in the original artifact accession records. However, almost all the fired stone from Unit 6 were found either in or around House 10.

Flakes

Artifacts assigned to the flake category in this thesis include those listed in the original accession records as flakes, miscellaneous flakes, worked flakes, exterior percussion flakes, interior percussion flakes, pressure flakes, bifacial thinning flakes, unifacial flakes, and core flakes. The current analysis does not separate each of these categories from the basic classification as a flake. Instead the basic flake definition used in this thesis was defined by Andrefsky (1998:11) as "a detached piece of lithic material, which can be modified only slightly by sharpening or straightening, entirely worked into a tool, or sometimes reworked

resulting in an entirely different too." These flakes were usually removed by percussion, the striking of an object by a hammer or percussor, or by pressure flaking, the removal of the flake or chip by applying pressure to the objective piece without striking (Andrefsky 1998:11). Although flakes are distributed in all portions of Unit 6, the highest amounts occur inside House 10 at a ratio of 5:2 compared to the rest of Unit 6.

Cores

As defined by Andrefsky (1998:12) "A core is a mass of homogeneous lithic material that has many flakes removed from its surface, and its primary use is to supply flakes used in the production of stone tools." Cores used in this analysis follow Andrefsky's definition and were simply classified as chert cores. Cores were analyzed according to their distribution across Unit 6 using 5 x 5 ft grid cells. The size and shape of these cores were not taken into consideration in this analysis. While cores were found throughout Unit 6, the highest amount occurs in or around House 10. Unlike the rest of the lithic debitage discussed previously, cores were consistently labeled during all excavations from the 1950s through the 1980s. When cores are compared to the previous stone debitage categories analyzed, House 10 appears as a center for the extensive modification of stone materials in Unit 6.

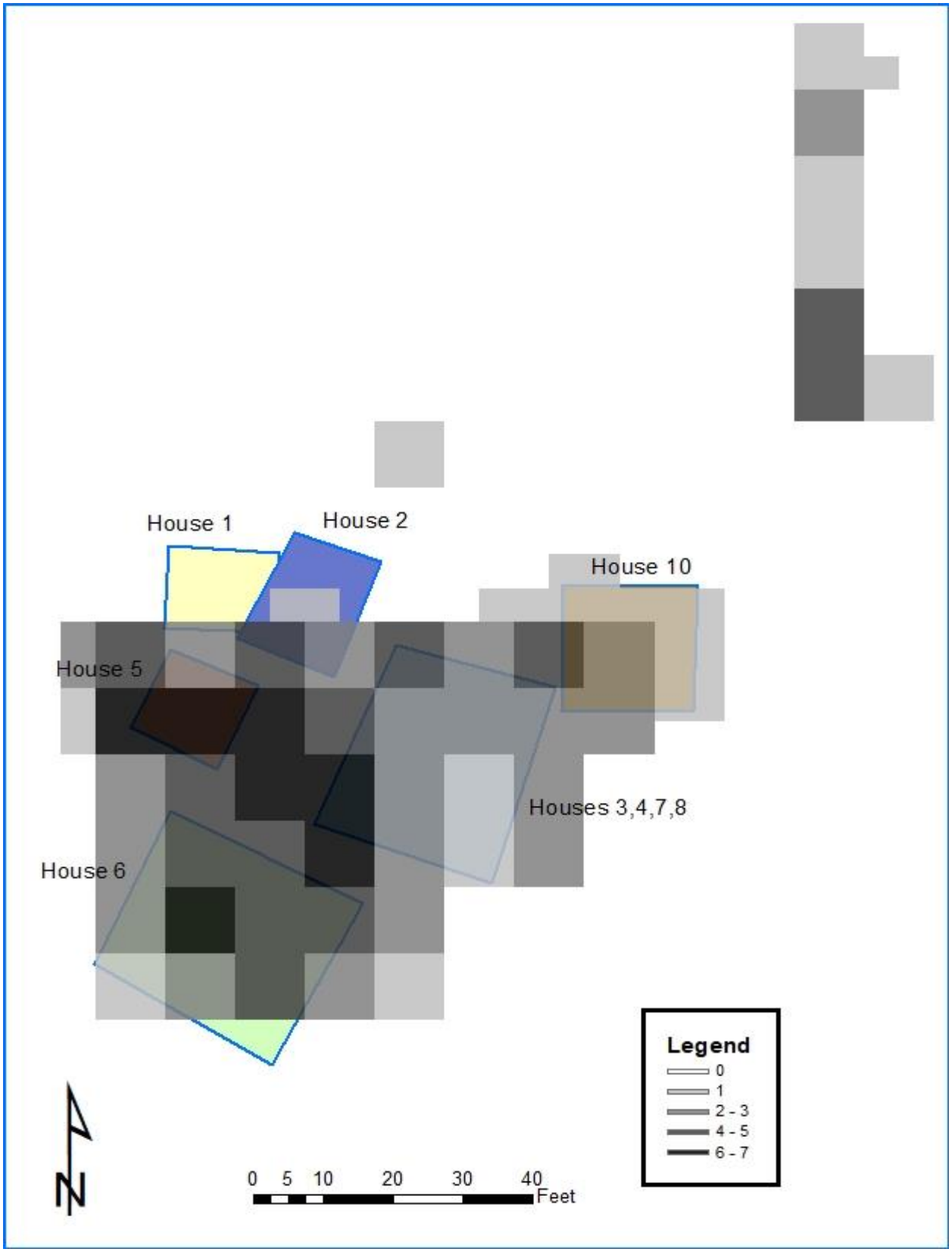

Figure 27. Raw Stone artifact density per 5 x 5 ft grid cell.

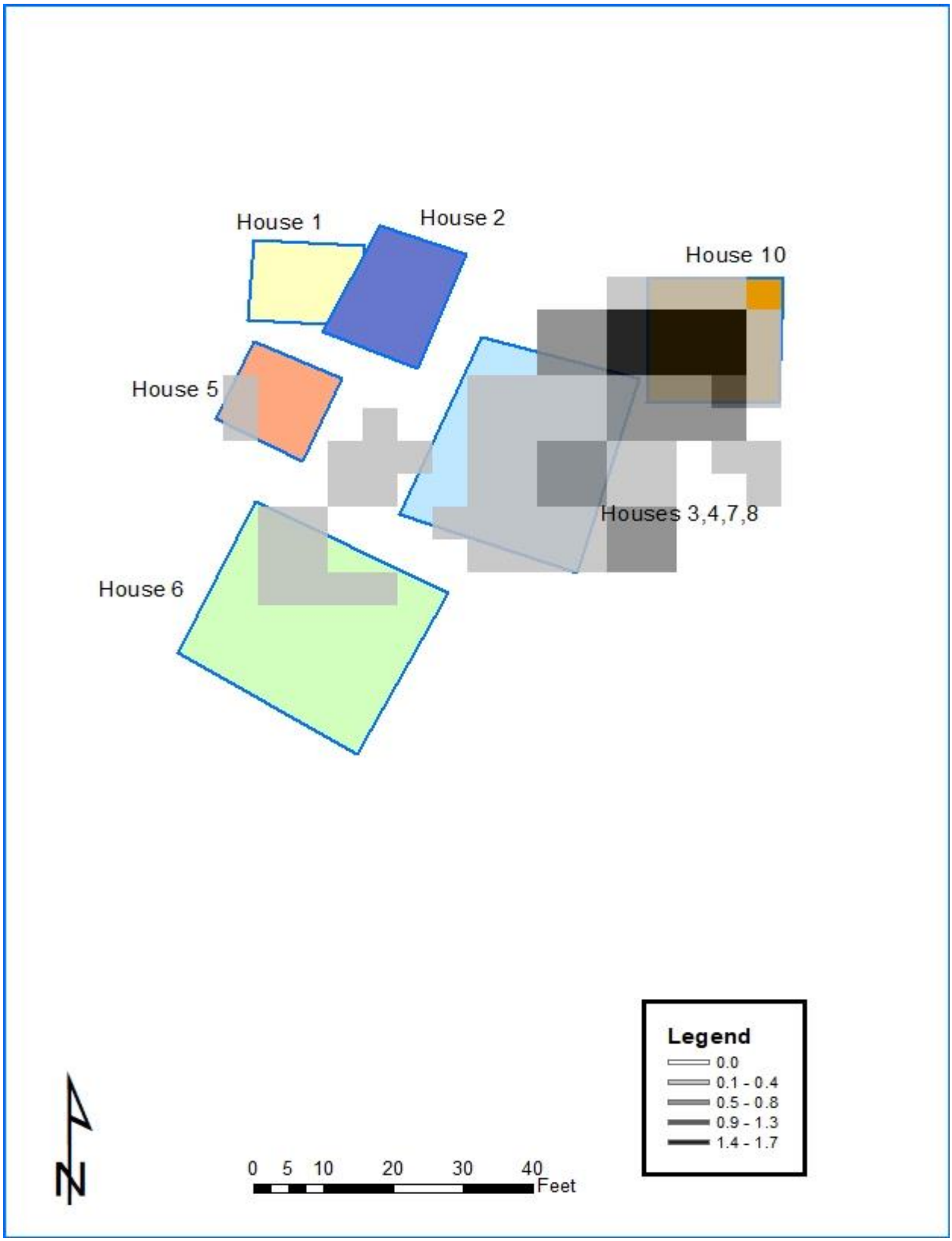

Figure 28. Chipping Shatter artifact density per 5 x 5 ft grid cell.

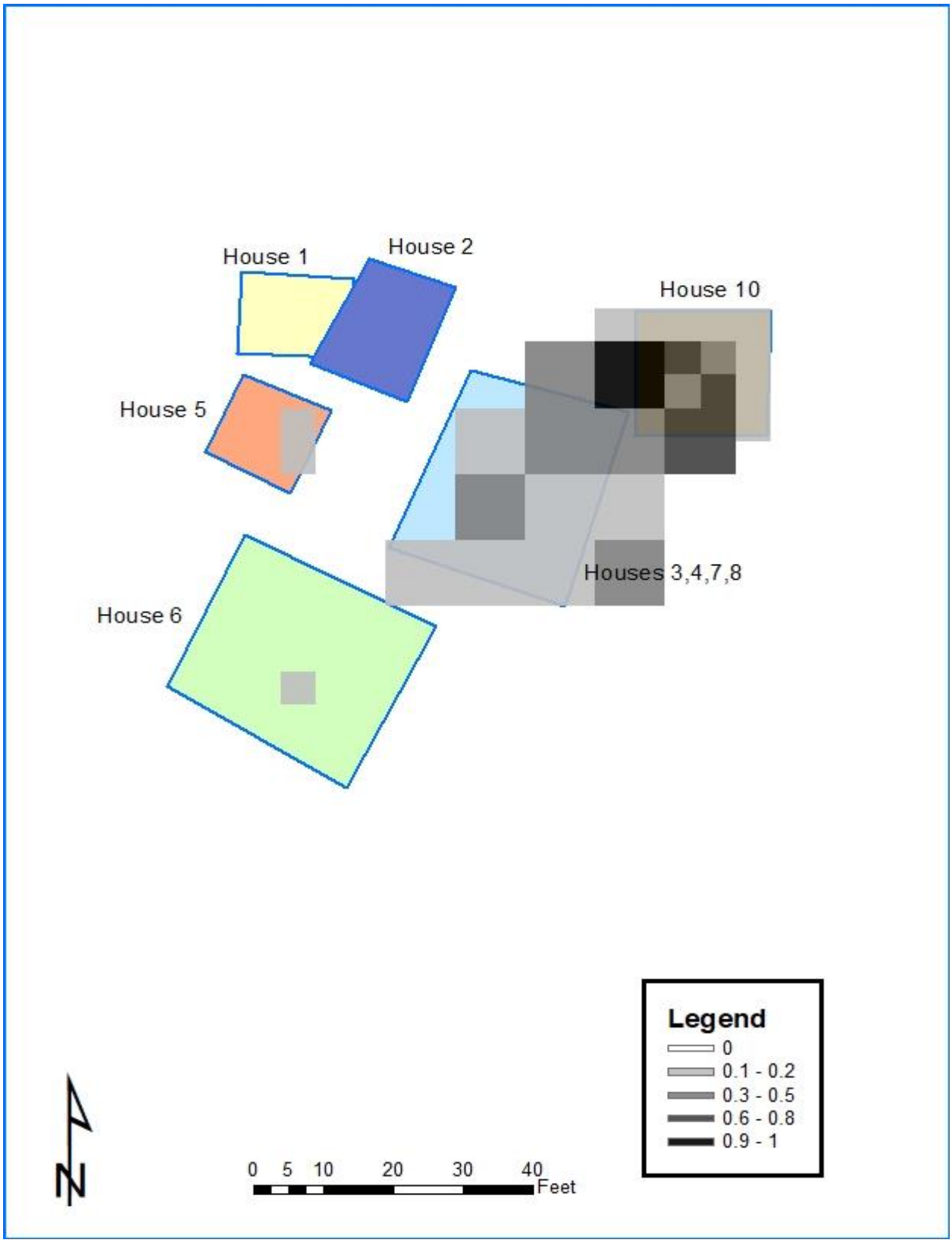

Figure 29. Fired Stone artifact density per 5 x 5 ft grid cell.

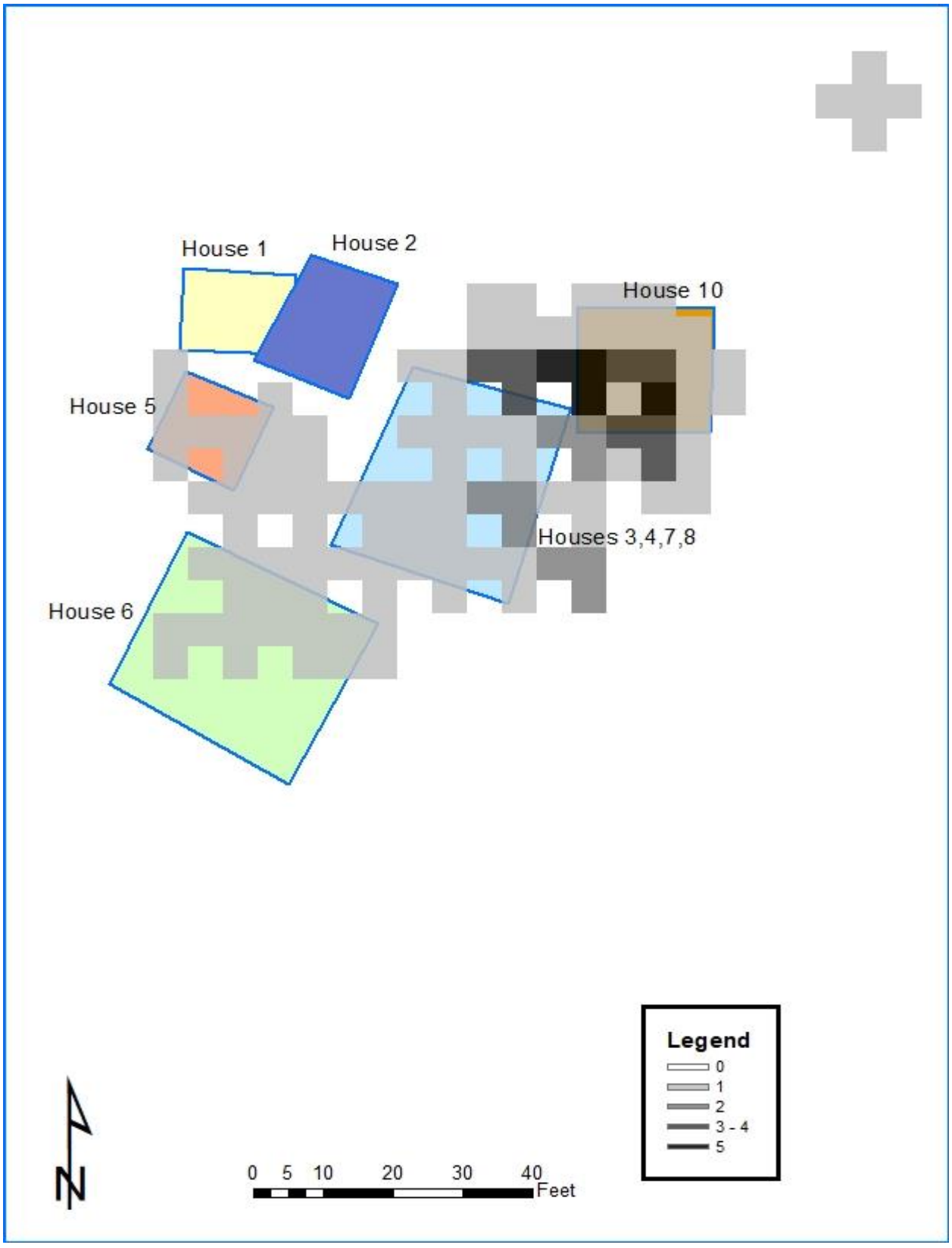

Figure 30. Flakes artifact density per 5 x 5 ft grid cell.

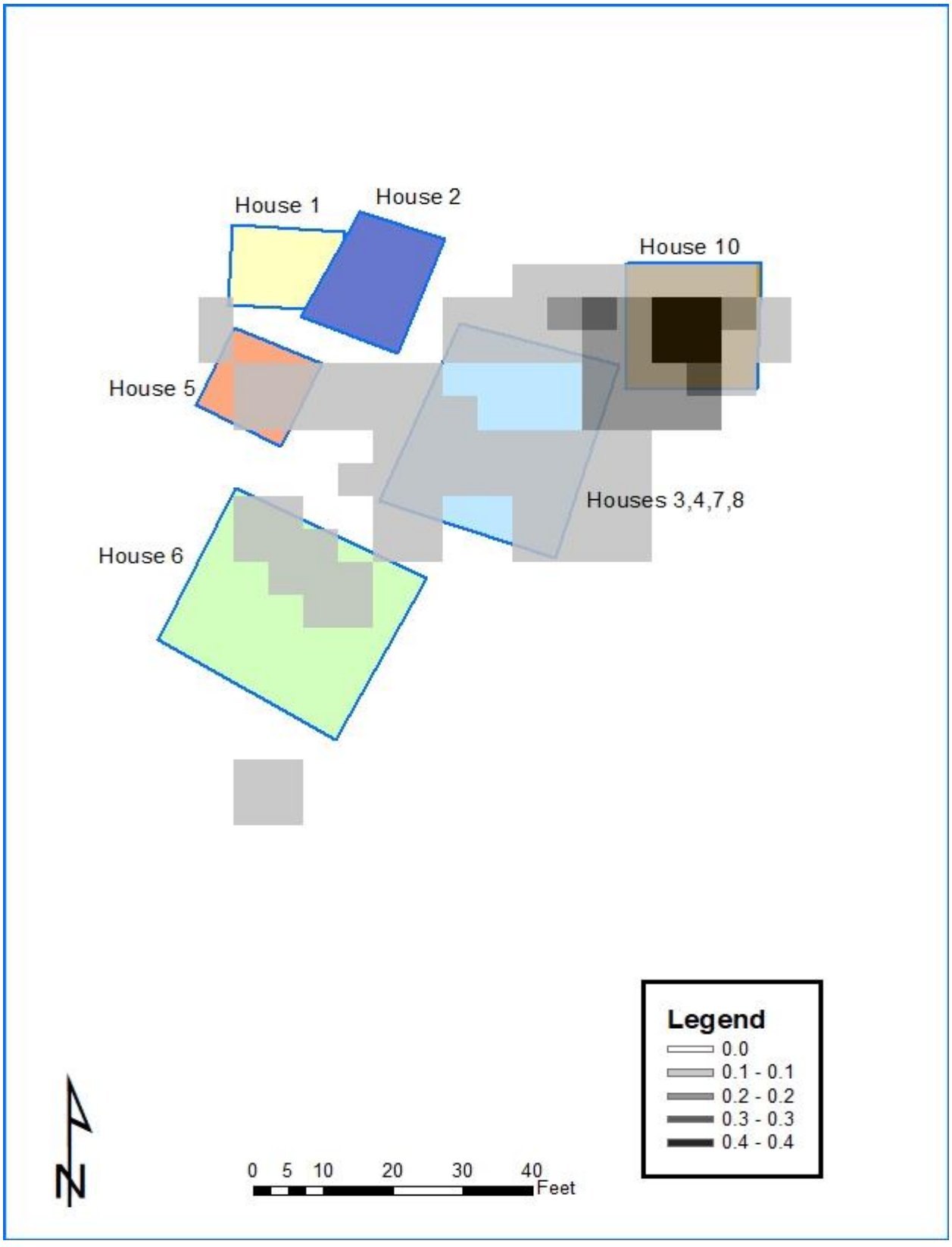

Figure 31. Core artifact density per 5 x 5 ft grid cell.

Stone Tools

The next category analyzed were classified as Stone Tools. Unlike the previous categories discussed in this analysis, a complete map of all stone tool distribution was not generated. Rather, every major stone tool sub-category were classified into individual sub-categories and labeled as Chert Tools, Bifaces, Celts, Grinding Stones, Hammerstones, and Projectile Points. Each sub-category is discussed individually as 5 x 5 ft artifact density per grid cell across Unit 6.

Chert Tools

Included in the chert tool sub-category in this thesis were those made from raw chert. The category of chert tools was comprised of Abraders, Drills, and Chisels and generated into one analysis by distribution across Unit 6 (Fig. 32). Abraders in Unit 6 were usually made of sandstone and used for grinding and sawing raw stone. Drills were likely the result of originally inserted bifaces inserted into a haft or handle and reshaped by retouching the object in one direction on each edge (Andrefsky 1998). Chisels were stones used in a percussion like method to carve stone (Holmes 1919). Abraders, drills, and chisels were grouped together in this analysis due to their low frequency distribution across Unit 6. Abraders and drills were evenly distributed across Unit 6 while only four chisels are present in Unit 6. None of the chisels occur in or around House 10. However, a dumping pit behind House 10 in the N620-650, R110-130 excavation blocks do contain one example.

Biface

Artifacts assigned as a Biface in this analysis were defined as artifacts extensively modified through the removal of flakes and have two sides that meet to form a single edge

circumscribing the entire artifact (Andrefsky 1998:20). Bifaces in this analysis were defined according to their original listing as a biface in the original accession records. However, the size, shape, or use of each biface were not considered. This analysis was therefore a simple distribution of biface artifacts across Unit 6 using 5 x 5 ft grid cells (Fig. 33). A total of 43 artifacts labeled as biface were used in the analysis. Results from this analysis reflect a high distribution occurring inside Houses 6 and 10. Also, a high distribution was reflected just outside the cluster of Houses 3, 4, 7, and 8. However, every single House 10 excavation block contains at least one example of a biface, while only certain portions of Houses 3, 4, 6, 7, and 8 contain some bifaces.

