APPENDIX B

CULTURAL RESOURCE SURVEYS

- A Phase I Cultural Resources Survey of the Twin Pines Minerals Adirondack Property in Charlton County, Georgia – TerraXplorations, Inc.
- A Phase I cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia – TerraXplorations, Inc.

A PHASE I CULTURAL RESOURCES SURVEY OF THE TWIN PINES MINERALS ADIRONDACK PROPERTY IN CHARLTON COUNTY, GEORGIA

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A PHASE I CULTURAL RESOURCES SURVEY OF THE TWIN PINES MINERALS ADIRONDACK PROPERTY IN CHARLTON COUNTY, GEORGIA

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ABSTRACT

Between March 11 and April 5, 2019, TerraXplorations, Inc. (TerraX), of Tuscaloosa, Alabama, performed a Phase I cultural resources survey for proposed mining at the Twin Pines Minerals Adirondack Property in Charlton County, Georgia. The Phase I survey was performed by Field Directors Matt Lyons and Wes White and Field Technicians Richard Lahan, Brian Loomis, Stephen Holt, Alexis Russell, Mary Kate Roberts, and John Michael Wolter. The purpose of this study was to determine if any prehistoric or historic properties exist within the limits of the project area, and if so, to document and assess each based on the National Register of Historic Places (NRHP) criteria. The lead federal agency for this project is the U.S. Army Corps of Engineers, Savannah District.

The study area, consisting of a 548.79-acre tract (222.05 hectares) located along Georgia State Road 94 approximately 3.5 miles (5.63 kilometers) west of St. George, Georgia. The Phase I investigation of this property led to the identification of one archaeological site (9CR207) and two isolated finds (TPA-2 and TPA-3). The singular component identified through investigations of these archaeological locations are early-to-middle twentieth century historic. Based on the results of the field investigation, none of these resources are considered significant, having been heavily impacted by numerous years of repeated pine cultivation activities. Site 9CR207 is considered to lack significant data potential, and its integrity has been compromised. Site 9CR207 is therefore recommended ineligible for NRHP listing. Archaeological loci TPA-1 and TPA-2 are precluded from NHRP listing due to their nature as isolated finds.

The architectural survey identified four structures over 50 years old within the visual APE. These include a house (8208 SR 94), a trailer (8296 SR 94), a radio tower, and the Georgia Southern and Florida Railway (GS&F). Of these four structures, only the GS&F is considered significant. The GS&F is eligible for NRHP inclusion under Criterion A, transportation. The property boundary for the railroad in the visual APE is the railroad ROW. No other rail-related features, such as buildings or structures associated with the railroad, are located in the visual APE. The railroad maintains its integrity as there is no indication that the track has been realigned or moved. As a fluid resource designed to provide transportation for both people and freight, it is expected that the setting and materials of the railroad would change over time. In general, areas that were at one time rural have become suburban with residential and commercial growth, and to maintain the safety and viability of the track the materials have been replaced over time. Because of the changing nature of the setting and materials of the railroad, it is the route that retains integrity and should not be altered. For these reasons, the project as proposed will not cause an adverse visual effect on the GS&F, but TerraX recommends avoidance of the railroad during the duration of the project. Avoidance of the railroad refers to any construction or activity that would disturb, alter, or realign the track. General use of the track for bringing in or carrying out materials or equipment would be permissible.

Based on this study, it is TerraX's opinion that no significant cultural resources will be adversely affected by the proposed mining project. Accordingly, TerraX recommends clearance for this project in regards to cultural resource concerns.

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A PHASE I CULTURAL RESOURCES SURVEY OF THE TWIN PINES MINERALS ADIRONDACK PROPERTY IN CHARLTON COUNTY, GEORGIA

Introduction

TerraXplorations, Inc. (TerraX), of Tuscaloosa, Alabama, was contracted by TTL, Inc. of Tuscaloosa, Alabama, to conduct a cultural resources survey of the Twin Pines Minerals Adirondack Property in Charlton County, Georgia. Mining of heavy minerals is proposed within the boundaries of the subject property. This process would involve excavation and extraction of the minerals on site. Once completed, spoil sand would then be redeposited into the excavation pits.