Celt

Celts are defined in this thesis as a pecked ground stone tool (Fig. 34). The most elaborately crafted celts were often found accompanying graves, while some other celts show signs of usewear (Andrefsky 1998; Holmes 1919). Celts showing usewear were often used to carve and chop wood. However, most celts were often crafted from non-local or exotic materials other than chert, i.e. Greenstone from the Tennessee/Cumberland Region. Unit 6 contains only 18 Celts or Celt fragments and were spread consistently across Unit 6. The highest distribution of celts in relation to residential structures is four. These four examples occur in or around House 6, which is attributed to the Boxtown phase.

Grinding Stone

Included in the category of grinding stones in this analysis were those labeled as grinding stones or grinding slabs in the original accession records (Fig. 35). Grinding stones and slabs were used in the processing of both wild and domesticated plant species. Grinding stones were

analyzed using artifact density per 5 x 5 ft grid cells. A total of 17 artifacts labeled grinding stones (3 grinding slabs and 14 grinding stones) were used in this analysis. Most grinding stones were excavated slightly outside of all Houses except for House 10. House 10 contains neither a single grinding stone nor a grinding slab. Considering the importance of food preparation for both the individual household as well as the entire site, the lack of grinding stones and grinding slabs in House 10 is unusual. Perhaps, House 10 was not a residential structure at all but instead had a different functionality.

Hammerstone

A hammerstone is defined as either a raw piece of cobble or pebble used to remove flakes from a core through striking; a process known as percussion flaking (Andrefsky 1998). Using a hammerstone applies a large amount of force to an object resulting in the removal of larger flakes. Hammerstones in this analysis follow Andrefsky's definition above and were defined as either a piece of chert stone or as a river pebble. A total of 26 hammerstones were used in this analysis. Hammerstone distribution across Unit 6 were analyzed according to density per 5 x 5 ft grid cell (Fig. 36). Unlike grinding stones, hammerstones were found in the highest concentration within House 10. When higher amounts were found in relation to other housing structures in Unit 6, the highest concentration occurs outside of the structures. However, House 10 contains the highest concentration of hammerstones inside any of the residential structures.

Stone Projectile Points

Projectile Points were often classified as the tip of a spear, dart, or arrow (Andrefsky 1998). Projectile points from Unit 6 were manufactured from either an animal bone, a gar scale, or a piece of stone. Only objects from the original accession record labeled as stone projectile points

or those labeled as stone projectile points or knives (PPK), a regional vernacular classificatory unit of dubious utility, were incorporated in this analysis. However, this analysis does not dismiss the fact that many of these materials classified as projectile points may have served many different functions, i.e. as a knife used for cutting.

Projectile points were analyzed in this study according to artifact density per 5 x 5 ft grid cells (Fig. 37). Results from this analysis show projectile points being distributed evenly across Unit 6 and in or around every housing structure. Little more can be said about the distribution of stone project points across Unit 6 except that it appears to be a common utilitarian item found within all residential structures.

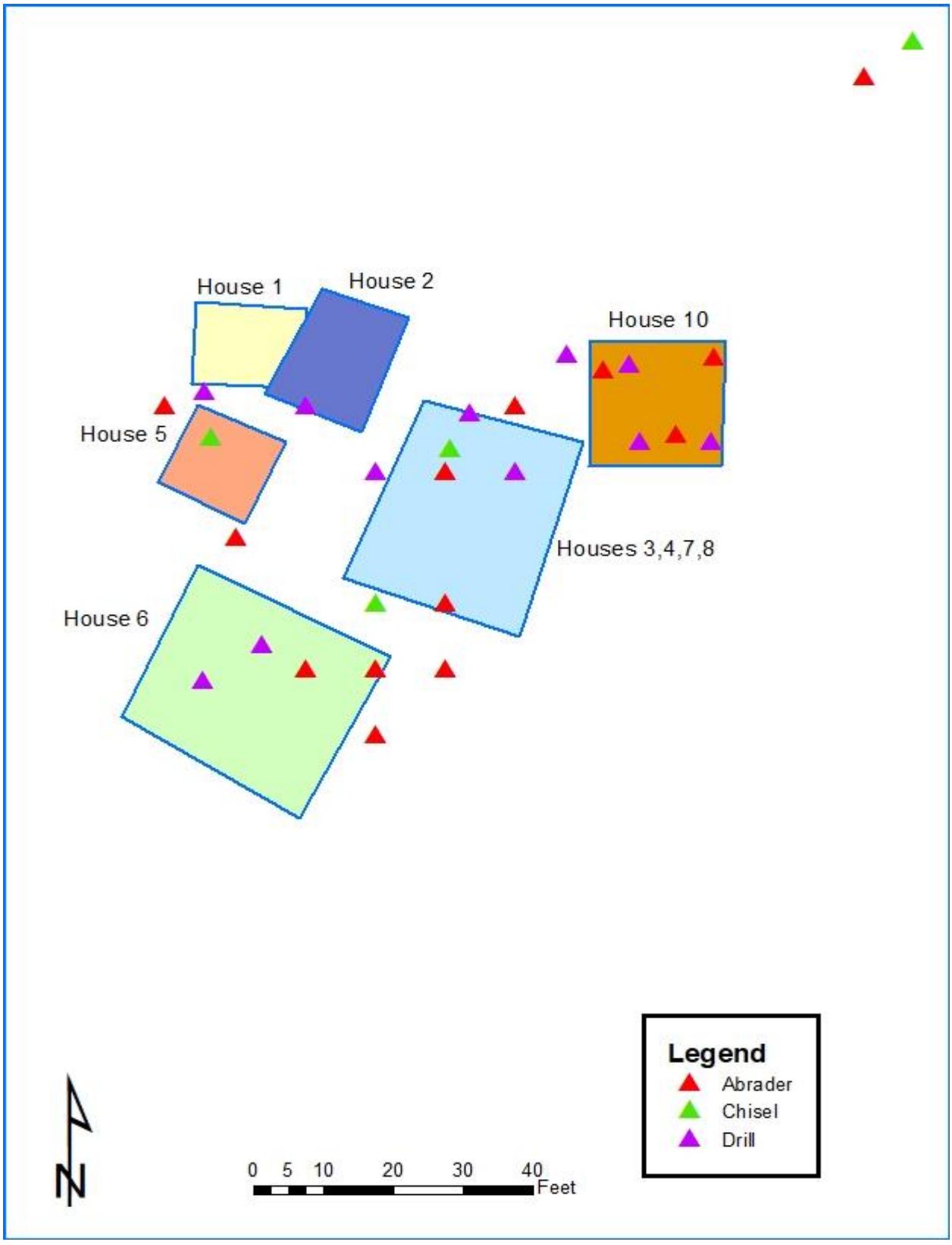

Figure 32. Abraders, Chisels, and Drills distribution across Unit 6.

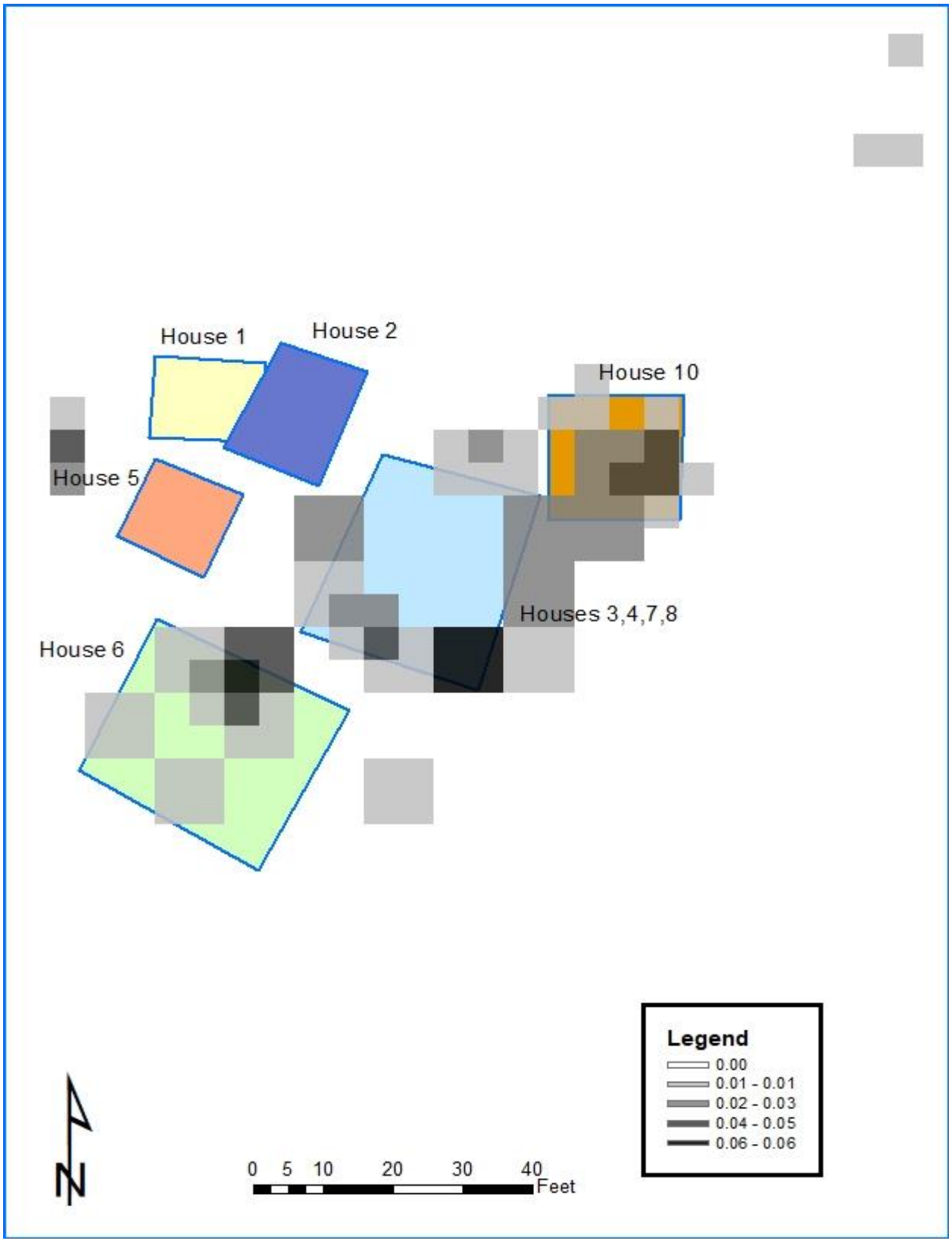

Figure 33. Biface artifact density per 5 x 5 ft grid cell.

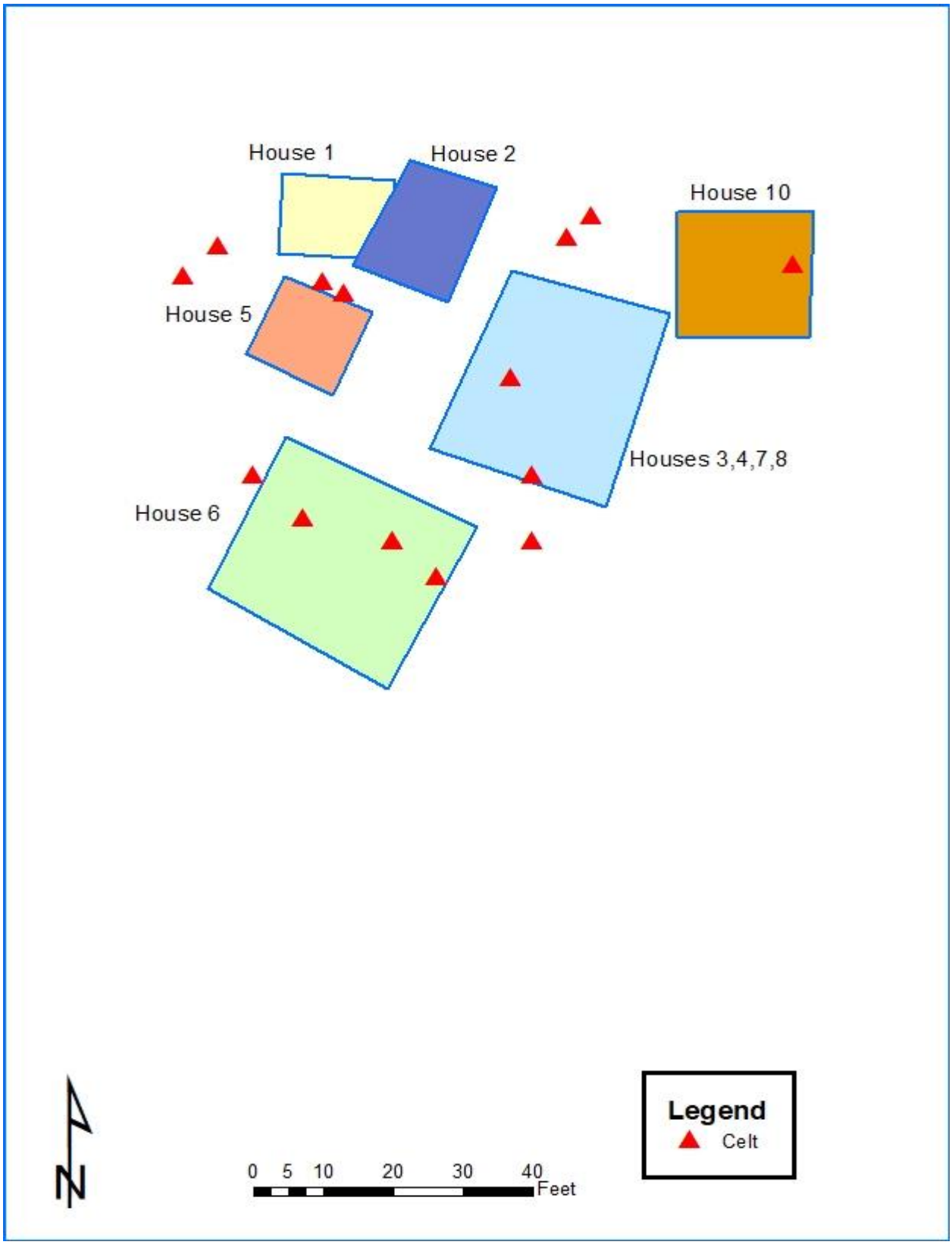

Figure 34. Celt artifact density per 5 x 5 ft grid cell.

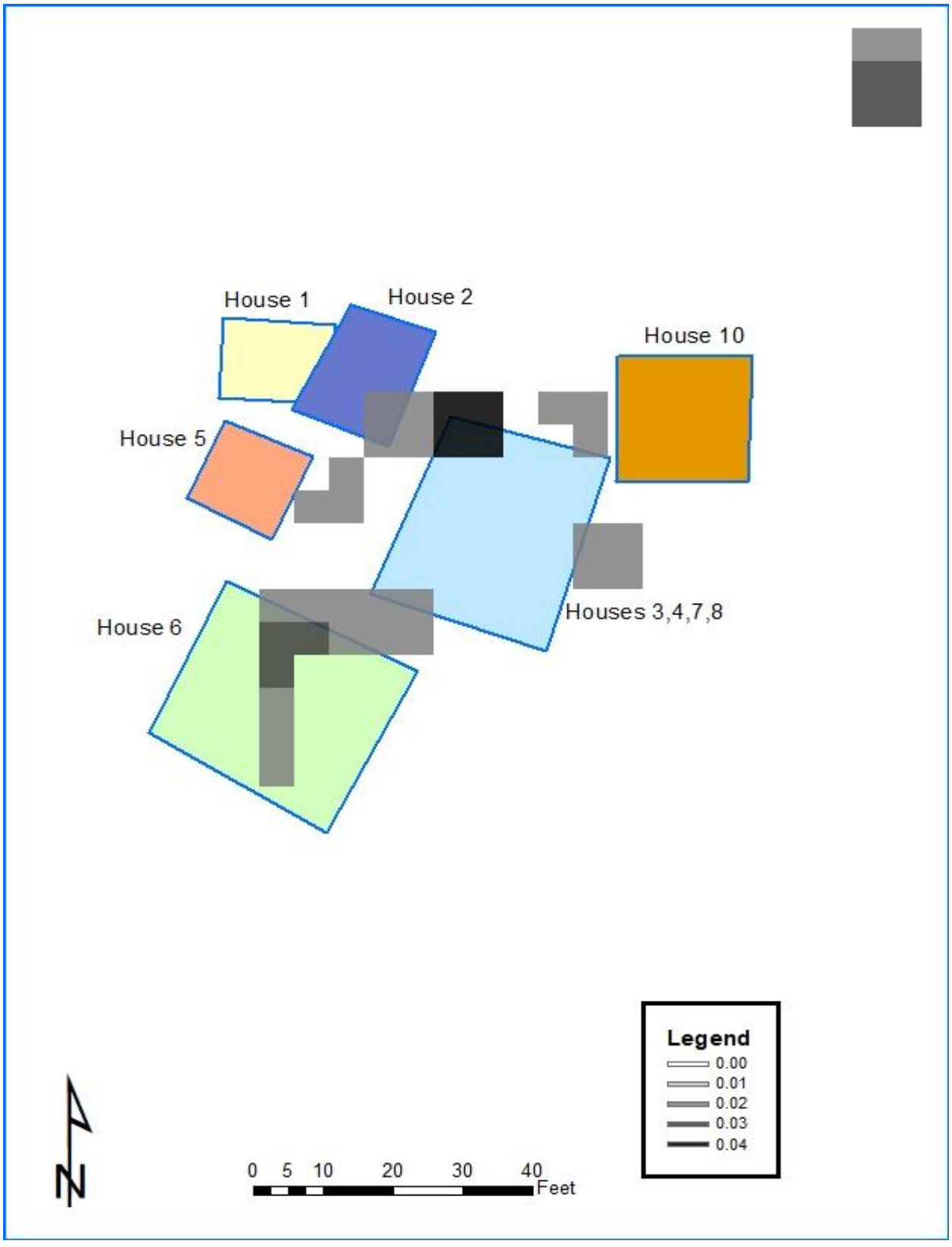

Figure 35. Grinding Stone artifact density per 5 x 5 ft. grid cell.

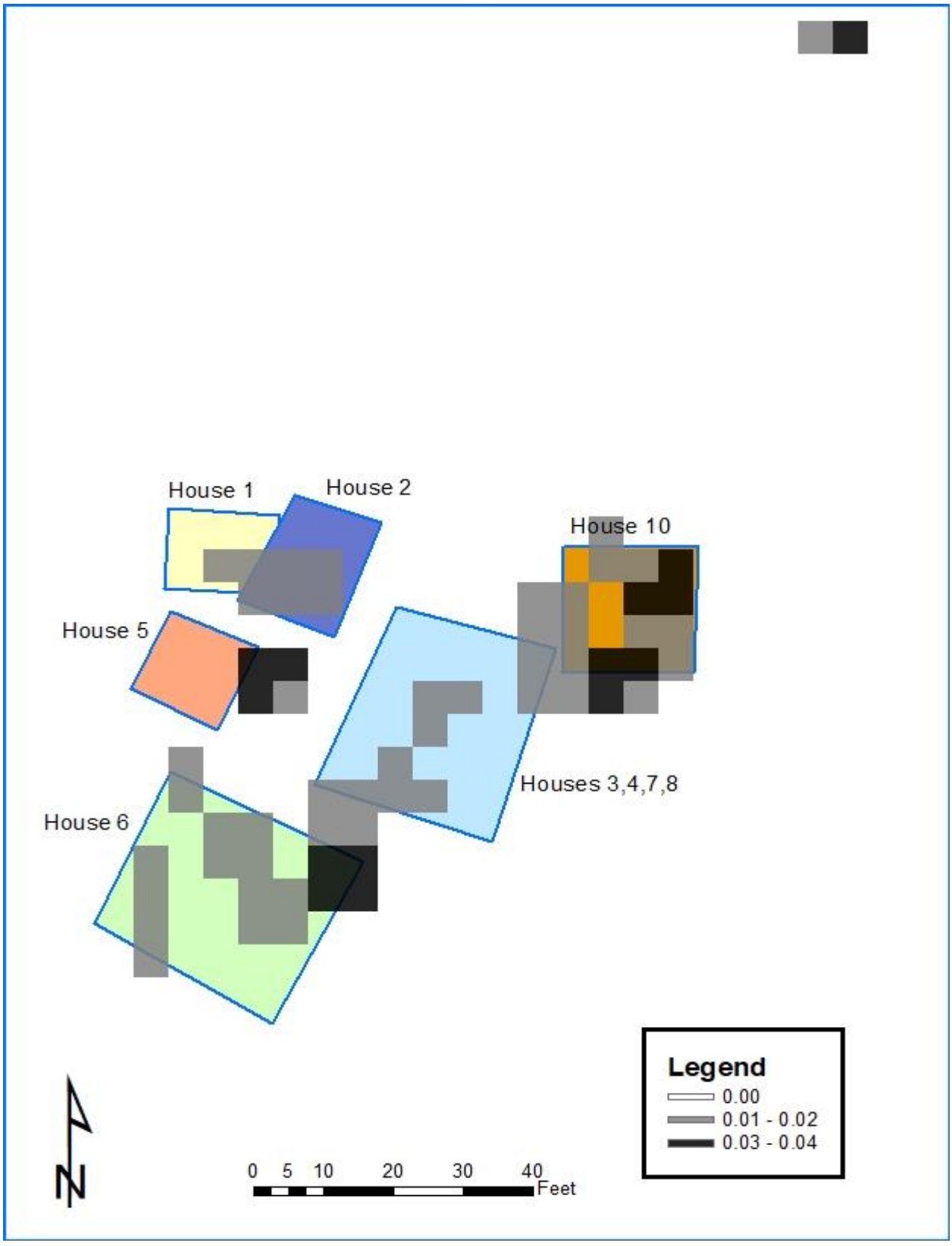

Figure 36. Hammerstone artifact density per 5 x 5 ft grid cell.