The Phase I survey for the Twin Pines Minerals Keystone Property was performed between March 11 and April 5 2019, by Field Directors Matt Lyons and Wes White and Field Technicians Richard Lahan, Brian Loomis, Stephen Holt, Alexis Russell, Mary Kate Roberts, and John Michael Wolter. Principle Investigators Matt Lyons and Paul Jackson oversaw report preparation. The purpose of this study was to determine if any prehistoric or historic properties exist within the limits of the project area, and if so, to document and assess each based on the National Register of Historic Places (NRHP) criteria. The lead federal agency for this project is the U.S. Army Corps of Engineers, Savannah District.

The project area is located along State Road 94 on Trail Ridge Road, approximately 3.75 miles (6.00 kilometers [km]) west of Saint George and approximately 4.75 miles (7.64 km) southeast of the Okefenokee National Wildlife Refuge. The property encompasses a single tract of land totaling 548.79 acres (222.05 hectares). The project area is bounded to the south by SR 94 and to the west by Trail Ridge Road (Figure 1). The southern portion of the project area is bisected by Line Break Road, which also serves as the northeastern boundary. The project area can be found on the 1994 Saint George GA-FL USGS 7.5' series topographic quadrangle (Figure 2). Photographs depicting the present condition of the land within the project area are provided (Figures 3-6).