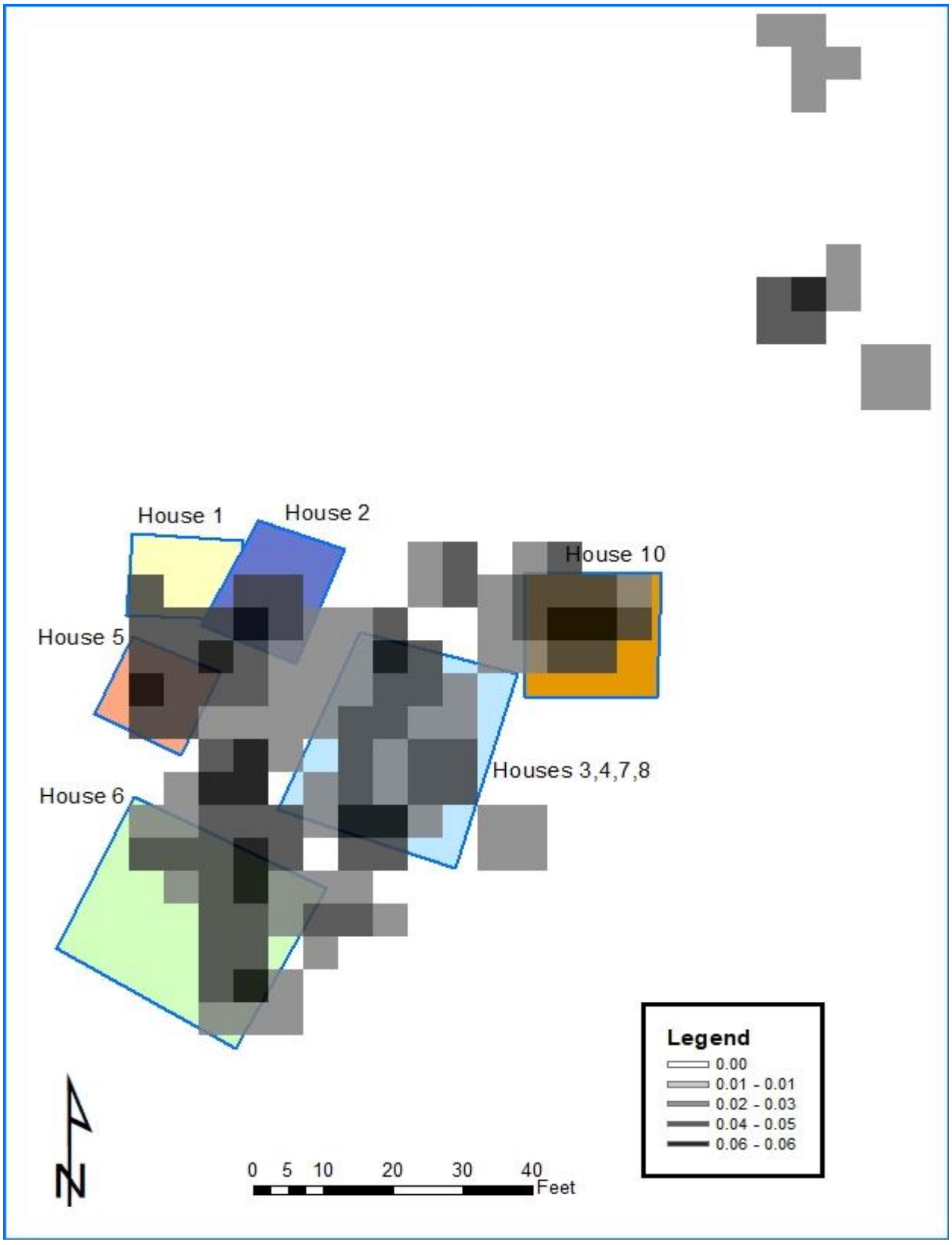

Figure 37. Projectile Point artifact density per 5 x 5 grid cell.

Uncommon Artifacts

The final portion of spatial analysis covered uncommon artifacts from Unit 6. Rare artifacts were defined in this thesis as being rare, exotic, or elaborately crafted materials. These materials were analyzed to illustrate a distinction between all other Unit 6 residential structures and House 10. Additionally, some of these materials were only known to occur during certain Mississippian cultural periods, e.g. the Early, Middle, or Late. Artifacts of the rarer variety, when combined with available radiocarbon dates, can aid in the assignment of residential structures to certain Mississippian periods. Uncommon Artifact specific to Chucalissa in this thesis include limonite/yellow ochre, red ochre, hematite, stone discordials, earplugs, sandstone grinder, mica, petrified wood, galena, wood, textiles, rare animal bones, bone fishing tools, sandstone, and siltstone. Each category assigned in this thesis as uncommon artifacts were assigned as sub-categories. Each category is discussed and defined individually in the following sections.

Limonite

Limonite is a mixture of hydrated iron oxides, and its chemical property was used in pigments, i.e. yellow ochre (Palache, Berman, and Frondel 1944). In this analysis, limonite and yellow ochre were combined, given that yellow ochre is a hydrated iron oxide defined as limonite. The original separation of both materials produced the same distribution pattern as when both are combined as one category. A total of 53 pieces of limonite/yellow ochre were used in the analysis. The highest proportions of limonite and yellow ochre occur in or around House 10, with a slightly concentration occurring outside of House 6 (Fig. 38). Given the amount of

limonite and yellow ochre per 5 x 5 ft grid cells occurring in House 10, it was likely that the material originated from this structure.

Red Ochre

Red ochre derives from an iron oxidized hematite and often described as a paint pigment, probably used in a ritualistic context (Holmes 1919). Evidence of the use of red ochre occurs on stone, ceramic, and some organic material. Unfortunately, organic materials like wood and textiles rarely survive long in the archaeological record in the southeast, given the humid climate and acidic soils. Given that a hematite may or may not become iron oxidized, each category was separated based on the raw material and the mineral pigment.

A total of 48 pieces of red ochre were used in this analysis. Figure 39 shows the distribution of red ochre across Unit 6 using 5 x 5 ft grid cells. This analysis shows a high distribution around the structures labeled House 6 and House 10. The highest concentration of red ochre occurs inside of Houses 6 and House 10, although some also occur outside these structures but in less amounts. House 10 contains slightly more red ochre per grid cell across the entire structure than House 6. This was likely due to the procurement of red ochre from raw hematite occurring in House 10. Hematite and red ochre were originally combined but were split into two categories due to a difference in the distribution generated from 5 x5 ft grid cells across Unit 6.

Hematite

Hematite is defined as a reddish-black mineral consisting of iron oxide. Hematite is a sedimentary rock ranging from harder types known as specular iron ore to thin scaly types referred to as micaceous hematite (Judson and Kauffman 1990). All hematite recorded in the

accession records at Chucalissa were of the red type. A total of 63 pieces of hematite were used in this analysis. While the categories of hematite and red ochre was often combined, the distribution of materials labeled as either hematite or red ochre produced slightly different results when the categories were separated. Therefore, each category was separated according to their labeling in the original accession record. The distribution of hematite per density across Unit 6 is displayed in 5 x 5 ft grid cells (Fig. 40).

Results from this analysis shows the highest concentration of hematite occurring mainly within House 10. While this finding is consistent with the high amount of red ochre found in House 10, and House 6 contains little hematite. This was in direct opposition to the high amount of red ochre found in House 6, suggesting an origin of red ochre from the hematite present in House 10.

Stone Discordials

Stone discordials (Chunky stones) are small, concave polished and crafted stones often attributed to a popular game in the southeast called chunky stone. Most data on stone discordials are based on historical accounts of the game played by the Choctaw and Chickasaw Nations. However, those stones in ethnographic accounts exhibit a striking resemblance to those used by Native Americans described by the early French and European accounts. Only five examples of stone discordials occur in Unit 6; two occur within House 10, and two occur within the overlapping sequences of Houses 3, 4, 7, and 8; and one occurs within House 1 (Fig. 41). Since overlay of four separate houses in the same vicinity disrupts what can be said about the two stone discordials, the fact that House 10 contains 20% of the entire count bares mention. Perhaps, another type of important stone material was manufactured in House 10.

Earplugs

Earplugs were jewelry items made from round ceramic, bone, wood, or stone and adorned as body ornaments (Boatright 2015:66). Earplugs were not found in high portions within Unit 6 and the few examples were made from either ceramic or shell types. Earplugs were likely part of a status symbol and often adorned during rituals. For this analysis, shell and ceramic earplugs were not separated. Since both types were rarely found in Unit 6, a basic breakdown of the earplugs across Unit 6 was enough for this analysis (Fig. 42). A further breakdown in the future is encouraged to perhaps place each one within a certain Mississippian cultural phase at Chucalissa.

A total of seven earplugs were used in this study. One of two earplugs are found in the excavation blocks containing a residential structure. The highest proportion of earplugs (3) occurs in the rebuilding cluster of Houses 3, 4, 7, and 8. This basic analysis shows that potentially one or a pair of earplugs were associated with each house.

Other Uncommon Artifacts

Analysis of the uncommon materials from Unit 6 (Fig. 43) shows a high concentration of artifacts either in or around House 10. Materials included in the category of rare artifacts in this thesis include one piece of galena, one piece of mica, one piece of petrified wood, one wood sample, two pieces of textile, one sandstone grinder, one sandstone palette, and two worked hematite. Each of these categories are not discussed individually, but rather some key notes are made on certain artifacts. The most intriguing of these artifacts include two worked hematite, a

sandstone grinder, and a sandstone palette. The two hematite were excavated from House 10 near the sandstone palette. From a geological perspective, there are no sandstone deposits near Chucalissa, however the palette was finely crafted out of a single piece of sandstone. Given the abundance of rare artifacts found in or around House 10, this structure was unlike any other house excavated.

Rare Animal Bones

The category of rare animal bones was based strictly on the rarity of certain animal bones labeled separately in the original artifact accession records. Animal bones assigned to this category include bear, bobcat, dog, and racoon (Fig. 44). However, a future study of animal bones may result in an overall broader density across Unit 6 than shown in this analysis. Of special interest was the presence of a dog burial in House 10 located in the N580-590 R90 excavation blocks. This is the only recorded dog burial across the entire unit. Furthermore, the highest concentration of rare animal bones occurs directly within House 10. This could potentially point to a differentiation in diet, which is often characteristic of individuals containing a higher status ranking within Mississippian societies.

Bone Fishing tools

Bone fishing tools are shown in figure 45. All 4 examples of bone fishing tools, 3 hooks and 1 reel, were in direct relation to House 10. The lack of fishing tools present in other structures was unusual and further complicated by the distribution of fish bones across Unit 6 (refer to Fig. 17). The lack of fish bone data across the rest of the unit could be a lack of separation a separation from artifacts labeled simply as animal bone. However, bone tools were always

separated during all excavations used in this analysis. This makes the only bone fishing tools excavated from Unit 6 directly associated with House 10.

Ferruginous Sandstone and Sandstone

Sandstone is raw material classified as a sedimentary rock. A sedimentary rock forms by the cementation of sediments at an ordinary temperature at or near the surface and can be either fine as clay or as large as a boulder (Andrefsky 1998:45). Ferruginous sandstone refers to iron oxidizes sandstone. These two categories are both represented in the original accession records but were combined in this analysis. A previous analysis which separated the two categories resulted in almost identical proportions of distribution across Unit 6. Therefore, both categories were joined together using a raster calculation in ArcGIS to generate one map (Fig 46). This analysis clearly shows the highest distribution of sandstone material occurring in or around House 10. The rebuilding cluster of Houses 3, 4, 7, and 8 also reflect a high but slightly less concentration. However, the highest concentration of sandstone occurs outside these structures. House 10 contains twice as much sandstone material as the rest of the site combined. The use of sandstone material usually serves a purpose as a stone tool or were used in elaborately crafted materials for ritualistic or status signifying purposes. Given the rarity of which sandstone were used for crafting everyday materials, House 10 appears to be the crafting center of sandstone artifacts.

Ferruginous Siltstone and Siltstone

Siltstone was another material classified as sedimentary rock and fits into the primary type known as clastic (Andrefsky 1998:49). Like sandstone, siltstone was also another material

rarely used for the crafting of artifacts except for specialized purposes. Ferruginous siltstone refers to iron oxidized siltstone. Both Ferruginous siltstone and siltstone were originally analyzed separately but combined due to near identical results. Both Ferruginous siltstone and siltstone are listed in the original accession records separately. Results from the distribution of siltstone across Unit 6 using 5 x 5 ft grid squares shows that siltstone only occurs across Unit 6 in or around House 10 (Fig. 47).

The spatial distribution of siltstone has the highest proportions occurring in or around House 10. Rare stone materials, tools, minerals, rare animal bones, and fishing bone materials all point to House 10 having a specialized function beyond a solely residential abode. Specialization was occurring within House 10 crafting artifacts made from stone, bone, shell, and ceramic. A further discussion is made concerning the relevance of House 10, and the results from the entire artifact analysis in following discussion chapter.

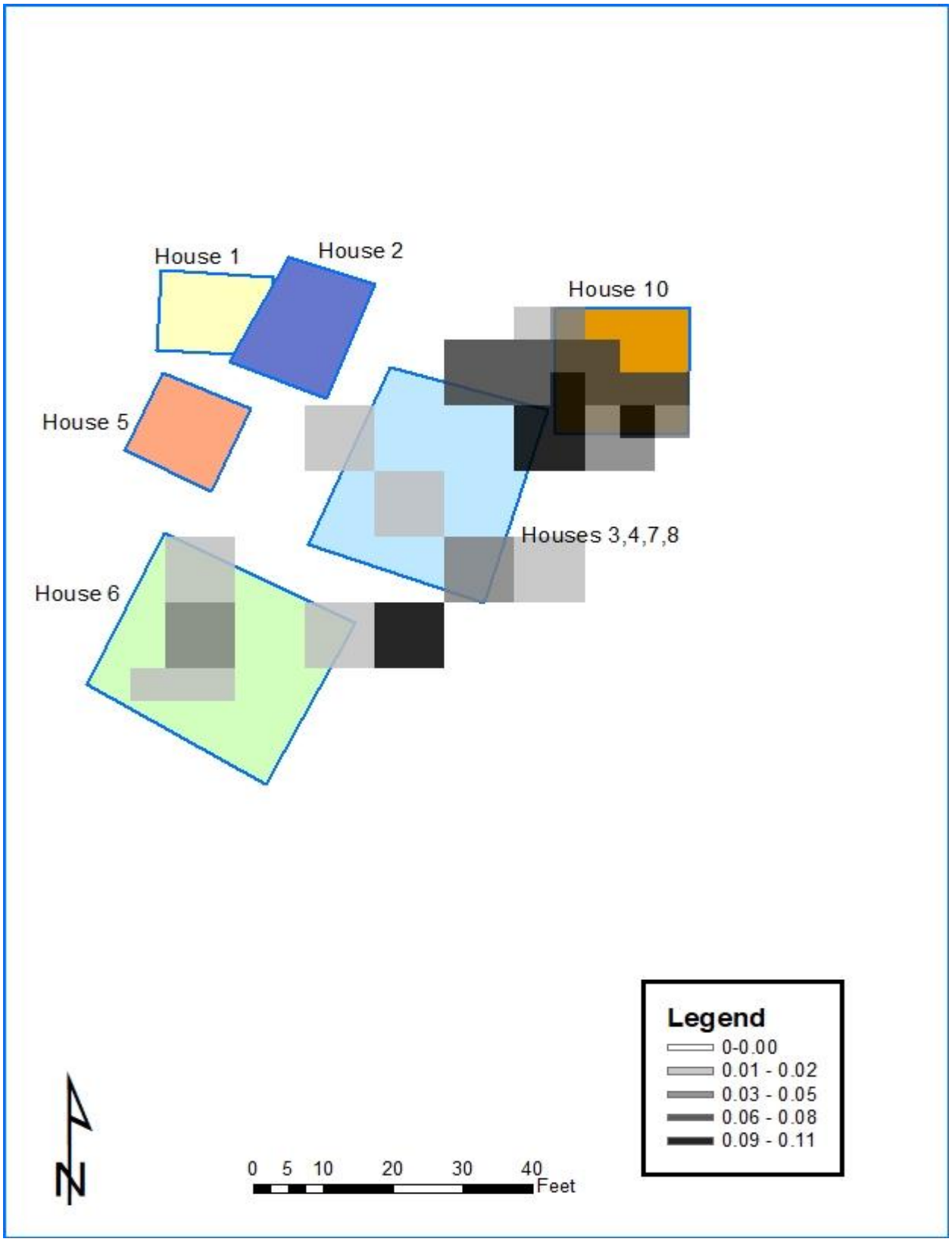

Figure 38. Limonite artifact density per 5 x 5 ft grid cell.

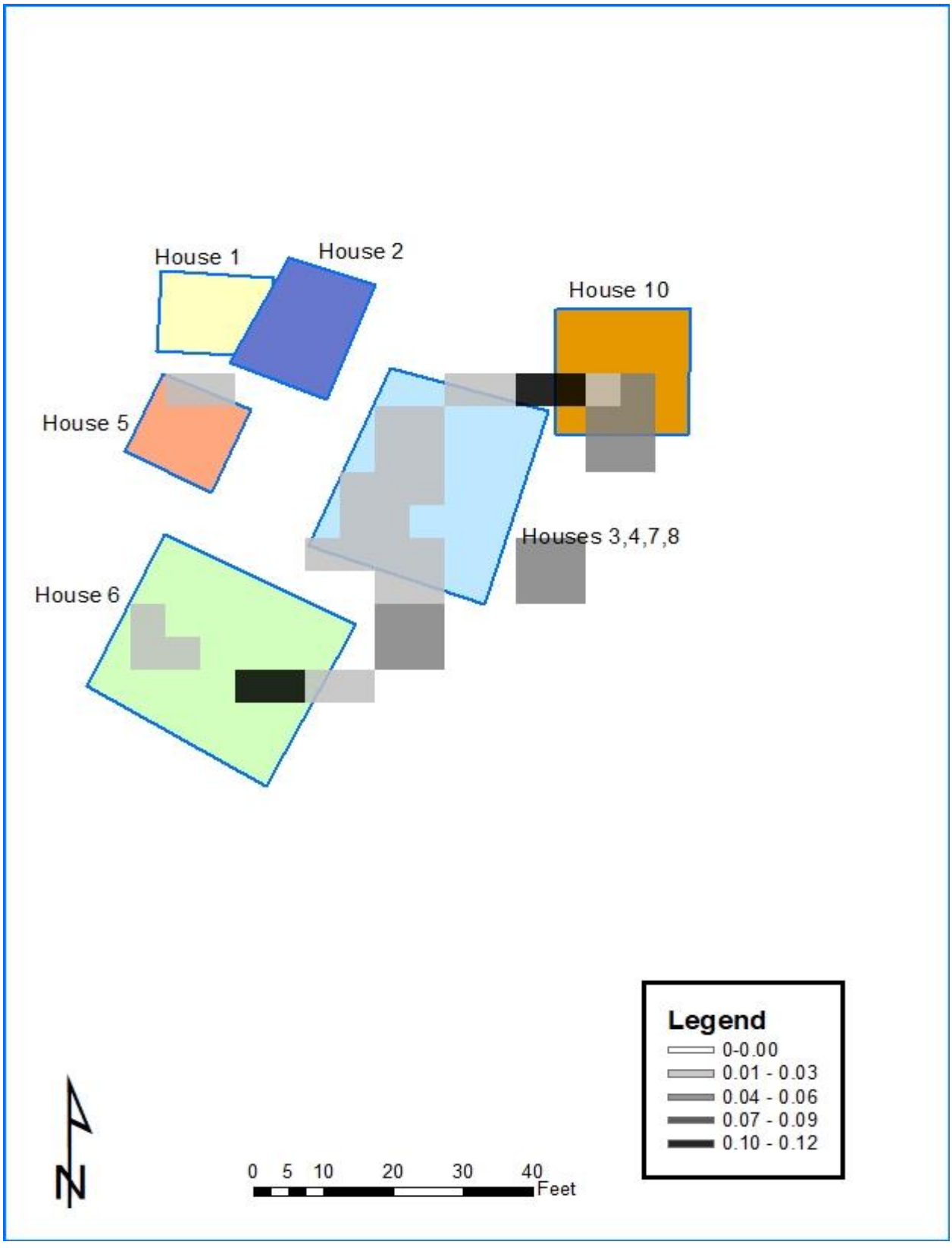

Figure 39. Red Ochre artifact density per 5 x 5 ft grid cell.

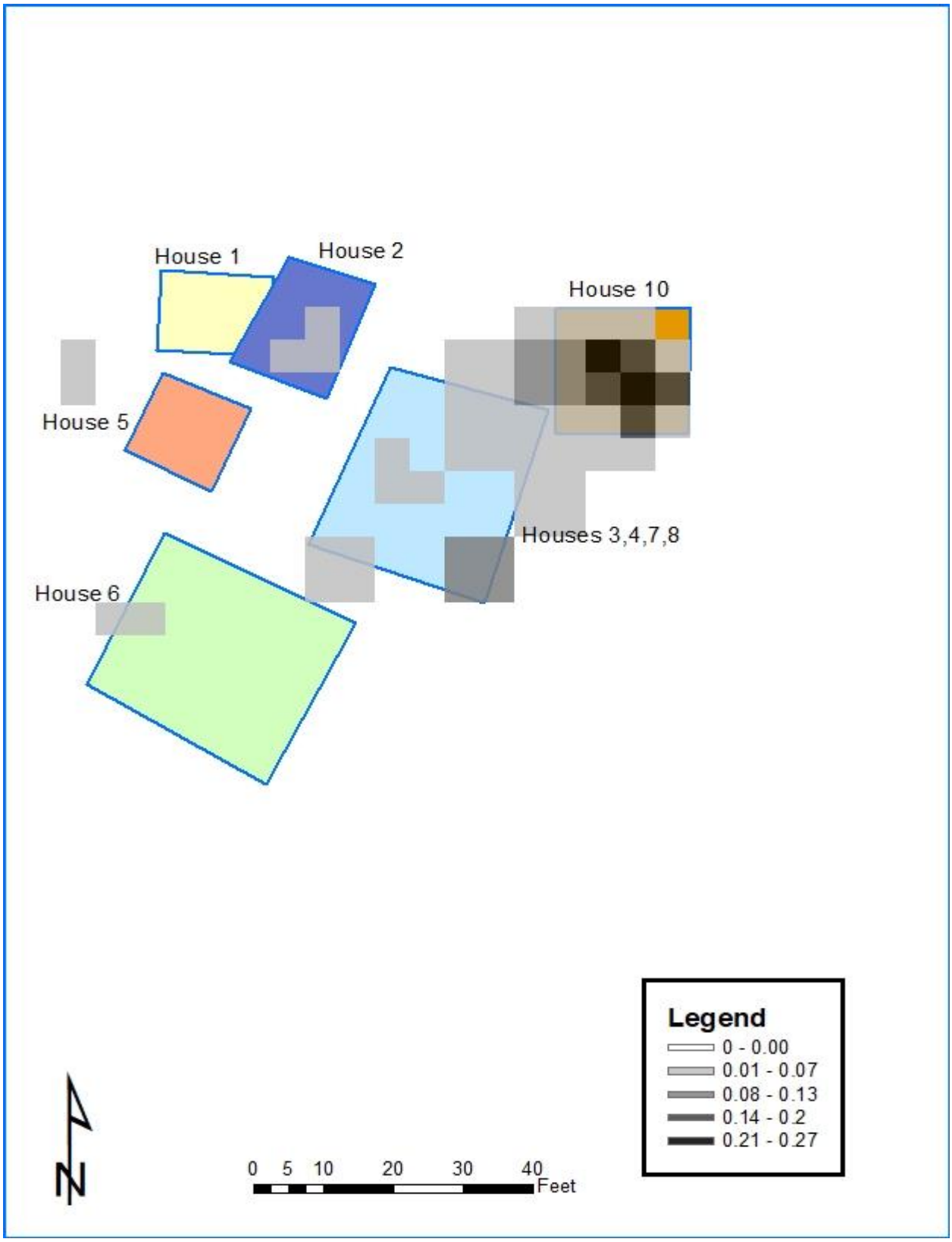

Figure 40. Hematite artifact density per 5 x 5 ft grid cell.

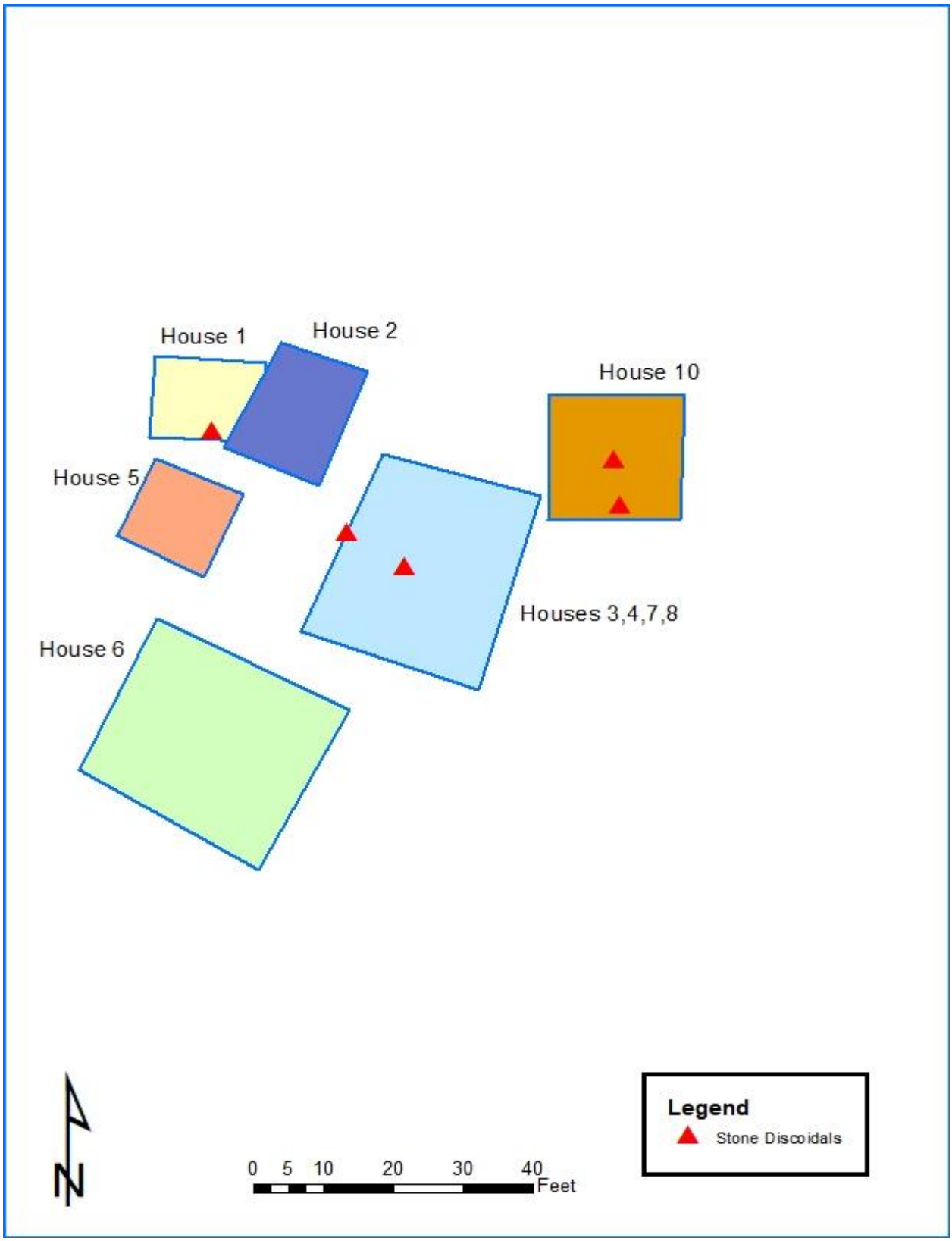

Figure 41. Stone Discordials distribution across Unit 6**.**

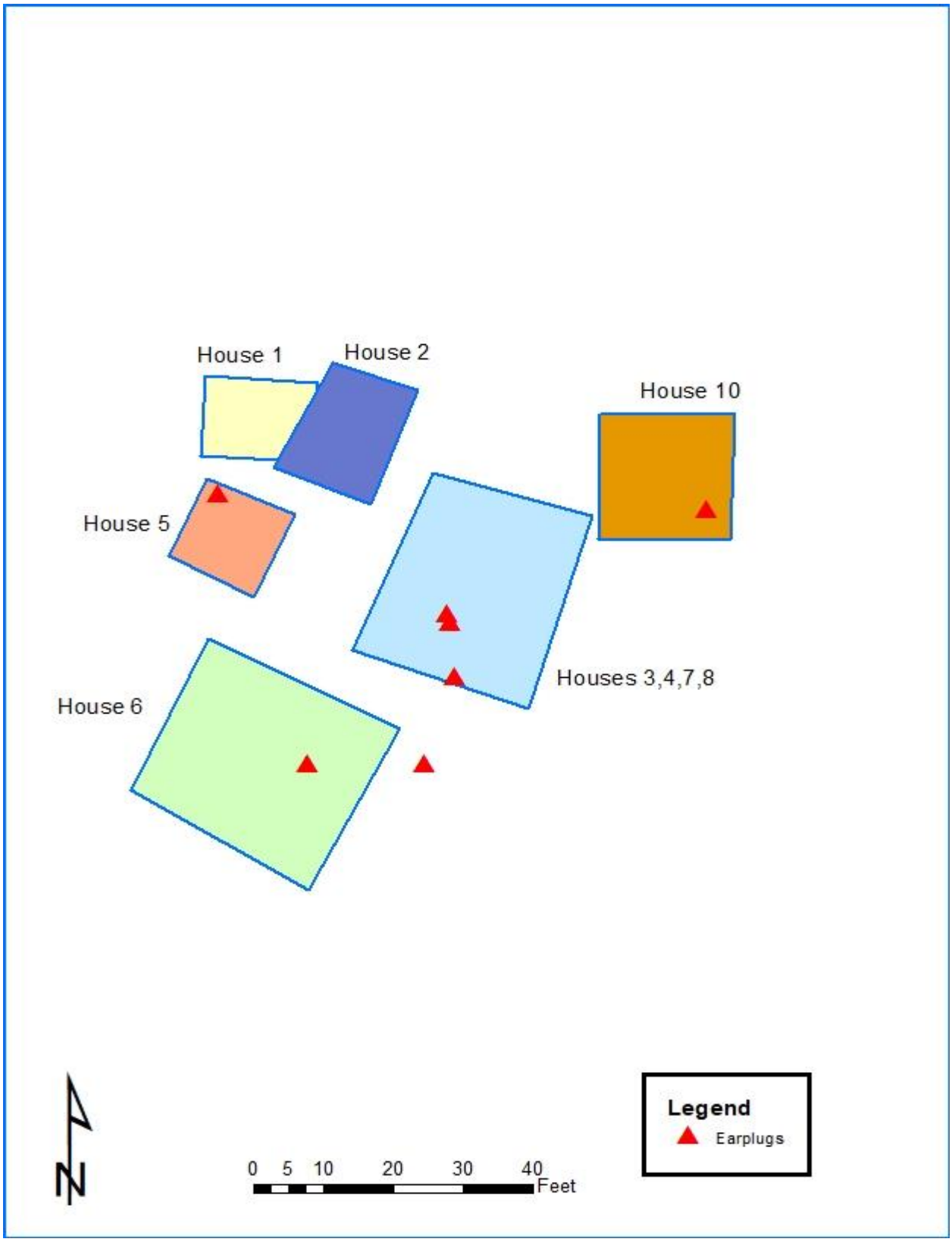

Figure 42. Earplug distribution across Unit 6.

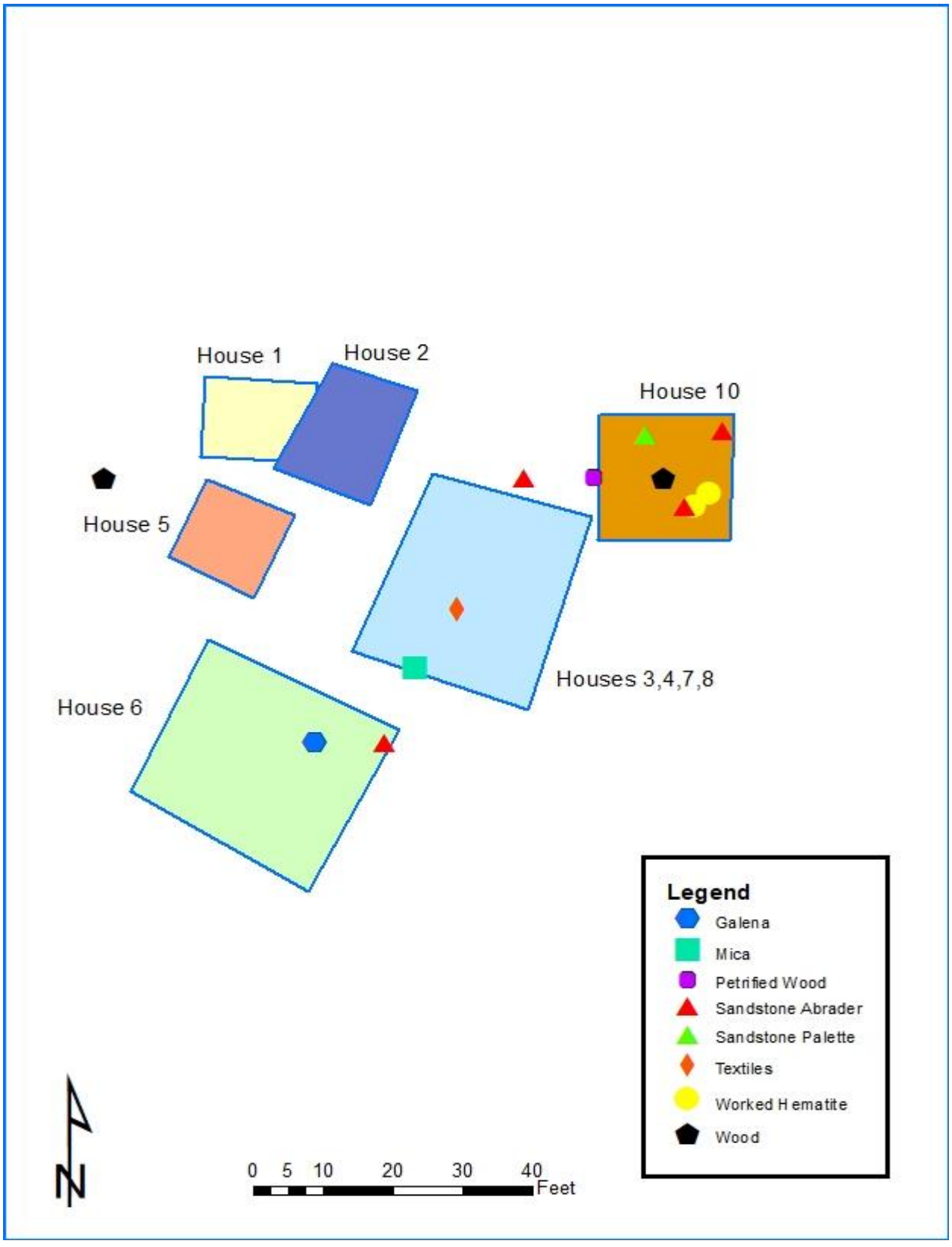

Figure 43. Rare artifact distribution across Unit 6.

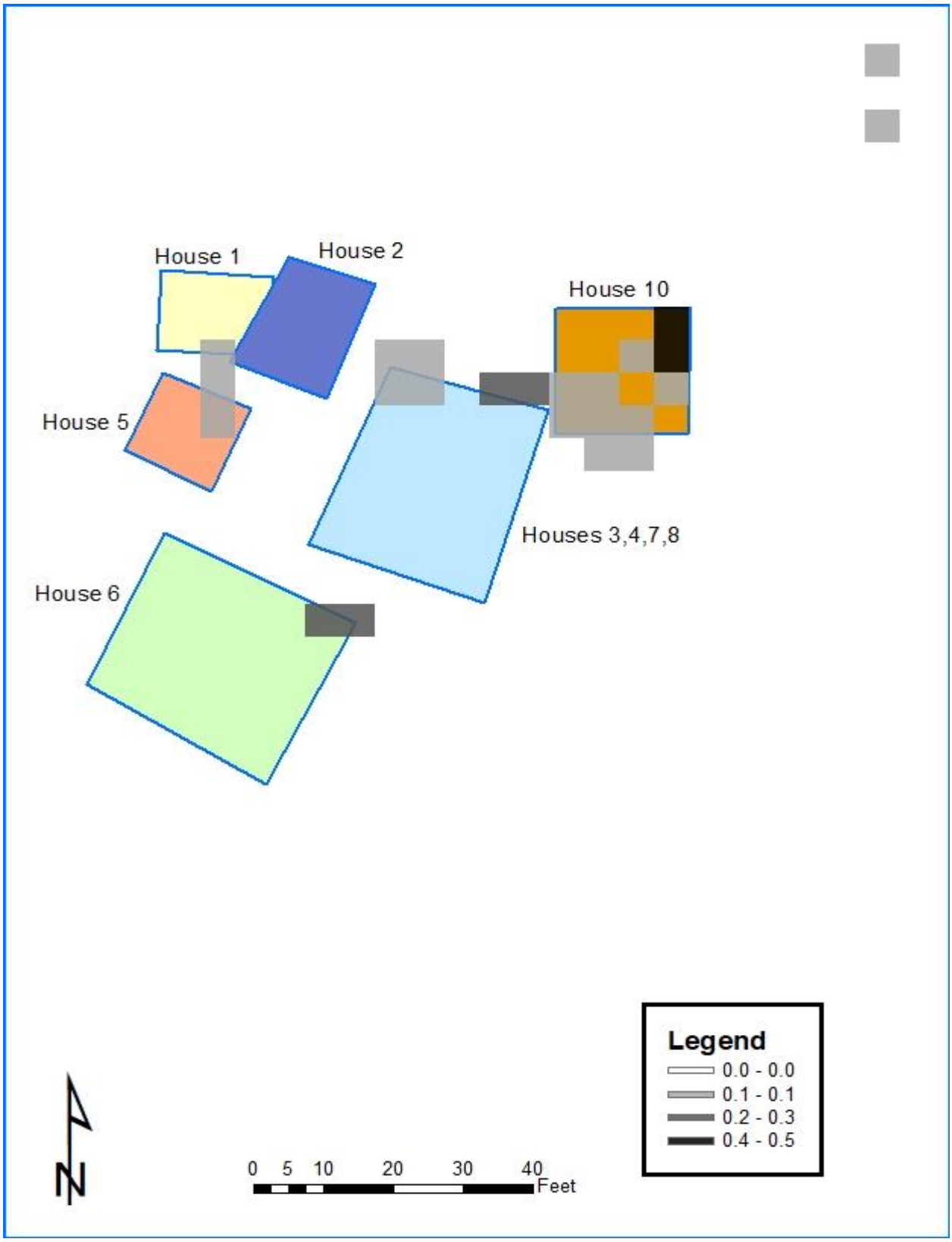

Figure 44. Rare Animal Bone artifact density per 5 x 5 ft grid cell.

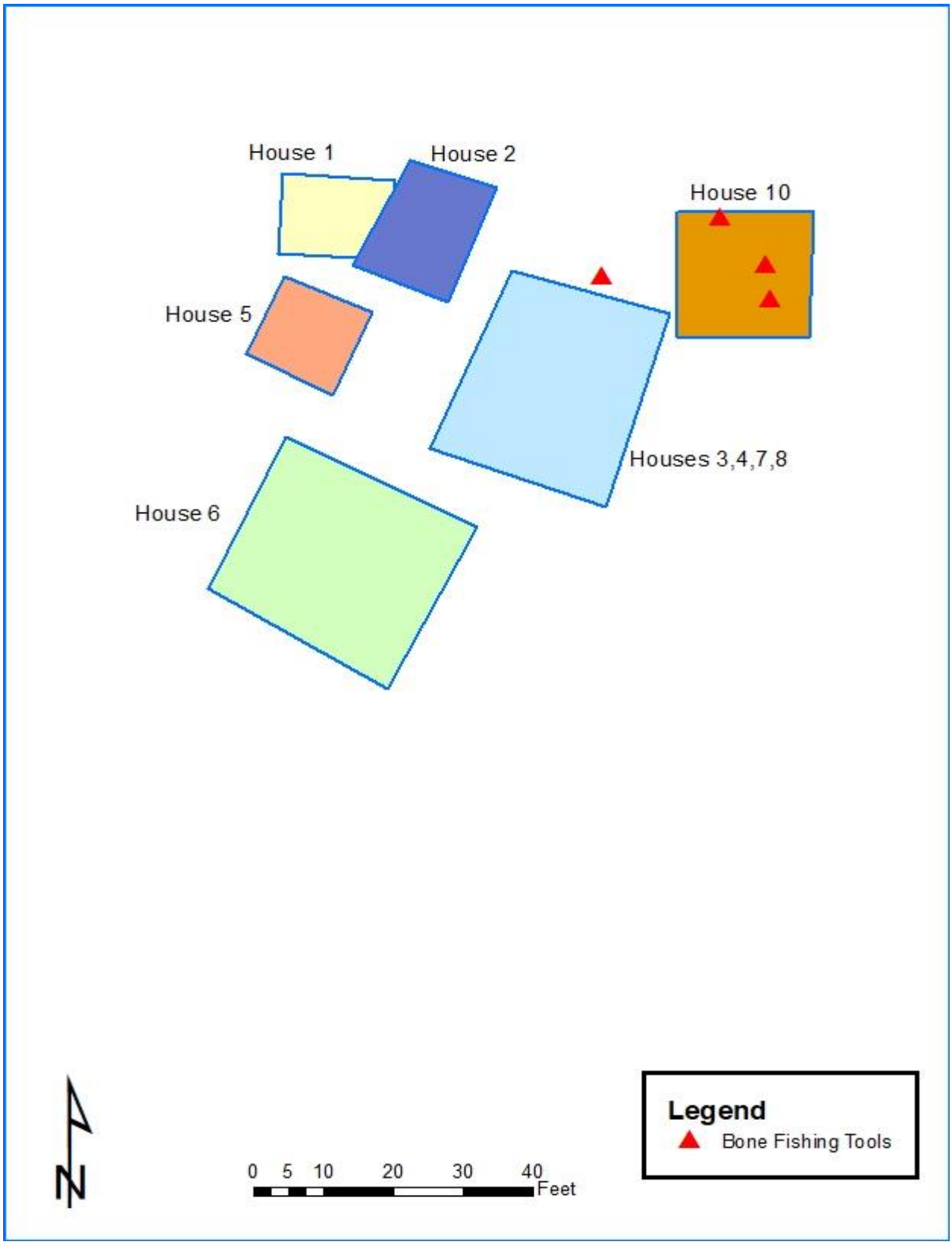

Figure 45. Bone Fishing Tools distribution across Unit 6.

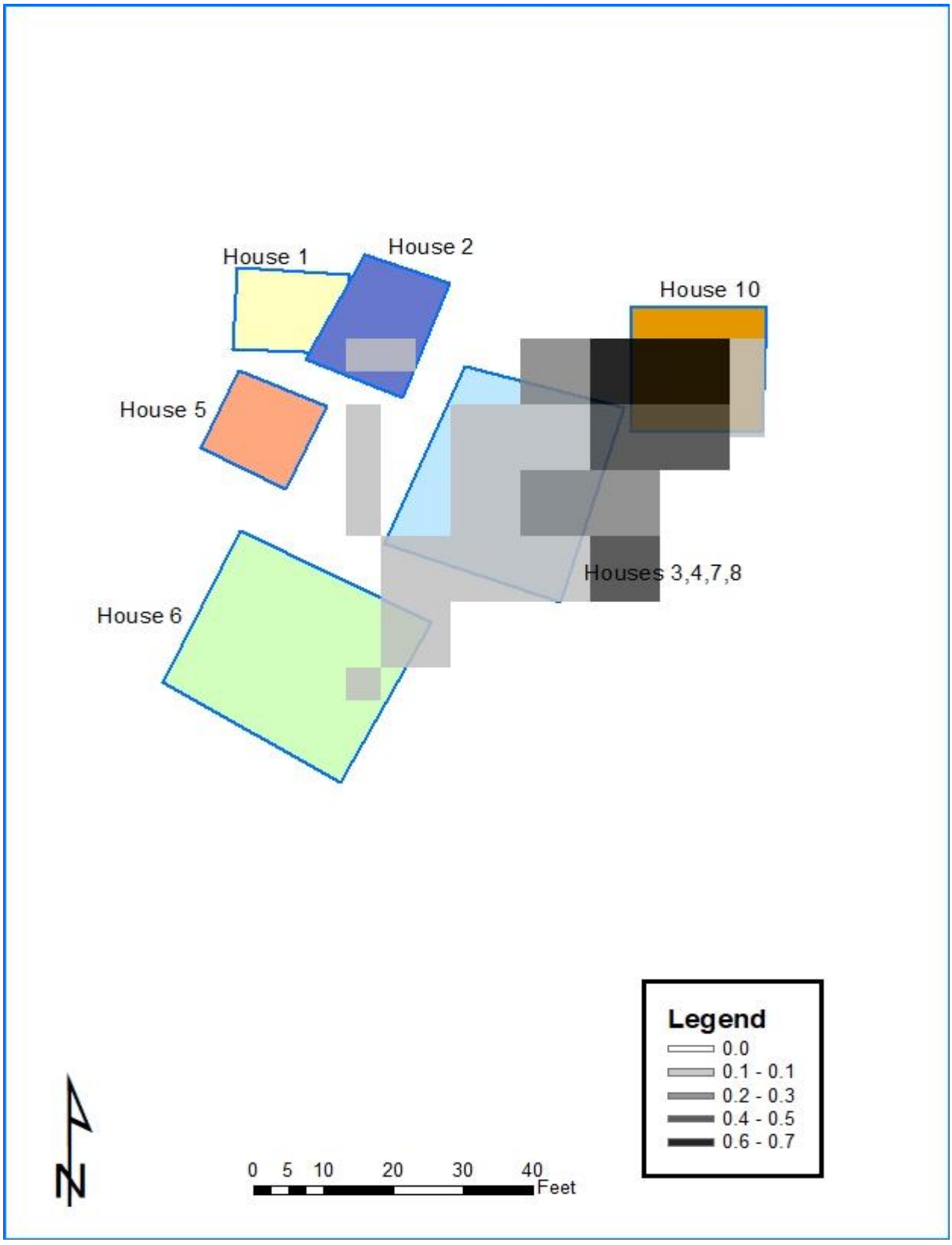

Figure 46. Ferruginous Sandstone and Sandstone artifact density per 5 x 5 ft grid cell.

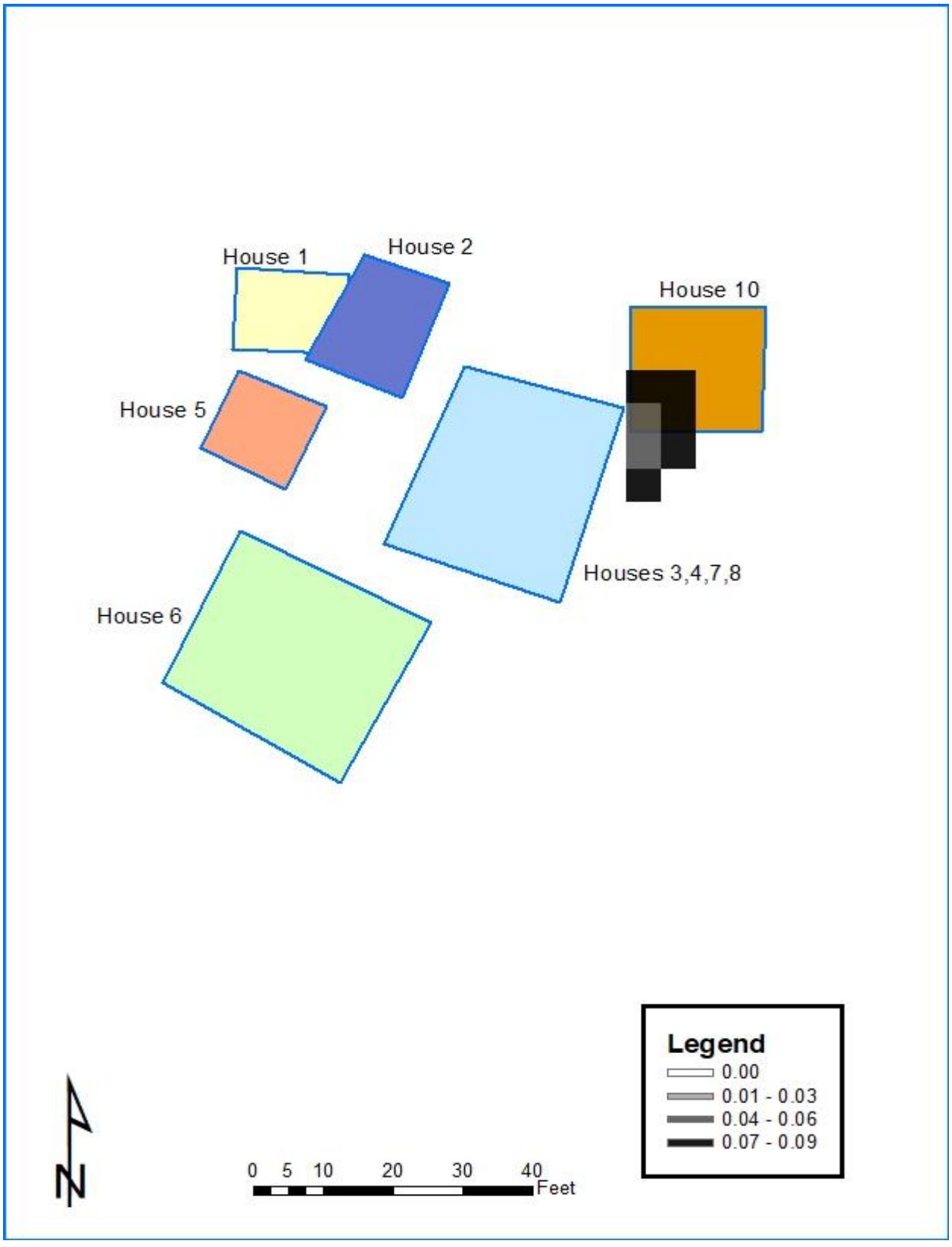

Figure 47. Ferruginous Siltstone and Siltstone artifact density per 5 x 5 ft grid cell.

Results from Spatial Analysis

This spatial analysis analyzed the main residential portion of the site using artifact density per 5 x 5 ft grid cells across Unit 6. Using architectural features, artifact assemblage, and depth, Houses 2, 5, and 6 can be ascribed to the Middle Mississippian Boxtown phase occupation of the site. House 6 was the largest structure excavated from Unit 6 by Bourdoin in 1952, and then reexamined by Dr. McNutt in 1988. By McNutt's estimation, House 6 is either 25 x 12 ft (3.7 x 7.6 m) or 25 x 25 ft (7.6 x 7.6 m). These dimensions depend on whether the structure was rectangular or square. Unfortunately, the analysis is based on only the exposure of one complete wall which measures ca. 25 ft (7.6 m). Lumb and McNutt (1988: 50-51) refer to House 6 as Structure 2 and believe the structure is an early chief's house. Given the artifact assemblage, architectural design, and houses proximity to the later constructed platform mound, I believe this was an accurate assessment of House 6. Houses 1, 3, and 4 can be ascribed to the Walls phase based on the architectural design, artifact assemblage, and excavation depth. This leads into a discussion of House 10 regarding its significance, and whether the structure fits into either the Boxtown or Walls phase component at Chucalissa.

House 10: Significance

The analysis of artifact assemblage and their relation to the use of space regarding residential structures in Unit 6 illustrate a difference between the function of House 10 and all other housing structures. All the evidence presented in this analysis points to House 10 being a workshop, specifically in the modification of stone materials. House 10 contains more chipped stones, flakes, and fired rock than any other place within Unit 6. Beaudoin (1953:10), states "Mr. G.E. Barnes when working the site in the early 1930s indicates that there was an extensive

stone workshop on one part of the site, but even so not as extensive as that found on many not too distant sites." Based on this spatial analysis performed on Unit 6, House 10 appear to be the workshop described by Mr. Barnes.

The highest concentration of most stone tools, flakes, chipping shatter, hematite, sandstone, sandstone working tools, and a distinctly Middle Mississippian period sandstone palette all occur in or near House 10. Furthermore, the highest concentration of ceramic discs, another characteristic Middle Mississippian material, were found in House 10 at a high frequency. Smith (1972:V) states that "Boxtown middens at Chucalissa tend to have three to four times as much chipping debris as the Walls middens, and the Walls middens are almost totally absent of ferruginous sandstone, ferruginous shale, and red ochre as chipping debris."

The highest concentration of bone materials was also found in House 10 as well as House 6. Also, the only bone fishing tools excavated from Unit 6 occur in House 10 (refer to Appendix B), as well as the only recorded dog burial. Finally, there is almost a complete lack of Walls Engraved ceramics in relation to House 10 as opposed to the rest of the unit further suggesting a Boxtown phase date for the structure.

Given the highest concentration of cultural materials predominately dating to the Middle Mississippian period, House 10 can best be assigned to the Boxtown period. Architectural features outlined by Smith (1972), Lumb & McNutt (1988) would have originally placed House 10 in the Walls phase occupation of the site. However, McNutt (2012) provides a radiocarbon date of a midden pit in House 10, block N580 R80, with a medium probability date of A.D. 1344 making the structure part of the Boxtown phase. This date is slightly before McNutt's (2012) proposed earlier date of A.D. 1350 for the Walls phase. The medium probability of this

date is exactly 1.000, and one of the highest probabilities of all the radiocarbon date collected prior to the year 2000 (McNutt 2012:234) (Fig. 48).

The transition to Walls architecture was accompanied by single post houses with a circular hearth (McNutt 2012:246). House 10 is also closed wall trench architecture which suggests Walls phase according to Smith's (1972: V) description of the transition. However, with the destruction of House 10, stone working appears to decline sharply in Unit 6. Also, the date associated with House 10, and the construction of the platform mound at Chucalissa began within a five year span (Fig. 49). Recent radiocarbon dates from the construction of the Platform Mound (Mound A) place the medium probability of the sub-mound at A.D. 1349 at a 1.000 probability and 1351 at an 0.43 probability (McNutt 2012:237). These dates aided in McNutt (2012) proposing a move of the Boxtown phase to A.D. 1250-1350 and the Walls phase ahead to A.D. 1350-1520. This is a refinement to the original dates proposed for the Boxtown and Walls phases by Smith (1972) and Lumb & McNutt (1988).

Sample	14C Yrs. ± cr B.P.	Cal. A.O. Yrs. ± 2cr	Probability	Median Probability	Phase<	Provenience
M-787	350 ± 200·	1399-1692	0.904	1562	Walls	Unit 3, House 3 profile, base Stratum I
M-788	360 ± 150•	1424-1664	0.996	1547	Walls	Unit 3, Stratum I, post (very late)
Tx-6173	470 ± 50	1391-1518	0.912	1437	Walls	Unit 5, Mound A, next to last structure
Tx-6174	490 ± 50	1311-1359	0.13	1426	Walls	Unit 5, Mound A, next to last structure
		1387-1489	0.867			
M-584	510 ± 200·	1281-1528	0.882	1416	Walls	Unit 3, House 3 floor, base Stratum I
,		1551-1634	0.118			
M-789	510 ± 200·	1281-1528	0.882	1416		Unit 3, above floor House 12, upper Stratum III
		1551-1634	0.118			
Tx-6843	520 ± 70	1287-1493	0.991	1403	Walls	Unit 4, Feature 7
		1389-1446	0.681			
Tx-6170	530 ± 50	1302-1366	0.371	1401	Walls	Unit 3, House 14
		1383-1448	0.629			
I-5780	540 ± 90	1272-1520	0.976	1389	Boxtown	Unit 6, House 6, Feature 96
Tx-6171	600 ± 150	1152-1644	0.983	1358	Boxtown	Unit 6, House 5
Tx-6169	640 ± 60	1272-1413	1.000	1344	Boxtown	Unit 6, sq. 580R80, midden, House 10?
Tx-6172	710 ± 60	1213-1333	0.729	1287	Boxtown	Unit 6, House 6, Feature 96
		1336-1398	0.271			
Tx-6078	760 ± 60	1155-1316	0.945	1250	Walls	Mound A, next to last structure
I-5781	765 ± 95	1040-1110	0.105	1238	Mitchell	Unit 6
		1115-1329	0.782			
		1340-1396	0.113			
M-583	930 ± 200•	945-1274	0.98	1106	Ensley	Unit 3, pit below House 12, upper Stratum III
Tx-6842	1110 ±70	769-1044	0.976	929	Ensley	Unit 4, submound midden
Gx-414	1600 ± 60	332-596	0.99	466	Wood land	Uni t 2, Feature 10, Stratum III

Note: All radiocarbon determinations made on wood charcoal.

• University of Michigan provides 2-crB.P.; 1-crB.P. was used for calibrations. b Only probabilities 2: 0.1 are shown.

c Phase determinations based on stratigraphy and ceramics.

Figure 48. Radiocarbon dates from Chucalissa, highlighted date is midden pit for House 10 (McNutt et al. 2012: Table 1).

Sample	14C Yrs. ± er B.P.	Ca l. A.O. Yrs . ± 2cr	Probability"	Median Probability	Provenience
AA-57228	399 ± 30	1437-1522	0.80	1478	Level 17B
		1574-1626	0.20		
AA-57227	367 ± 30	1448-1528	0.56	1519	Level 17A
		1551-1634	0.44		
AA-57226	330 ± 30	1477-1642	1.00	1562	Level 15C
AA-57225	390 ± 30	1441-1523	0.73	1488	Level 15A
		1571-1630	0.27		
Beta-183826	400 ± 40	1432-1526	0.70	1490	Level 15
		1556-1632	0.30		
AA-57224	465 ± 30	1411-1462	1.00	1436	Level 12A
AA-57223	483 ± 30	1407-1450	1.00	1430	Level SA
AA-57222	463 ± 30	1412-1464	1.00	1437	Level 4B
AA-57221	416 ± 31	1427-1519	0.90	1464	Level 4A
		1593-1619	0.10		
Beta-183825	550 ± 40	1304-1365	0.47	1389	Level 4
		1384-1438	0.53		
AA-57220	617 ± 31	1293-1401	1.00	1349	Submound
AA-57219	640 ± 31	1283-1329	0.43	1351	Submound
		1339-1396	0.57		

Note: All radiocarbon determinations made on wood charcoal.

Figure 49. Radiocarbon dates for sub-mound construction of the platform mound at Chucalissa, highlighted dates for sub-mound construction (McNutt et al. 2012: Table 3).

Given the results presented in this analysis and radiocarbon dates from both House 10 and construction of the platform mound, House 10 can be firmly placed in the late Boxtown-early Walls transition phase. Three possibilities are offered to account for the architectural discrepancy regarding House 10. The first was that the switch to different architectural practices began earlier than the start of the proposed Walls period. The second possibility was that House 10 displayed characteristics of a residential structure transition from the Boxtown phase to the Walls phase at Chucalissa. The last possibility is that House 10 was not a house at all or served a different purpose other than merely a residential structure. Results are based on the spatial analysis of artifact assemblage, radiocarbon dates, and the newly proposed earlier date for the Walls phase component by McNutt (2012). Perhaps the most striking characteristic placing House 10 in the Middle Mississippian Boxtown component lies in the discovery of an intact sandstone palette. Sandstone palettes are seldom found intact except when accompanying burials or within mounds. These palettes only occur during the Middle Mississippian period in the Southeast. Previous research concerning Sandstone Palette use and function is discussed in the next section followed by a brief discussion on the Sandstone Palette excavated from House 10.

Research into Sandstone Palette: Use and Function

Around 1200-1250 A.D., religious practices increased the craft production of materials illustrating an increasing concern with warfare and religious ideologies. The production of materials displaying a concern with warfare and was not an instantaneous throughout the southeast, but confined to large centers like Moundville, Etowah, and Winterville. Moundville, Etowah, and Winterville were regionally important ceremonial centers only populated by

religious functionaries and those individuals of elite status. The remainder of the population were spread out among smaller local sites, forming hamlets or individual households.

For example, Moundville and Etowah in contain the most reported number of intact sandstone palettes. Distributionally, these palettes were found in an expanse from Southeast Missouri to Georgia and Alabama. However, often only a single fully intact example was ever found at any given site. According to Steponaitis (2017), one example was each recovered from the Anna and Glass sites in Mississippi. Brain (1989:181) also points to one example from the Winterville site in southwest Mississippi. Webb and DeJaranette (1942:289-291) claimed these palettes are abundantly found throughout the Southeast but were rarely found completely intact. Part of this problem was perhaps due to the intentional ritual breaking of sandstone palettes (Steponaitis 2017).

Sandstone palettes were usually associated with mound sites and usually found associated with burials (Peebles and Kus 1977; Steponaitis 2017). One of the earliest interpretations was made by William H. Holmes who referred to them as “paint palettes” (Holmes 1883). Studies regarding the usage of sandstone palettes range from a simple paint prepping vessel for the mixing of paint for ritualistic ceremonies to their use as mirrors or portals to the afterlife. Steponaitis (1992) originally referred to these palettes as “elite” artifacts. However, the most recent interpretation defines these palettes as being a form of sacred knowledge passed down to only a select few individuals (Steponaitis 2017).

Steponaitis (2017) explains the palettes may represent corporate lineages or clans and each were deliberately crafted to be unique. Palettes often found in elite burial mounds tend to be elaborately designed while those found outside an elite burial context were often quite plain

with scalloped or notched rims and incised lines (Whitney 2002) (Fig. 50). Palettes associated with burials were often found under the head, and occasionally near the arms, feet, or torso.

Moundville Palettes

According to Steponaitis (2017), All Moundville palettes date to the Middle Mississippian period between A.D. 1200-1450. Each palette from Moundville was individually unique, yet stylistically similar. Most palettes are 17-21 cm, although some are as small as 9 cm or as large as 30 cm (Steponaitis (2017). Most palettes are circular, but a couple rectangular examples are also present at the site. Some of these palettes are plain, and some are elaborately designed. The palettes that are elaborately design were always found accompanying an elite burial. Steponaitis (2017) suggested that the production of these sandstone palettes began at Moundville, which he believes was a pilgrimage site where crafters throughout the southeast would come to learn sacred knowledge associated with these objects.

Etowah Palettes

At Etowah, all palettes were found in burial context and often bundled together with hematite, galena, and mica. These objects were all wrapped in textile fabrics similar to those reported from ethnographic contexts used in medicine bundles reported from the Midwest. The bottom of the Etowah palettes contains black stains consistent with those left from organic material. Moore (1905: 149-150), states one of the palettes from Moundville was wrapped in wood, however no evidence of the palettes being bundled with textiles was present (Steponaitis 2012).

The Chucalissa Palette

Traces of red ochre are present on the sandstone palette from House 10, potentially indicated its use for some ritualistic purpose (Fig. 51). The palette was excavated but never defined as a grave good. However, three burials were recorded under or just outside House 10 but were never excavated. I posit that the sandstone palette is not associated with the burial found inside Unit 10. The burial was found in a large burial pit, while the palette is located in a different smaller pit occurring 5 to 10 ft away occurring at a deeper depth than the burial.

The only objects excavated near the Chucalissa sandstone palette were two worked hematite. No other items like galena, mica, or textiles were found with the palette. Presently, whether the sandstone palette and worked hematite were part of a bundling component is indeterminate. A further residue analysis on the palette to determine the presence of organic materials may be of utility.

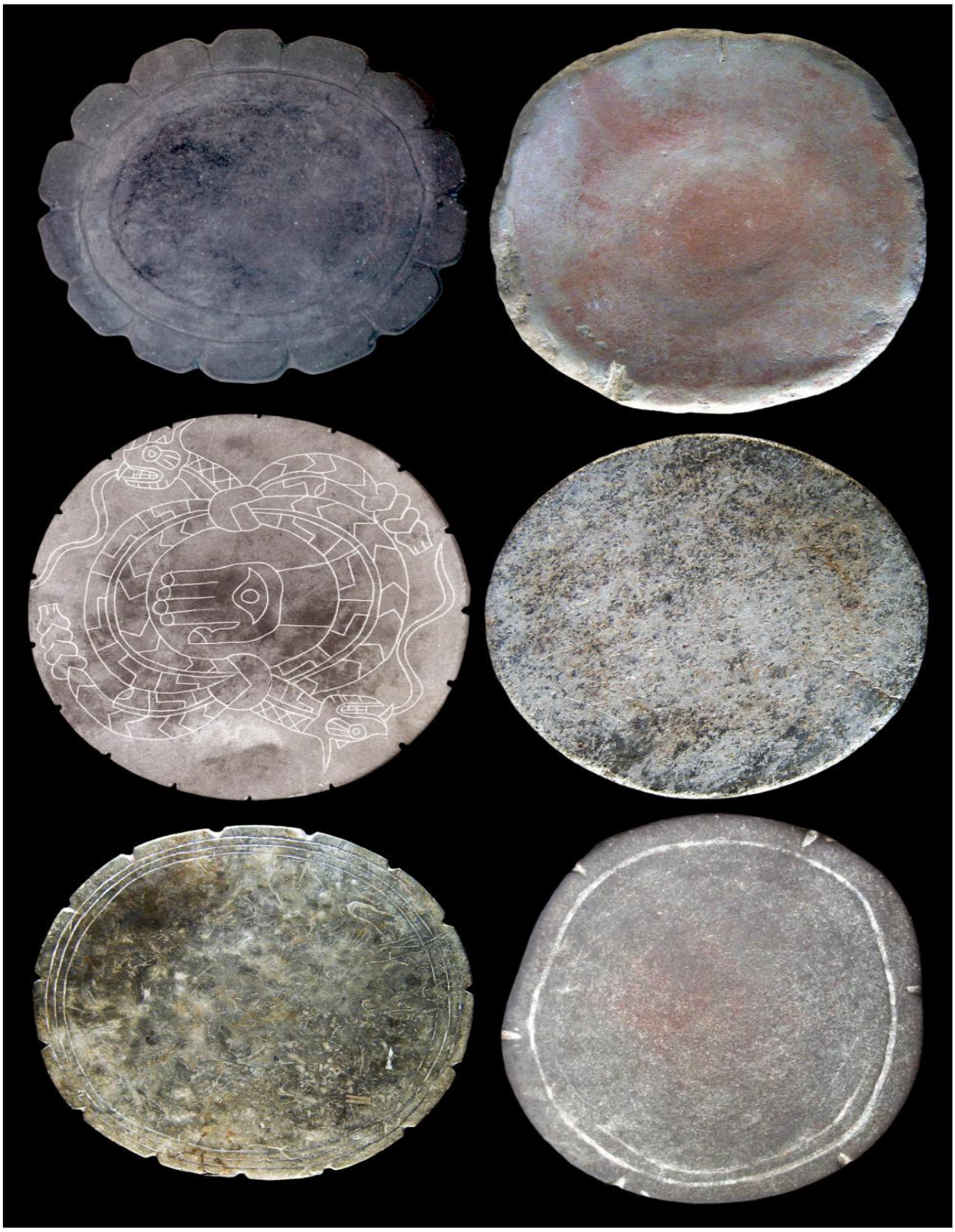

Figure 50. Examples of sandstone palettes (Bostrom 2011).

Figure 51. Sandstone Palette recovered from House 10 at Chucalissa.

The significance of Chucalissa cannot be overlooked based on intact sandstone palettes rarely found throughout the Southeast. Given the time frame for all the known excavated palettes, the palette found at Chucalissa dates to the Middle Mississippian period. Three lines of evidence place the palette firmly in this period. The first is that the palette was excavated from a pit below the floor level of the final destruction episode of House 10. The second line of evidence is that all Walls Engraved ceramics in the area are found above the depth of the palette location and above the destruction of House 10. Even though there was disturbance in portions of House 10 caused by the construction of a historic structure, rodents, and burials, Walls Engraved ceramics still only occur above the level containing the excavated floor of House 10. Lastly, radiocarbon dates taken from the large platform mound showing construction began at, ca 1400 A.D., the end of the Boxtown phase (Franklin (2005). However, McNutt (2012), believes the Walls phase occupation of the Chucalissa site may have begun much earlier than once expected around ca A.D, 1350. Following Dr. McNutt's early Walls phase date, the radiocarbon date associated with the House 10 feature still places the structure and sandstone palette firmly between the Boxtown-early Walls transitional phase at Chucalissa.

5. Discussion and Conclusion

The results from spatial analysis are discussed in the following order; (1) functional attributes, (2) occupational continuity, (3) temporal changes, (4) and artifact spatial analysis.

This thesis has utilized previously unpublished data from Chucalissa to conduct a Spatial Analysis of Unit 6. Artifacts from previous excavations were used to perform a distributional analysis of several different artifact classes in relation to building or house footprints across Unit 6. Although the buildings within Unit 6 were originally classified as houses (which presupposes solely a residential function), my spatial analysis of associated artifacts requires a reassessment of structure function within Unit 6. My analysis indicates a high density of uncommon artifacts, tools, and stone debitage within the House 10 locality. Results from spatial analysis indicated that House 10 was a residential structure which additionally functioned as a workshop during the Boxtown-Walls transitional phase, differentiating it from other structures within Unit 6.

While House 10 contained the highest proportion of stone tools like hammerstones, the structure had no ground stone tools, e.g. grounding stones or slabs for processing plant materials. Also, House 10 contained the only bone fishing equipment. These findings from House 10 are in direct opposition to all other structures within Unit 6, which all contained grinding stones and lacked bone fishing equipment. My analysis only indicated the presence of animal bones consistently associated with all structures across Unit 6, while fish bones and scales were only associated with House 10. Given that “grinding Slabs” were absent, but stone tools such as hammerstones were present in House 10, analysis of House 10 suggests that it was structure with both residential and specialized workshop functions.

Regarding architecture and building sequences within Unit 6, several observations may be made. Excavation plans showed a continuous rebuilding sequence of Houses 3, 4, 7, and 8. This sequence showed a continuous occupancy of structures in the center portion of Unit 6 from the Boxtown through the Walls periods. The transition between the Boxtown and Walls structures are clearly shown in the rebuilding sequences of Houses 3, 4, 7, and 8. Houses 7 and 8 are attributed to the Boxtown phase, while Houses 3 and 4 are attributed to the Walls phase. Potentially, more structures once existed in Unit 6 but were destroyed during the demolition and subsequent rebuilding of structures. However, two things were clear from this spatial analysis regarding structures in Unit 6; 1) Unit 6 was continually occupied through the Boxtown and Walls phase occupations of the site, and 2) House 10 appeared as a single construction episode in the N580-600, R70-90 blocks and only existed during the Boxtown-Walls transitional phase. During the latter portion of the Walls phase, the location of builds shifts towards the northern half of Unit 6, as elaborated on in further discussion below.

Returning for the moment to the House 10 midden, radiocarbon assays place a median date of the structure to A. D. 1344, while radiocarbon dates for sub-mound construction of the platform mound began at A.D. 1349 (McNutt et al. 2012). Also, analysis indicates a sharp decline in stone working and craft specialization in Unit 6 in the upper strata following the destruction of House 10. Whether craft specialization was moved to another portion of Chucalissa or sharply declined across the entire site is not clearly understood. However, the architectural changes between the Boxtown and Walls phase also suggest cultural change occurring in the latter portion of occupation a Chucalissa, probably due to shifts in social organization.

Regarding construction techniques, Boxtown structures were built with long poles set into narrow trenches with square, open-corner wall trenches, while the Walls structures were constructed with wall posts placed in continuous circular, wall trenches with closed corners. Within Unit 6, a change occurred in the use of space for buildings following the Boxtown phase. The Boxtown phase structures were constructed in the center and eastern half of the unit, while the later period Walls phase structures were constructed in the center to the northern portion of Unit 6. Although House 10 fits into the Walls phase architecturally, its age of 1344 A.D. and associated artifacts hint to a Boxtown affinity.

Results from my study provided a deeper understanding of Chucalissa regarding the main residential portion of the site. By mapping previous excavation data and artifact distributions using GIS, a reassessment of previously held assumptions about the use and function of structures within Unit 6 was possible.

My analysis clearly demonstrated functional differences in activities occurring in within the area House 10 in contrast to every other structure in Unit 6. Results also showed a reorganization of the use of space in Unit 6 from the Boxtown phase relegated to the central and eastern portion of the unit with a shift to building structures in the northern portion of the unit during the Walls phase. This may imply a switch of cultural change due to shifts in social organization inferred from diachronic or temporal changes seen in the distribution of cultural materials across Unit 6. However, future research is required to identify what cultural and social mechanisms were responsible for the changes observed in the archaeological record within Unit 6 at Chucalissa.

Future Considerations

Given that this study consolidated several classes of artifacts into coarse-grained or broad categories, it is acknowledged that finer-grained analysis could be conducted in the future. For instance, the class "animal bone" utilized in this study could be broken-down into finer-scale classes such as genus or species levels, given the ability to conduct a better analysis of faunal remains. Finer-grained analysis of many artifact classes used for this study may yield surprising results, including changes to the densities and distributional properties of some of the categories presented in this thesis.

A future reassessment of buildings in excavation Units 2 and 3 at Chucalissa regarding whether they functioned as residences (i.e., "houses") or something else is recommended. By mapping all structures present in each unit, differential functional uses of the site could be properly analyzed. A similar methodological approach to the one used in this thesis could be undertaken on the other excavation blocks at Chucalissa. Given the rich archaeological record within the collections from Chucalissa that have yet to be investigated, future discoveries are anticipated.

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APPENDIX A
Tabular Artifact Data from Unit 6

Appendix A

Tabular Artifact Data

Horizontal Locus (N540 R0)	Count	Weight (grams)
Lithics	110	2297
Ceramics	218	1984
Daub	10	38
Historic	1	12
Animal Bone	429	1863
Stone Tools	0	0
Bone Tools	0	0
Organics/Mussel Shell/Turtle Shell	15	45
Specialty Items	0	0
Walls Engraved (Ceramics)	2	15
Sandstone	0	0
Hematite	4	35
Effigy	0	0
Totals	**789**	**6289**

Horizontal Locus (N540 R10)	Count	Weight (grams)
Lithics	66	1222
Ceramics	239	2116
Daub	2	3
Historic	0	0
Animal Bone	111	403
Stone Tools	2	263
Bone Tools	1	7
Organics/Gar Scales/Clay	4	179
Specialty Items (Bone Bead)	1	3
Walls Engraved (Ceramics)	3	14
Sandstone	2	4
Hematite (1)/Limonite (1)	2	20
Effigy	1	13
Totals	**434**	**4247**

Tabular Artifact Data Continued

Horizontal Locus (N540 R20)	Count	Weight (grams)
Lithics	244	2772
Ceramics	856	7376
Daub	5	6
Historic	0	0
Animal Bone	786	3147
Stone Tools	4	245
Bone Tools	3	23
Organics/Shell/Pumice	3	40
Specialty (Bone Bead) (Earplug)	2	4
Walls Engraved (Ceramics)	11	71
Sandstone	1	8
Hematite/Limonite (1)	1	2
Effigy	3	0
Totals	**1919**	**13694**

Horizontal Locus (N550 R0)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	1	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**1**	**0**

Tabular Artifact Data Continued

Horizontal Locus (N550 R10)	Count	Weight (grams)
Lithics	162	2417
Ceramics	447	4250
Daub	10	19
Historic	1	4
Animal Bone	391	1823
Stone Tools	3	128
Bone Tools	9	47
Organics (Shell)	11	50
Specialty Items (Celt)	1	10
Walls Engraved (Ceramics)	5	41
Sandstone	0	0
Hematite (Red Ochre)	2	12
Effigy, Ceramic Vessel (225g.)	2	225
Totals	**1044**	**9036**

Horizontal Locus (N550 R20)	Count	Weight (grams)
Lithics	457	5721
Ceramics	1291	11533
Daub	34	283
Historic	44	22
Animal Bone	1368	6248
Stone Tools	12	808
Bone Tools	10	51
Organics; Shell (10), Clay (1)	11	597
Specialty Items (Ceramic Vessel-1)	1	121
Walls Engraved (Ceramics)	12	194
Sandstone	1	4
Hematite; Yellow Ochre (3)	3	57
Effigy	1	79
Totals	**3245**	**25718**

Tabular Artifact Data Continued

Horizontal Locus (N560 R0)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	2	11
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**2**	**11**

Horizontal Locus (N560 R10)	Count	Weight (grams)
Lithics	158	1983
Ceramics	513	4111
Daub	4	15
Historic	0	0
Animal Bone	377	2149
Stone Tools	2	118
Bone Tools	3	8
Organics (Shell)	4	55
Specialty Items (Celt)	1	10
Walls Engraved (Ceramics)	2	13
Sandstone	0	0
Hematite	0	0
Effigy (Human)	1	24
Totals	**1065**	**8486**

Tabular Artifact Data Continued

Horizontal Locus (N560 R20)	Count	Weight (grams)
Lithics	353	3688
Ceramics	1541	11771
Daub	39	200
Historic	1	16
Animal Bone	1196	8385
Stone Tools	6	169
Bone Tools	7	20
Organics (Shell)	15	58
Specialty Items	0	0
Walls Engraved (Ceramics)	11	73
Sandstone	0	0
Hematite; Limestone (1)	1	3
Effigy (Human-1 (27g.)	5	75
Totals	**3175**	**24458**

Horizontal Locus (N570 R0)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	2	81
Stone Tools	0	0
Bone Tools	1	1
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**3**	**82**

Tabular Artifact Data Continued

Horizontal Locus (N570 R10)	Count	Weight (grams)
Lithics	130	2159
Ceramics	539	4817
Daub	3	124
Historic	0	0
Animal Bone/ Human Bone (4)6g.	462	2347
Stone Tools	0	0
Bone Tools	6	14
Organics/Shell	27	43
Specialty Items (Bone Bead)	1	1
Walls Engraved (Ceramics)	2	13
Sandstone	0	0
Hematite	0	0
Effigy (Human)	1	6
Totals	**1171**	**9524**

Horizontal Locus (N570 R20)	Count	Weight (grams)
Lithics	301	4502
Ceramics	1081	9605
Daub	17	98
Historic	0	0
Animal Bone	1636	9703
Stone Tools	2	138
Bone Tools	9	30
Organics/Shell	23	114
Specialty Items (Polished Stone)	1	18
Walls Engraved (Ceramics)	2	13
Sandstone	0	0
Hematite	0	0
Effigy (Ceramic Vessel (1)-827g.	1	866
Totals	**3073**	**25087**

Tabular Artifact Data Continued

Horizontal Locus (N580 R0)	Count	Weight (grams)
Lithics	23	117
Ceramics	185	1259
Daub	32	76
Historic	2	27
Animal Bone	32	95
Stone Tools	1	53
Bone Tools	0	0
Organics/Gar Scale	1	1
Specialty Items	0	0
Walls Engraved (Ceramics)	1	3
Sandstone (FE)	1	72
Hematite	0	0
Effigy (Human)	1	17
Totals	**279**	**1720**

Horizontal Locus (N580 R10)	Count	Weight (grams)
Lithics	438	4745
Ceramics	1687	10952
Daub	10	54
Historic	0	0
Animal Bone	1469	6700
Stone Tools	4	23
Bone Tools	9	79
Organics; Shell, Gar Scales	24	176
Specialty Items; Bone Bead, Earplug	2	9
Walls Engraved (Ceramics)	4	17
Sandstone	1	2
Hematite	0	0
Effigy	8	80
Totals	**3656**	**22837**

Tabular Artifact Data Continued

Horizontal Locus (N580 R20)	Count	Weight (grams)
Lithics	460	5250
Ceramics	1489	11877
Daub	44	434
Historic	0	0
Animal Bone	2158	12088
Stone Tools	7	307
Bone Tools	7	30
Organics; Shell,	21	90
Specialty Items; Celt (2), Bone Bead (2)	4	148
Walls Engraved (Ceramics)	7	36
Sandstone	1	3
Hematite	0	0
Effigy- Human (1)19g.	5	77
Totals	**4203**	**30340**

Horizontal Locus (N580 L10)	Count	Weight (grams)
Lithics	2	29
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	1	10
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**3**	**39**

Tabular Artifact Data Continued

Horizontal Locus (N590 R0)	Count	Weight (grams)
Lithics	345	5212
Ceramics	1375	11081
Daub	6	484
Historic	6	672
Animal Bone	1068	3932
Stone Tools	6	235
Bone Tools	12	34
Organics; Charcoal, Shell, Gar Scales	11	57
Specialty Items (Wood-2)3g., (Celt 2)63g.	4	66
Walls Engraved (Ceramics)	2	24
Sandstone	1	40
Hematite	1	3
Effigy (Human 1)2g.	4	47
Totals	**2841**	**21887**

Horizontal Locus (N590 R10)	Count	Weight (grams)
Lithics	284	3266
Ceramics	805	6292
Daub	5	29
Historic	0	0
Animal Bone	595	3181
Stone Tools	7	416
Bone Tools	8	18
Organics; Shell	5	64
Specialty Items (Ceramic Vessels)	2	877
Walls Engraved (Ceramics)	2	8
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**1713**	**14151**

Tabular Artifact Data Continued

Horizontal Locus (N590 R20)	Count	Weight (grams)
Lithics	196	2400
Ceramics	703	5201
Daub	23	148
Historic	0	0
Animal Bone	698	3534
Stone Tools	3	240
Bone Tools	7	33
Organics; Clay, Shell, Gar Scales	11	61
Specialty Items (Stone Disc)	2	115
Walls Engraved (Ceramics)	3	16
Sandstone	0	0
Hematite (Red Ochre)	1	6
Effigy	2	19
Totals	**1649**	**11773**

Horizontal Locus (N590 L10)	Count	Weight (grams)
Lithics	54	400
Ceramics	400	2218
Daub	21	50
Historic	1	1
Animal Bone	172	343
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	1	8
Sandstone	0	0
Hematite	0	0
Effigy, Ceramic Vessel-534g.	3	629
Totals	**652**	**3649**

Tabular Artifact Data Continued

Horizontal Locus (N590 L30)	Count	Weight (grams)
Lithics	7	34
Ceramics	5	28
Daub	0	0
Historic	2	89
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	1	1
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**13**	**152**

Horizontal Locus (N380 L290)	Count	Weight (grams)
Lithics	166	3461
Ceramics	1360	12478
Daub	2	5
Historic	0	0
Animal Bone	2	65
Stone Tools	6	730
Bone Tools	2	5
Organics/Gar Scale	1	0
Specialty (Celt)	1	36
Walls Engraved (Ceramics)	8	62
Sandstone	0	0
Hematite	0	0
Effigy	2	65
Totals	**1550**	**16907**

Tabular Artifact Data Continued

Horizontal Locus (N390 L290)	Count	Weight (grams)
Lithics	0	0
Ceramics	814	7396
Daub	0	0
Historic	0	0
Animal Bone	735	4627
Stone Tools	0	0
Bone Tools	1	5
Organics/Shell	4	204
Specialty Items (Human Bone)	1	7
Walls Engraved (Ceramics)	3	8
Sandstone	0	0
Hematite	0	0
Effigy	2	17
Totals	**1560**	**12264**

Horizontal Locus (N380 L300)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	1	523
Bone Tools	1	6
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**2**	**529**

Tabular Artifact Data Continued

Horizontal Locus (N520 R20)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	1	47
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**1**	**47**

Horizontal Locus (N530 R10)	Count	Weight (grams)
Lithics	0	0
Ceramics	1	20
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**1**	**20**

Tabular Artifact Data Continued

Horizontal Locus (N530 R20)	Count	Weight (grams)
Lithics	0	0
Ceramics	1	25
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Total	**1**	**25**

Horizontal Locus (N530 R30)	Count	Weight (grams)
Lithics	0	0
Ceramics	2	29
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	2	15
Bone Tools	0	0
Organics/Shell	1	36
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Total	**5**	**80**

Tabular Artifact Data Continued

Horizontal Locus (N530 R40)	Count	Weight (grams)
Lithics	0	0
Ceramics	1	50
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Total	**1**	**50**

No Horizontal Locus	Count	Weight (grams)
Lithics	644	8536
Ceramics	2299	12343
Daub/Clay Ball (1)58g.	95	787
Historic	50	151
Animal Bone/Human Bone (13)253g.	612	3171
Stone Tools	41	1402
Bone Tools	27	138
Organics; Shell, Gar scale	34	101
Specialty; Ear Plug (1)5g., Bone Bead (1) 12g., Stone Disc (1)45g.	3	62
Walls Engraved (Ceramics)	7	44
Sandstone	2	26
Hematite	1	2
Effigy (Human-1) 3g.	9	207
Totals	**3824**	**26970**

Tabular Artifact Data Continued

Horizontal Locus (N540 R30)	Count	Weight (grams)
Lithics	385	3036
Ceramics	1254	7884
Daub	20	44
Historic	0	0
Animal Bone/Human Bone (3)4g.	950	3877
Stone Tools	5	186
Bone Tools	7	22
Organics/Gar Scales/Mussel Shell/Turtle Shell	15	62
Specialty Items (Celt)	1	39
Walls Engraved (Ceramics)	6	24
Sandstone	1	195
Hematite	12	55
Effigy/Ceramic Vessels (2)	3	1528
Totals	**2659**	**16952**

Horizontal Locus (N540 R40)	Count	Weight (grams)
Lithics	138	1459
Ceramics	456	3797
Daub	6	42
Historic	0	0
Animal Bone	126	590
Stone Tools	3	24
Bone Tools	2	30
Organics	0	0
Specialty Items (Earplug/Bone Bead)	2	1
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	1	3
Effigy	0	0
Totals	**734**	**5946**

Tabular Artifact Data Continued

Horizontal Locus (N540 R50)	Count	Weight (grams)
Lithics	41	515
Ceramics	171	1343
Daub	0	0
Historic	0	0
Animal Bone	138	610
Stone Tools	1	17
Bone Tools	1	7
Organics/Mussel Shell/Turtle Shell	6	46
Specialty Items	0	0
Walls Engraved (Ceramics)	1	7
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**359**	**2545**

Horizontal Locus (N550 R30)	Count	Weight (grams)
Lithics	317	5057
Ceramics	1225	10610
Daub	16	103
Historic	0	0
Animal Bone	1298	7068
Stone Tools	9	424
Bone Tools	7	43
Organics; Shell, Charcoal	17	79
Specialty Items (Galena 1-243g.); Stem Bead (6-0g.); Celt (2-35g.)	9	278
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite (Red Ochre)	0	0
Effigy	1	6
Totals	**2899**	**23668**

Tabular Artifact Data Continued

Horizontal Locus (N550 R40)	Count	Weight (grams)
Lithics	328	5209
Ceramics	964	8070
Daub	1	3
Historic	1	10
Animal Bone	488	3076
Stone Tools	6	659
Bone Tools	9	58
Organics; Shell; Gar Scale	5	44
Specialty Items (Nodena R&W Vessel)	1	633
Walls Engraved (Ceramics)	2	9
Sandstone	2	18
Hematite (Red Ochre);Yellow Ochre (1)	1	2
Effigy	1	13
Totals	**1809**	**17804**

Horizontal Locus (N550 R50)	Count	Weight (grams)
Lithics	116	2495
Ceramics	370	3310
Daub	1	1
Historic	1	23
Animal Bone	371	1991
Stone Tools	2	105
Bone Tools	2	7
Organics (Charcoal, Gar Scale)	16	11
Specialty Items (Celt) (Yellow Ochre)	10	49
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite (Red Ochre)	3	11
Effigy	0	0
Totals	**892**	**8003**

Tabular Artifact Data Continued

Horizontal Locus (N560 R30)	Count	Weight (grams)
Lithics	337	4096
Ceramics	2142	16166
Daub	44	254
Historic	0	0
Animal Bone	1857	10918
Stone Tools	8	157
Bone Tools	14	65
Organics; Shell, Gar Scale, Clay	35	365
Specialty Items; Bone Bead	1	7
Walls Engraved (Ceramics)	15	74
Sandstone	0	0
Hematite	0	0
Effigy (Human-(2) 64g.); Ceramic Vessel (518g.)	5	606
Totals	**4458**	**32708**

Horizontal Locus (N560 R40)	Count	Weight (grams)
Lithics	624	7247
Ceramics	1638	10333
Daub	43	122
Historic	0	0
Animal Bone	1102	4918
Stone Tools	14	786
Bone Tools	20	161
Organics; Ash, Shell, Gar Scales	21	111
Specialty Items (Mica 2) 1g.; Ceramic Earplug (3)9g.	5	10
Walls Engraved (Ceramics)	6	33
Sandstone	2	73
Hematite (Red Ochre)	2	118
Effigy, Ceramic Vessel (1) 179g.	4	281
Totals	**3481**	**24193**

Tabular Artifact Data Continued

Horizontal Locus (N560 R50)	Count	Weight (grams)
Lithics	202	2822
Ceramics	591	4455
Daub	87	873
Historic	5	254
Animal Bone	373	1781
Stone Tools	7	48
Bone Tools	5	6
Organics; Shell	4	46
Specialty Items; Celt (1), Bone Bead (1), Cer. Pipe (1), Earplug (1)	4	258
Walls Engraved (Ceramics)	4	24
Sandstone	2	93
Hematite (Red Ochre)	1	1
Effigy	2	17
Totals	**1287**	**10678**

Horizontal Locus (N560 R60)	Count	Weight (grams)
Lithics	177	1497
Ceramics	529	3424
Daub	509	2733
Historic	58	852
Animal Bone	673	1484
Stone Tools	12	203
Bone Tools	3	21
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	6	56
Sandstone (8); Limestone (2)19g.	10	81
Hematite	7	28
Effigy	1	3
Totals	**1985**	**10382**

Tabular Artifact Data Continued

Horizontal Locus (N560 R70)	Count	Weight (grams)
Lithics	291	2798
Ceramics	1190	5885
Daub	347	2825
Historic	17	174
Animal Bone	1076	2720
Stone Tools	22	149
Bone Tools	0	0
Organics; Charcoal (37); Johnson Grass (1); Gar Scale (1)	39	9
Specialty Items	0	0
Walls Engraved (Ceramics)	4	27
Sandstone	41	958
Hematite (Red Ochre-3); Limestone-(1)22g.	4	32
Effigy	0	0
Totals	**3031**	**15577**

Horizontal Locus (N570 R30)	Count	Weight (grams)
Lithics	496	5237
Ceramics	3003	15286
Daub	131	625
Historic	0	0
Animal Bone	2234	8941
Stone Tools	7	112
Bone Tools	7	54
Organics; Shell, Gar Scale	39	265
Specialty Items (Bone Bead)	1	5
Walls Engraved (Ceramics)	12	91
Sandstone	1	6
Hematite	0	0
Effigy	0	0
Totals	**5931**	**30622**

Tabular Artifact Data Continued

Horizontal Locus (N570 R40)	Count	Weight (grams)
Lithics	412	4253
Ceramics	848	6798
Daub	16	153
Historic; Coal	1	14
Animal Bone	1762	6336
Stone Tools	9	292
Bone Tools	11	32
Organics; Clay, Dirt, Shell, Gar Scales	54	145
Specialty Items; Celt (1)134g., Bone Bead (1)6g., Polished Stone (1)7g., Stone Disc (1)156g.	4	303
Walls Engraved (Ceramics)	5	44
Sandstone	0	0
Hematite (Red Ochre)	3	32
Effigy	1	28
Totals	**3126**	**18430**

Horizontal Locus (N570 R50)	Count	Weight (grams)
Lithics	160	2387
Ceramics	632	4929
Daub	230	1423
Historic	9	265
Animal Bone	416	1367
Stone Tools	8	294
Bone Tools	4	8
Organics; Clay, Shell; Textile Fabric (14)149g., Ash	45	3187
Specialty Items; Stone Disc (1)279g., Fired Clay Object (1)64g., Ceramic Vessel (1)595g.	3	938
Walls Engraved (Ceramics)	2	28
Sandstone	7	182
Hematite; Limestone (1)	1	2
Effigy	1	5
Totals	**1518**	**15015**

Tabular Artifact Data Continued

Horizontal Locus (N570 R60)	Count	Weight (grams)
Lithics	235	1454
Ceramics	808	4938
Daub	474	4548
Historic	20	99
Animal Bone	707	1326
Stone Tools	6	117
Bone Tools	3	16
Organics; Shell, Charcoal, Gar Scale, Carbon Seed (2)1g., Dirt	94	379
Specialty Items	0	0
Walls Engraved (Ceramics)	6	41
Sandstone	9	161
Hematite	0	0
Effigy	2	27
Totals	**2364**	**13106**

Horizontal Locus (N570 R70)	Count	Weight (grams)
Lithics	230	1808
Ceramics	990	5406
Daub	1029	6297
Historic	31	885
Animal Bone	1395	3261
Stone Tools	27	411
Bone Tools	0	0
Organics; Charcoal, Shell	8	111
Specialty Items	0	0
Walls Engraved (Ceramics)	5	21
Sandstone	18	423
Hematite	3	66
Effigy	0	0
Totals	**3736**	**18689**

Tabular Artifact Data Continued

Horizontal Locus (N570 R80)	Count	Weight (grams)
Lithics	2	5
Ceramics	12	61
Daub	0	0
Historic	0	0
Animal Bone	9	10
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy (Human)	1	6
Totals	**24**	**82**

Horizontal Locus (N580 R30)	Count	Weight (grams)
Lithics	398	4929
Ceramics	2122	17024
Daub	85	584
Historic	0	0
Animal Bone	2815	11181
Stone Tools	4	169
Bone Tools	10	31
Organics; Shell, Gar Scale	21	158
Specialty Items	0	0
Walls Engraved (Ceramics)	3	12
Sandstone	2	34
Hematite	0	0
Effigy	1	17
Totals	**5461**	**34139**

Tabular Artifact Data Continued

Horizontal Locus (N580 R40)	Count	Weight (grams)
Lithics	331	3589
Ceramics	650	6902
Daub	42	308
Historic	0	0
Animal Bone	1503	6052
Stone Tools	8	181
Bone Tools	12	61
Organics; Shell, Gar Scales, Crinoid Stem	14	88
Specialty Items (Bone Bead)	1	2
Walls Engraved (Ceramics)	4	19
Sandstone	0	0
Hematite; Yellow Ochre (1)	1	1
Effigy	1	18
Totals	**2567**	**17221**

Horizontal Locus (N580 R50)	Count	Weight (grams)
Lithics	216	3474
Ceramics	592	4788
Daub	63	680
Historic	18	162
Animal Bone	419	2007
Stone Tools	8	153
Bone Tools	5	15
Organics; Shell	4	52
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	3	7
Hematite (Red Ochre)	1	0
Effigy	1	6
Totals	**1330**	**11344**

Tabular Artifact Data Continued

Horizontal Locus (N580 R60)	Count	Weight (grams)
Lithics	216	1052
Ceramics	797	4672
Daub	502	2432
Historic	2	14
Animal Bone	1063	2189
Stone Tools	4	5
Bone Tools	0	0
Organics; Shell, Gar Scales	22	60
Specialty Items (Human Bone)	39	61
Walls Engraved (Ceramics)	2	4
Sandstone	3	66
Hematite	2	5
Effigy	1	10
Totals	**2653**	**10570**

Horizontal Locus (N580 R70)	Count	Weight (grams)
Lithics	299	1710
Ceramics	1298	7426
Daub	1060	7255
Historic	38	445
Animal Bone	1046	2301
Stone Tools	19	716
Bone Tools	7	18
Organics; Charcoal, Fired Clay, Charred Nut Hull (1)10g., Fish Bone	38	424
Specialty Items	0	0
Walls Engraved (Ceramics)	1	10
Sandstone	32	908
Hematite; Yellow Ochre (12)16g.	17	44
Effigy	5	51
Totals	**3860**	**21308**

Tabular Artifact Data Continued

Horizontal Locus (N580 R80)	Count	Weight (grams)
Lithics	542	3106
Ceramics	1711	7773
Daub; Basin Fill (4)-5g.	674	5346
Historic; Historic Bone (2)-23g.	177	1677
Animal Bone	1772	2912
Stone Tools	54	1101
Bone Tools; Bone Hook (1) 3g.	13	164
Organics; Charcoal, Fish Bone, Gar Scales, Shell, Clay (4)-93g.; Pumice (1)-12g.	87	203
Specialty Items; Ceramic Earplug (1)3g., Stone Disc (1)180g.	1	183
Walls Engraved (Ceramics)	3	18
Sandstone	29	902
Hematite (Red Ochre) (19)-124g.; Limonite (Yellow Ochre) (9)-61g.	28	185
Effigy	1	14
Totals	5092	23584

Horizontal Locus (N590 R30)	Count	Weight (grams)
Lithics	260	3481
Ceramics	1072	8663
Daub	1	7
Historic	0	0
Animal Bone	922	6379
Stone Tools	8	136
Bone Tools	3	36
Organics; Shell, Gar Scales	6	65
Specialty Items	0	0
Walls Engraved (Ceramics)	5	307
Sandstone	1	89
Hematite	1	48
Effigy	3	69
Totals	**2282**	**19280**

Tabular Artifact Data Continued

Horizontal Locus (N590 R40)	Count	Weight (grams)
Lithics	103	1279
Ceramics	569	5502
Daub	1	32
Historic	2	29
Animal Bone	391	2547
Stone Tools	2	572
Bone Tools	4	11
Organics/Shell/Gar Scales	24	21
Specialty Items	0	0
Walls Engraved (Ceramics)	7	102
Sandstone	0	0
Hematite	0	0
Effigy	1	13
Totals	**1104**	**10108**

Horizontal Locus (N590 R50)	Count	Weight (grams)
Lithics	269	4023
Ceramics	826	7279
Daub	29	291
Historic	0	0
Animal Bone	456	3464
Stone Tools	8	693
Bone Tools	7	18
Organics; Shell, Clay, Gar Scales	9	70
Specialty Items (Celt)	2	29
Walls Engraved (Ceramics)	4	19
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**1610**	**15886**

Tabular Artifact Data Continued

Horizontal Locus (N590 R60)	Count	Weight (grams)
Lithics	419	1762
Ceramics	1890	10727
Daub	478	7990
Historic	20	92
Animal Bone/Fish Bone (58)21g.	1823	4250
Stone Tools	11	53
Bone Tools	2	5
Organics; Clay, Gar Scales, Charcoal	5	33
Specialty Items (Bone Bead-2)7g., (Bone Fish Hook-1)0g.	3	7
Walls Engraved (Ceramics)	6	117
Sandstone/ Limestone (4)103g. (Limonite-1)0g.	26	281
Hematite (Red Ochre 2)4g.	4	10
Effigy	1	71
Totals	**4688**	**25398**

Horizontal Locus (N590 R70)	Count	Weight (grams)
Lithics	960	5204
Ceramics	3475	15340
Daub/Fired Clay (14)37g.	963	9680
Historic	188	1024
Animal Bone/ Human Bone (11)23g.	4047	7418
Stone Tools	35	549
Bone Tools	10	33
Organics; Shell, Gar Scale, Fish Bone, Charcoal; Crinoid Stem, Petrified Wood (1)18g.	290	348
Specialty Items; (Sandstone Palette-1)459g., (Fish Bone Hook-1)0g., (Ceramic Pipe-1)3g.	2	459
Walls Engraved (Ceramics)	11	67
Sandstone	55	728
Hematite (Red Ochre)	23	152
Effigy	2	12
Totals	**10061**	**41014**

Tabular Artifact Data Continued

Horizontal Locus (N590 R80)	Count	Weight (grams)
Lithics	668	4143
Ceramics	2633	10836
Daub	611	4025
Historic	211	1986
Animal Bone/Human Bone (1)2g.	2183	3985
Stone Tools	45	1447
Bone Tools	11	13
Organics; Gar Scales, Fish Bone Shell, Charcoal	100	111
Specialty Items (Wood-1)1g., (Bone Bead-2)3g., (Celt-1)13g., (Stone Disc-1)9g., (Bone Reel-1)1g., (Ceramic Pipe-2)17g.	8	44
Walls Engraved (Ceramics)	10	47
Sandstone	50	883
Hematite (Red Ochre-12)120g.	15	129
Effigy	2	14
Totals	**6547**	**27663**

Horizontal Locus (N600 R60-70)	Count	Weight (grams)
Lithics	0	0
Ceramics	4	14
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	2	3
Organics	0	0
Specialty Items	0	0
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**6**	**14**

Tabular Artifact Data Continued

Horizontal Locus (N600 R0)	Count	Weight (grams)
Lithics	1	182
Ceramics	24	445
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items (Ceramic Bowl(section)	14	139
Walls Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**39**	**766**

Horizontal Locus (N600 R70-80)	Count	Weight (grams)
Lithics	0	0
Ceramics	4	16
Daub	4	4
Historic	1	5
Animal Bone	4	4
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Wall Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**13**	**29**

Tabular Artifact Data Continued

Horizontal Locus (N600 R80-90)	Count	Weight (grams)
Lithics	0	0
Ceramics	2	17
Daub	0	0
Historic	0	0
Animal Bone	1	3
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Wall Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**3**	**20**

Horizontal Locus (N620 R110)	Count	Weight (grams)
Lithics	0	0
Ceramics	152	1454
Daub	1	5
Historic	0	0
Animal Bone	44	198
Stone Tools	1	5
Bone Tools	3	32
Organics	0	0
Specialty Items (Bear Tooth)	1	6
Wall Engraved (Ceramics)	1	5
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**203**	**1705**

Tabular Artifact Data Continued

Horizontal Locus (N620 R120)	Count	Weight (grams)
Lithics	0	0
Ceramics	150	1416
Daub	1	5
Historic	0	0
Animal Bone	29	140
Stone Tools	1	5
Bone Tools	1	13
Organics	0	0
Specialty Items; Bear Tooth (1); Worked Animal Bone (2)	3	25
Wall Engraved (Ceramics)	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**185**	**1604**

Horizontal Locus (N620 R50)	Count	Weight (grams)
Lithics	13	831
Ceramics	87	1004
Daub	0	0
Historic	0	0
Animal Bone	32	182
Stone Tools	0	0
Bone Tools	1	5
Organics (Mussel Shell)	4	3
Specialty Items	0	0
Wall Engraved (Ceramics)	3	18
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**140**	**2043**

Tabular Artifact Data Continued

Horizontal Locus (N630 R110)	Count	Weight (grams)
Lithics	422	4910
Ceramics	903	5060
Daub	0	0
Historic	0	0
Animal Bone	649	3282
Stone Tools	0	0
Bone Tools	1	5
Organics	0	0
Specialty Items	0	0
Walls Engraved	4	20
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**1979**	**13277**

Horizontal Locus (N630 R120)	Count	Weight (grams)
Lithics	3	259
Ceramics	525	2862
Daub	2	289
Historic	0	0
Animal Bone	1	112
Stone Tools	1	23
Bone Tools	2	6
Organics (Fired Clay)	1	29
Specialty Items	0	0
Walls Engraved (Hull Engraved)	5	68
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**540**	**3648**

Tabular Artifact Data Continued

Horizontal Locus (N640 R110)	Count	Weight (grams)
Lithics	414	6582
Ceramics	841	5519
Daub	0	0
Historic	0	0
Animal Bone	287	1057
Stone Tools	9	501
Bone Tools	4	16
Organics	0	0
Specialty Items (Celts)	2	121
Walls Engraved	3	24
Sandstone	0	0
Hematite	0	0
Effigy (Ceramic Vessel)	16	140
Totals	**1576**	**13960**

Horizontal Locus (N640 R120)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	21	153
Stone Tools	2	13
Bone Tools	2	6
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**25**	**172**

Tabular Artifact Data Continued

Horizontal Locus (N650 R110)	Count	Weight (grams)
Lithics	63	561
Ceramics	316	1660
Daub	1	4
Historic	0	0
Animal Bone	59	292
Stone Tools	1	514
Bone Tools	2	14
Organics (Ash)	1	198
Specialty Items	0	0
Walls Engraved	2	10
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**445**	**3253**

Horizontal Locus (N650 R120.5)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	1	21
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**1**	**21**

Tabular Artifact Data Continued

Horizontal Locus (N660 R110)	Count	Weight (grams)
Lithics	28	579
Ceramics	81	301
Daub	0	0
Historic	0	0
Animal Bone	2	54
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items (Crinoid Stem Bead)	1	1
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**112**	**935**

Horizontal Locus (N670 R110)	Count	Weight (grams)
Lithics	125	1184
Ceramics	199	783
Daub	0	0
Historic	0	0
Animal Bone	5	3
Stone Tools	3	219
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	1	9
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**333**	**2198**

Tabular Artifact Data Continued

Horizontal Locus (N680 R110)	Count	Weight (grams)
Lithics	49	1047
Ceramics	90	394
Daub	0	0
Historic	0	0
Animal Bone	31	5
Stone Tools	2	114
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	1	4
Sandstone	14	291
Hematite	0	0
Effigy	0	0
Totals	**187**	**1855**

Horizontal Locus (N670 L180)	Count	Weight (grams)
Lithics	3	34
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	3	11
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**6**	**45**

Tabular Artifact Data Continued

Horizontal Locus (N680 L180)	Count	Weight (grams)
Lithics	1	6
Ceramics	4	36
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**5**	**42**

Horizontal Locus (N690 L170)	Count	Weight (grams)
Lithics	0	0
Ceramics	13	76
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	1	44
Totals	**14**	**120**

Tabular Artifact Data Continued

Horizontal Locus (N690 L180)	Count	Weight (grams)
Lithics	71	1231
Ceramics	247	1569
Daub	2	1979
Historic	0	0
Animal Bone	78	101
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	1	4
Sandstone	0	0
Hematite	0	0
Effigy	1	9
Totals	**400**	**4893**

Horizontal Locus (N700 L180)	Count	Weight (grams)
Lithics	3	12
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	1	9
Totals	**3**	**12**

Tabular Artifact Data Continued

Horizontal Locus (N380-390 L290-300)	Count	Weight (grams)
Lithics	0	0
Ceramics	233	2484
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**233**	**2484**

Horizontal Locus (N550-560 R20)	Count	Weight (grams)
Lithics	0	0
Ceramics	94	808
Daub	0	0
Historic	0	0
Animal Bone	1	2
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**95**	**810**

Tabular Artifact Data Continued

Horizontal Locus (N560-570 R40)	Count	Weight (grams)
Lithics	3	35
Ceramics	2	5
Daub	0	0
Historic	0	0
Animal Bone	8	14
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**13**	**54**

Horizontal Locus (N560-570 R50-60)	Count	Weight (grams)
Lithics	8	18
Ceramics	46	305
Daub	7	115
Historic	1	20
Animal Bone	37	70
Stone Tools	0	0
Bone Tools	0	0
Organics; Fish Bone	2	1
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	1	33
Hematite	0	0
Effigy	0	0
Totals	**102**	**562**

Tabular Artifact Data Continued

Horizontal Locus (N560-570 R60)	Count	Weight (grams)
Lithics	7	43
Ceramics	7	36
Daub	5	18
Historic	0	0
Animal Bone	6	6
Stone Tools	0	0
Bone Tools	0	0
Organics; Shell	1	1
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	2	75
Hematite	0	0
Effigy	0	0
Totals	**28**	**179**

Horizontal Locus (N560-580 R40)	Count	Weight (grams)
Lithics	1	1
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	8	8
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**9**	**9**

Tabular Artifact Data Continued

Horizontal Locus (N570-580 R40)	Count	Weight (grams)
Lithics	0	0
Ceramics	1	9
Daub	2	10
Historic	0	0
Animal Bone	5	7
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**8**	**26**

Horizontal Locus (N570-580 R60)	Count	Weight (grams)
Lithics	0	0
Ceramics	14	41
Daub	1	18
Historic	0	0
Animal Bone	15	65
Stone Tools	0	0
Bone Tools	1	1
Organics; Gar Scales	3	1
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	1	7
Hematite	0	0
Effigy	0	0
Totals	**13**	**133**

Tabular Artifact Data Continued

Horizontal Locus (N570-580 R20)	Count	Weight (grams)
Lithics	12	112
Ceramics	414	3533
Daub	10	46
Historic	0	0
Animal Bone	6	8
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	3	34
Sandstone	0	0
Hematite	0	0
Effigy	2	16
Totals	**447**	**3749**

Horizontal Locus (N580-590 R0)	Count	Weight (grams)
Lithics	0	0
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	5	33
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**5**	**33**

Tabular Artifact Data Continued

Horizontal Locus (N580-590 R20)	Count	Weight (grams)
Lithics	0	0
Ceramics	40	321
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**40**	**321**

Horizontal Locus (N580-590 R80)	Count	Weight (grams)
Lithics	4	7
Ceramics	52	212
Daub	30	314
Historic	9	16
Animal Bone	10	17
Stone Tools	1	2
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	2	7
Hematite	0	0
Effigy	0	0
Totals	**108**	**575**

Tabular Artifact Data Continued

Horizontal Locus (N580-590 R90)	Count	Weight (grams)
Lithics	3	17
Ceramics	16	65
Daub	10	35
Historic	2	8
Animal Bone	7	8
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	1	3
Hematite	0	0
Effigy	0	0
Totals	**39**	**136**

Horizontal Locus (N580-600 R70)	Count	Weight (grams)
Lithics	3	20
Ceramics	0	0
Daub	31	387
Historic	1	1
Animal Bone	23	162
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**58**	**570**

Tabular Artifact Data Continued

Horizontal Locus (N590-600 R10)	Count	Weight (grams)
Lithics	0	0
Ceramics	40	655
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**40**	**655**

Horizontal Locus (N590-600 R70)	Count	Weight (grams)
Lithics	2	142
Ceramics	31	241
Daub	27	207
Historic	0	0
Animal Bone	14	53
Stone Tools	1	6
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**75**	**649**

Tabular Artifact Data Continued

Horizontal Locus (N590-600 R80)	Count	Weight (grams)
Lithics	4	11
Ceramics	3	40
Daub	12	73
Historic	0	0
Animal Bone	10	9
Stone Tools	0	0
Bone Tools	1	2
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**30**	**135**

Horizontal Locus (N590-600 R90)	Count	Weight (grams)
Lithics	2	2
Ceramics	9	24
Daub	3	16
Historic	0	0
Animal Bone	1	2
Stone Tools	2	37
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**17**	**81**

Tabular Artifact Data Continued

Horizontal Locus (N620-650 R120)	Count	Weight (grams)
Lithics	23	644
Ceramics	0	0
Daub	0	0
Historic	0	0
Animal Bone	0	0
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**23**	**644**

Horizontal Locus (N660-670 R110)	Count	Weight (grams)
Lithics	7	139
Ceramics	14	77
Daub	0	0
Historic	0	0
Animal Bone	8	41
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**29**	**257**

Tabular Artifact Data Continued

Horizontal Locus (N690-700 R110)	Count	Weight (grams)
Lithics	5	49
Ceramics	17	118
Daub	2	7
Historic	0	0
Animal Bone	5	44
Stone Tools	0	0
Bone Tools	0	0
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**29**	**218**

Horizontal Locus (R120 Line)	Count	Weight (grams)
Lithics	0	0
Ceramics	69	635
Daub	0	0
Historic	0	0
Animal Bone	66	404
Stone Tools	1	8
Bone Tools	1	26
Organics	0	0
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	0	0
Effigy	0	0
Totals	**137**	**1073**

Tabular Artifact Data Continued

Horizontal Locus (R140 Line)	Count	Weight (grams)
Lithics	38	686
Ceramics	2	63
Daub/Fired Clay (1)87g.	2	130
Historic	0	0
Animal Bone	99	610
Stone Tools	0	0
Bone Tools	0	0
Organics; Shell	1	15
Specialty Items	0	0
Walls Engraved	0	0
Sandstone	0	0
Hematite	3	33
Effigy	0	0
Totals	**145**	**1537**

APPENDIX B:
Supplemental Images: Excavation and Artifact Photos from Unit 6

Figure 52. Unit 6, feature 96. Profile of postholes from House 6.

Figure 53. Unit 6, House 2. Feature 289, hearth.

Figure 54. Unit 6, feature 96. Profile of House 6 wall trench.

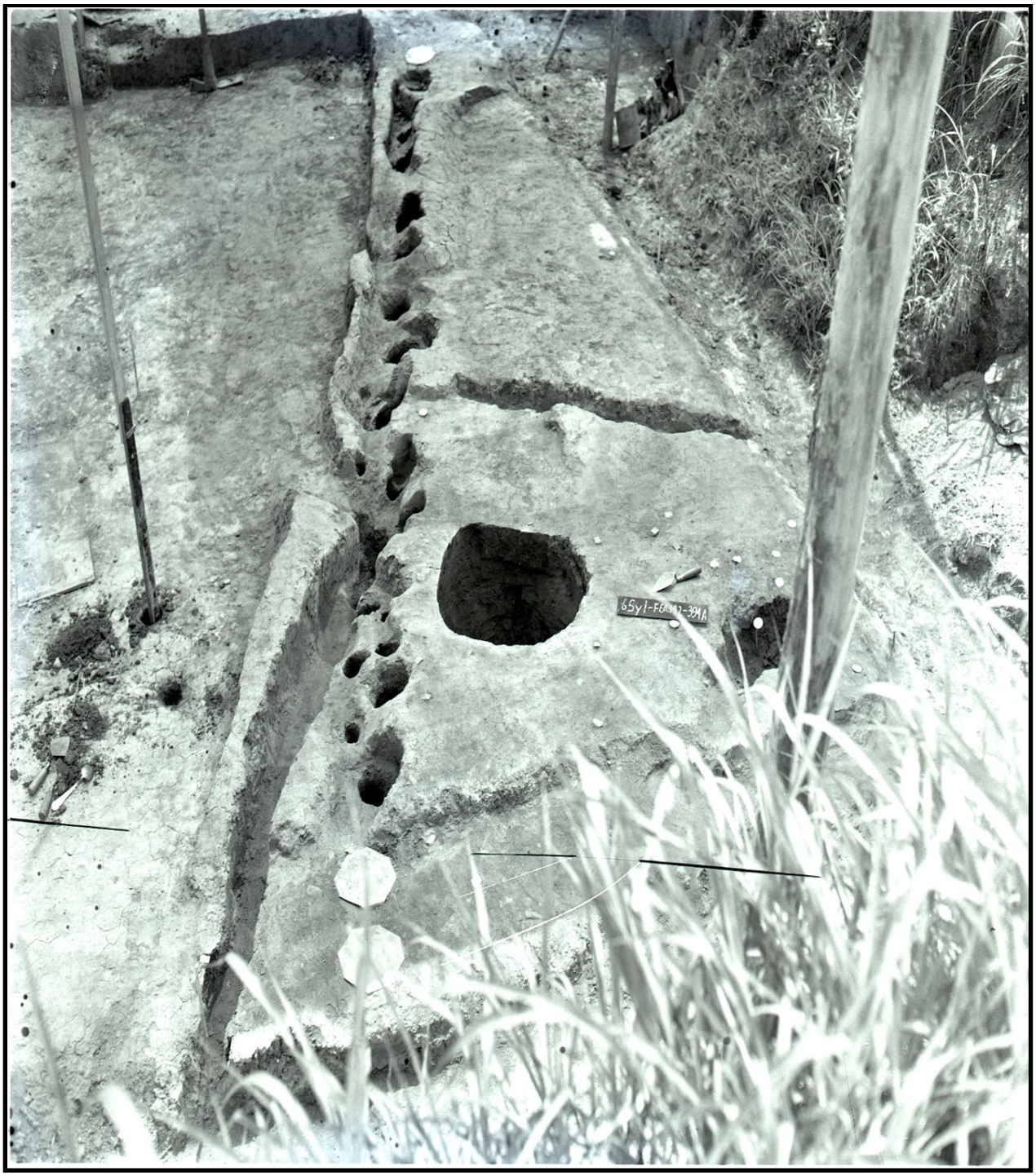

Figure 55. Unit 6, feature 192. Profile of House 6 wall trench.

Figure 56. Profile of SW corner wall trench of Houses 3, 4, 7, and 8 at N570, R40 in Unit 6.

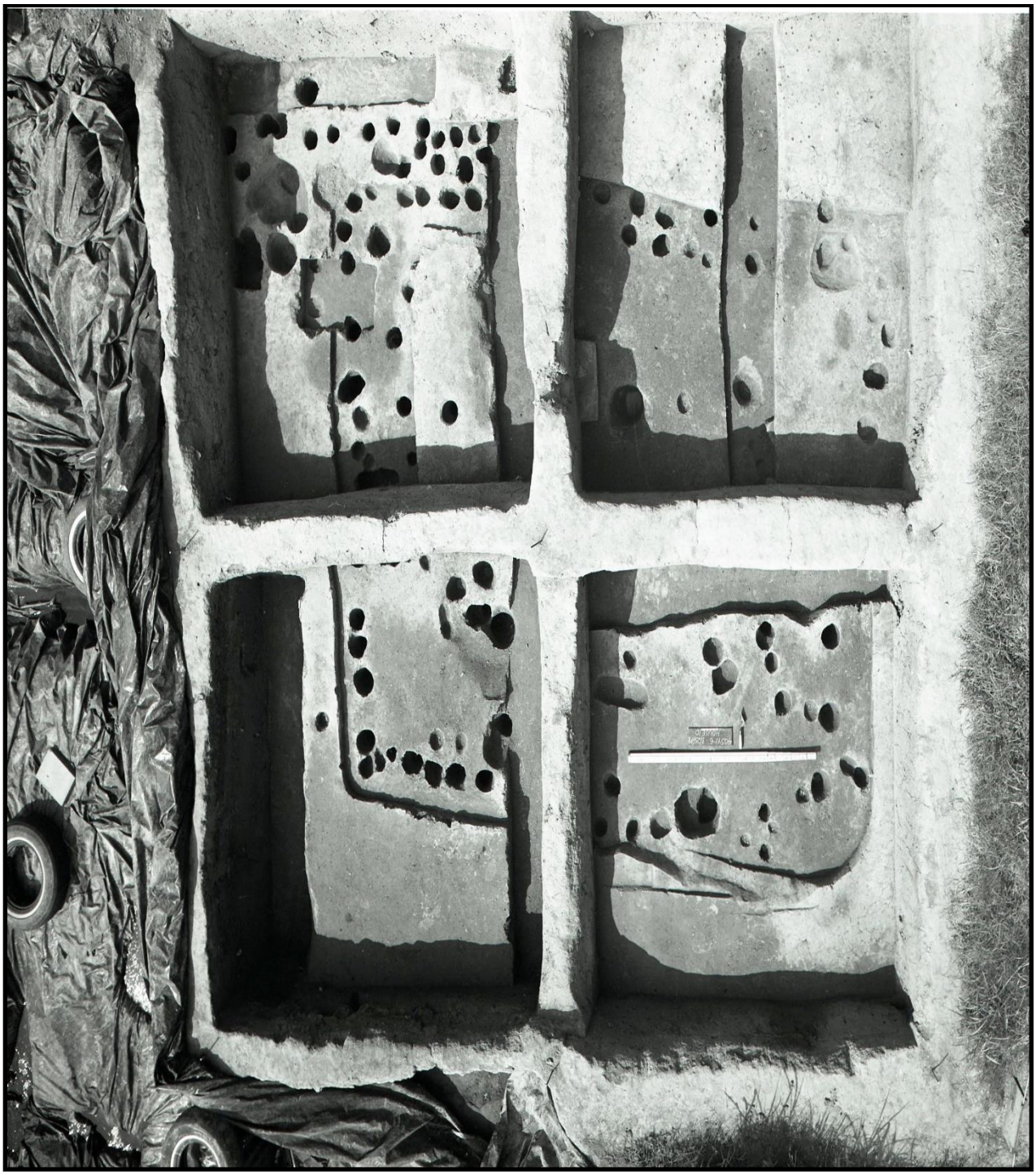

Figure 57. Unit 6, House 10 plan view of excavations.

Figure 58. Leland Incised bowl excavated from N598.2, R18.3, Unit 6.

Figure 59. Human bell plain var. bell ceramic effigy bottle from N592.8, R16.9, Unit 6.

Figure 60. Drilled hand ceramic effigy from N380, L290, Unit 6. Top picture is obverse view, bottom picture is reverse view.

Figure 61. Ceramic effigies from Unit 6. Top photo is feline serpent, bottom photo is animal effigy from N596.5, L12.

Figure 62. Ceramic face effigies from Unit 6.

Figure 63. Ceramic handle and effigy from Unit 6. Top photo is a ceramic handle with a geometric design, bottom photo is a bird effigy.

Figure 64. Ceramic discs from Unit 6. Top picture is obverse view, bottom picture is reverse view.

Figure 65. Ceramic pipe. Two views of a ceramic pipe from N560.9, R50.1, Unit 6.

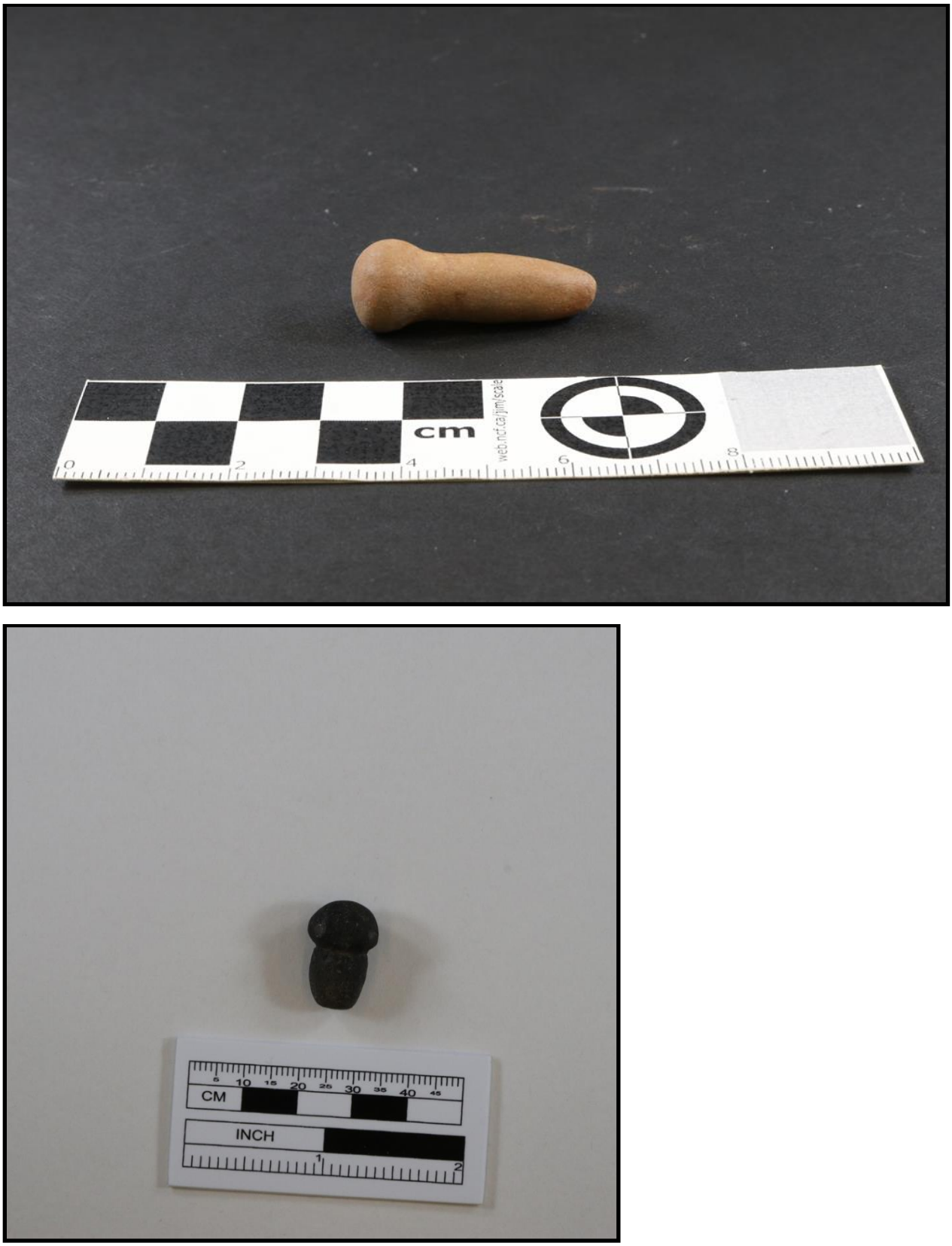

Figure 66. Ceramic earplugs from Unit 6.

Figure 67. Stone tools from Unit 6. Top photo is a drill and drill fragment, bottom photo is a biface.

Figure 68. Stone projectile points from Unit 6. The top row are Madison points, bottom left three are Nodena points, and the bottom far right point is a scallion.

Figure 69. Unit 6, House 10 Sandstone palette from N596.65, R77.45, at a depth of 18.96 ft. Top is obverse view, bottom is reverse view.

Figure 70. Two worked hematite found in context with figure 69, Unit 6. One was found at N587.75, R86.6, the other at 585.8, R86.6, and both at a depth of 19.05 ft.

Figure 71. Stone discordial from Unit 6.

Figure 72. Stone discordials from Unit 6.

Figure 73. Ground and polished stone from a pit in N560, R20, Unit 6.

Figure 74. Bone fishing reel from N591.75, R83.45, Unit 6.

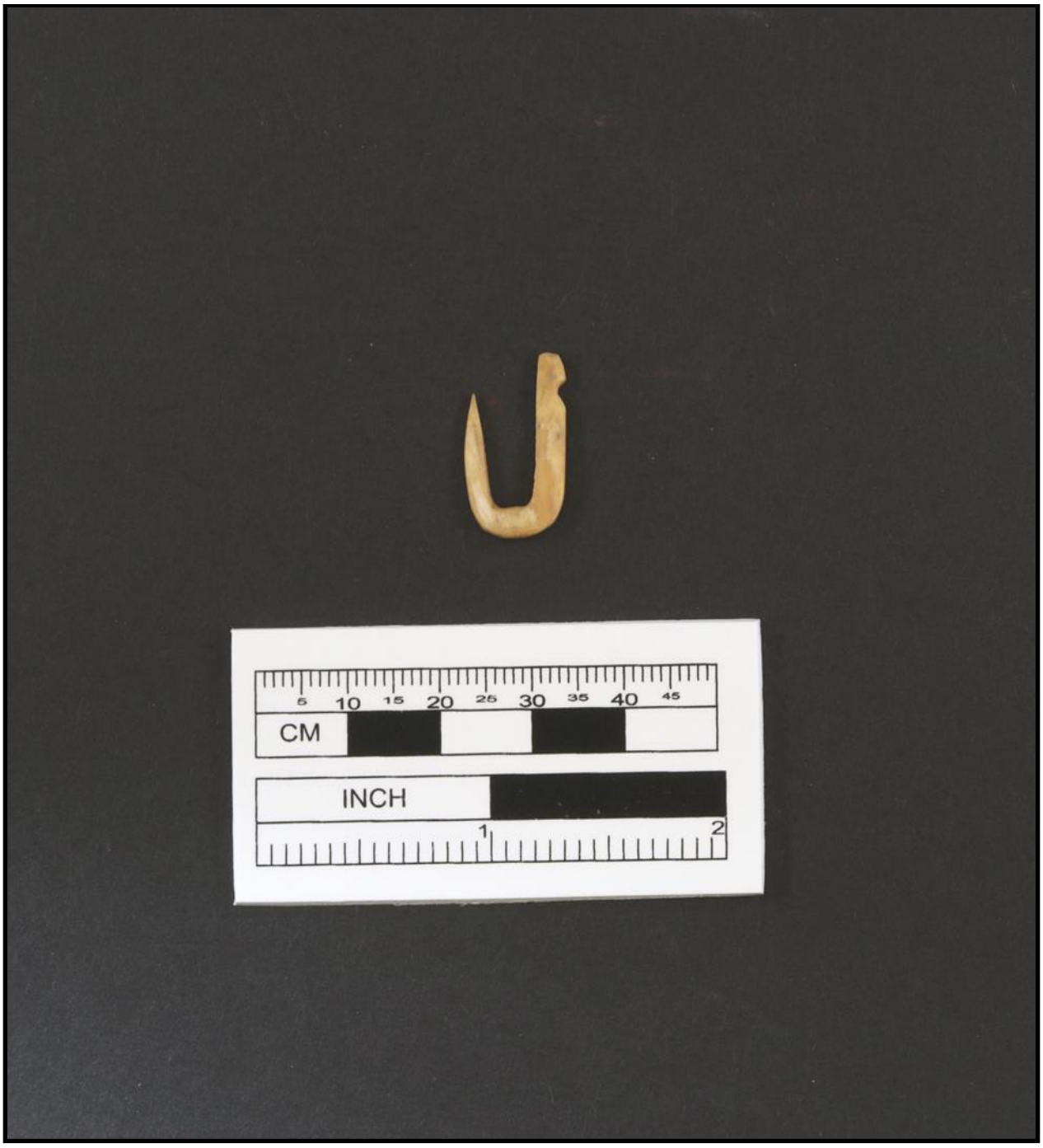

Figure 75. Bone fishing hook from N598.9, R76.9, Unit 6.

Figure 76. Drilled and polished bear tooth from N584.2, R20, Unit 6.

Figure 77. Bone tools from Unit 6. Top picture is a bone awl and bone needle, bottom picture is a hallow bone tube and an antler tine.

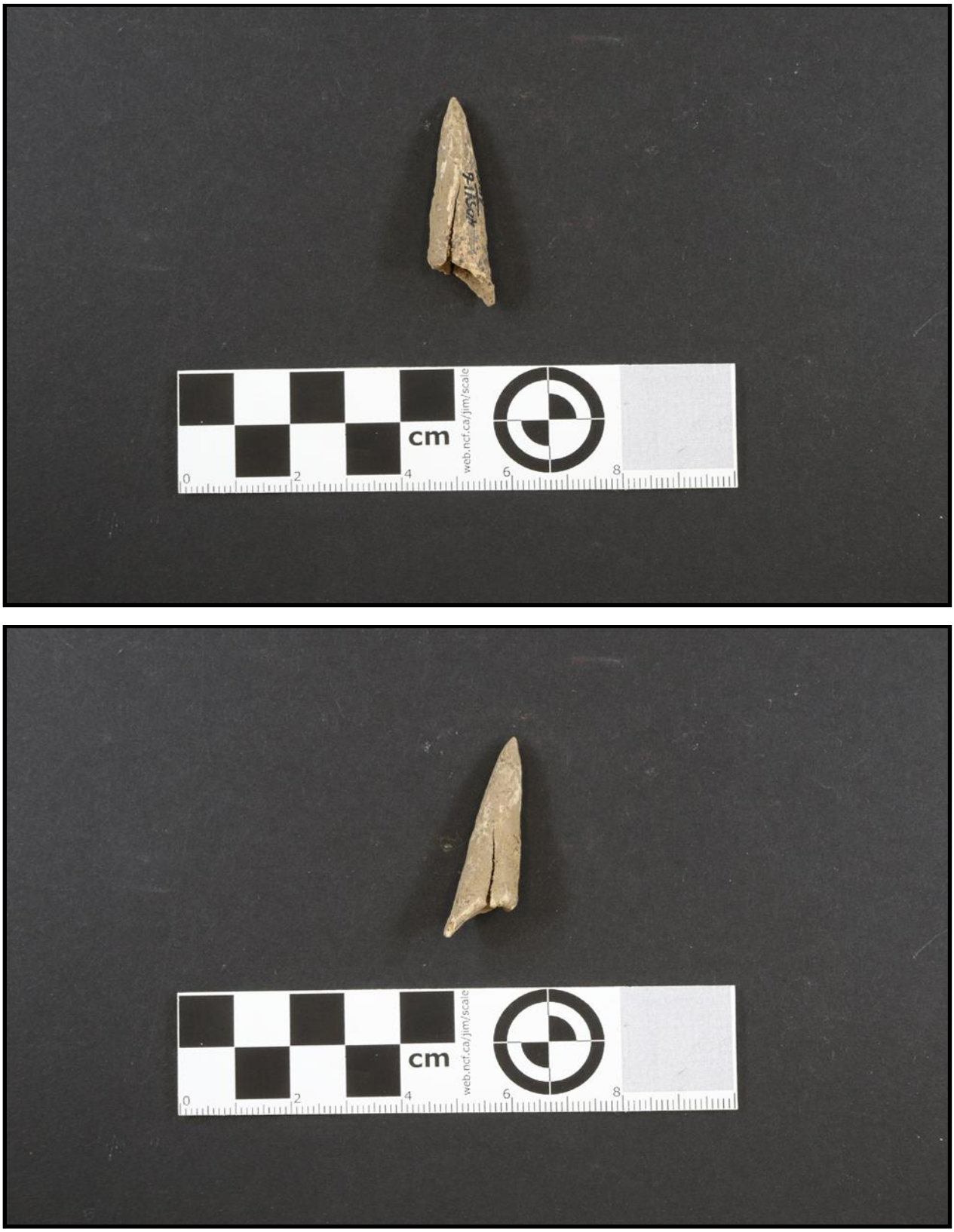

Figure 78. Antler tine projectile points from Unit 6.

Figure 79. Turtle plastron from N590, R80, Unit 6.

Figure 80. Prehistoric textile fabric from N570, R50.5, Unit 6.