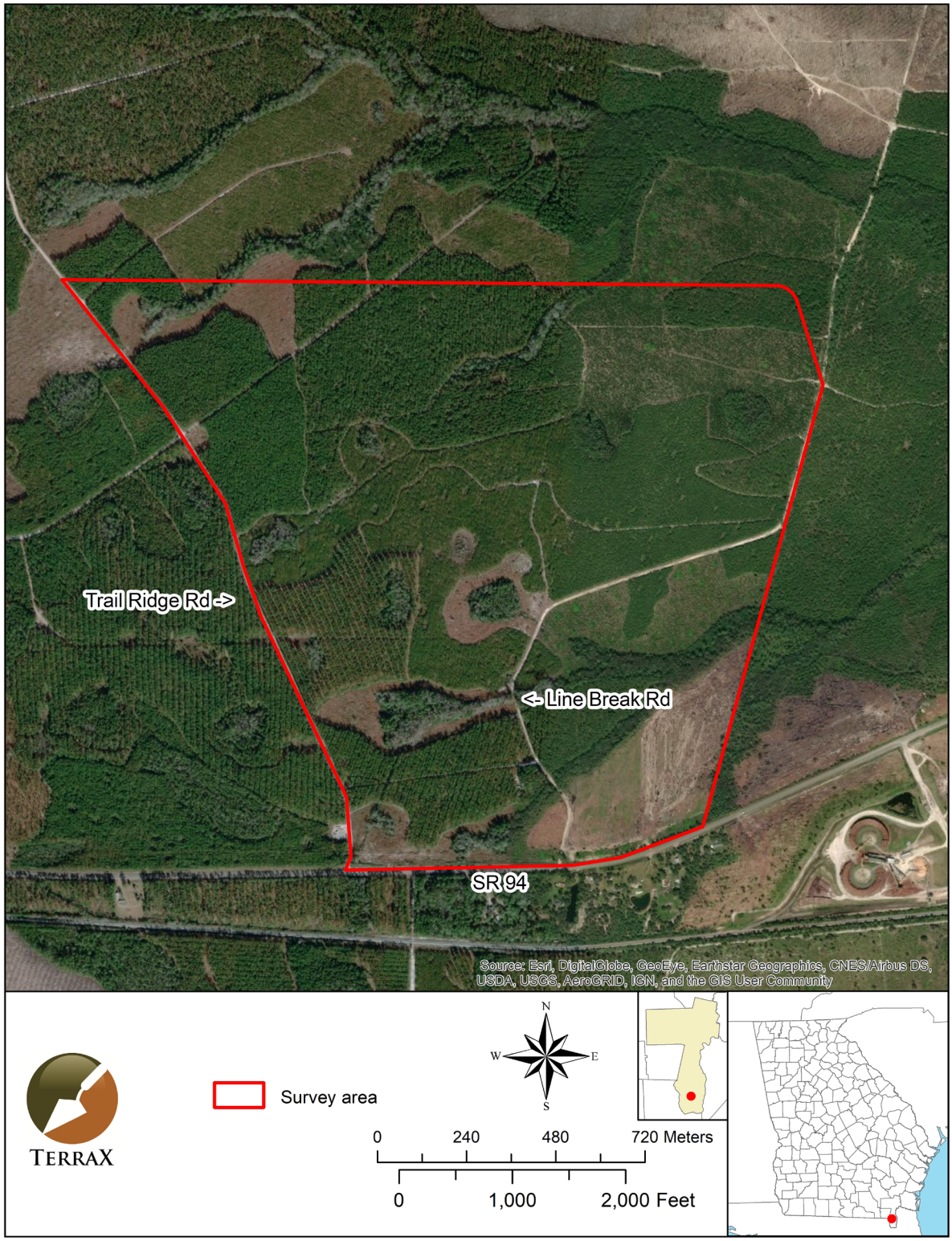

Figure 1. *Aerial map showing the survey area.*

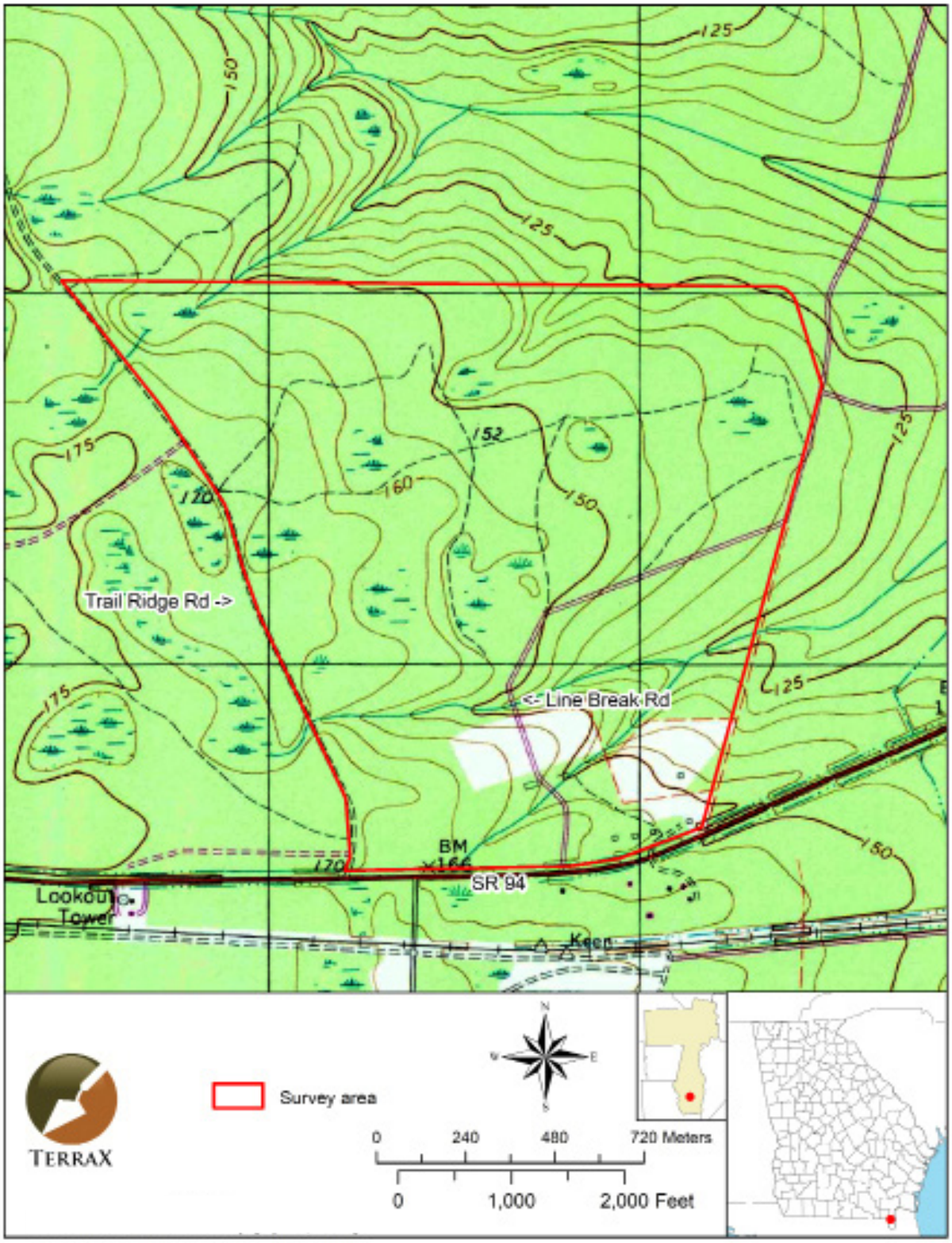

Figure 2. *Topographic map showing the survey area (based on the 1994 Saint George GA-FL USGS 7.5' topographic quadrangle..*

Project Area Environment

The project area is situated within the Barrier Island Sequence District of the Coastal Plain Province. Specifically, the area is located in south-central portion of Charlton County in southeast Georgia. The Barrier Island Sequence District was created by the advance and retreat of Pleistocene sea levels forming six discrete shoreline deposit complexes that occur parallel to the present coastline in a step-like progression of decreasing elevations towards the sea. The project is situated within the Wicomico shoreline deposit complex (relief varies between 50 and 75 feet). The Wicomico shoreline includes an abnormally large barrier island referred to as Trail Ridge. This large barrier island obstructed the drainage of an enormous salt marsh, and in doing so, is thought to have helped create what is now known as the Okefenokee Swamp. The western boundary of the Barrier Island Sequence District, which borders the Okefenokee Basin District, lies at the western base of Trail Ridge (Clark and Zisa 1976; Hodler and Schretter 1986; Seabrook 2017).

The project area is situated within a rural setting and is primarily utilized for pine cultivation and hunting. The area consists of a pine flatwoods environment that is characterized by low, flat topography; relatively poorly drained, acidic, sandy soil; and open woodlands dominated by pines with an extensive shrub layer that typically includes palmetto, gallberry, fetterbush, wax myrtle, dwarf live oak, tarflower, and blueberries. Elevations within the project area range between 125 and 170 ft above mean sea level (AMSL) with the topography sloping gently from west to east. Vegetation in forested portions of the property typically consists of stands of planted pines varying in age and interspersed with undergrowth comprised of palmetto, brush, briars, and patches of grass. Along drainages and wetlands, both cypress and pine are common. At the time of this investigation, large sections of pine forest had recently been logged, plowed, and replanted in pine. Along with pine saplings, new growth in these areas included grass, palmetto, and brush. Notable disturbances observed within the project area were associated with silviculture activities and road construction with repeated episodes of pine cultivation representing the most significant impact.

The flat topography, soils, and seasonal precipitation significantly influence hydrology of the pine flatwoods. During the rainy season, standing water is common and lasts for various periods of time due to poorly drained soils and the low, flat topography. During times of little precipitation, droughty conditions can occur due to evaporation of water from upper soil layers and the inability of water to move upward through impermeable hardpan from lower horizons. The project area contains several small drainages typically associated with large wetland areas, which cover a large percentage of the area. Waters from the project area drain east into Boone Creek, which empties into the St. Marys River.

Soils encountered during the field investigation consisted of deep sands, which were formed in sandy marine deposits. Shovel tests typically exposed three strata with the bottom zone comprised of a spodic horizon that frequently coincided with the water table (Figure 7). A review of the Web Soil Survey (2019) identified five soil types within the project area. For information on these soil types, refer to Table 1.

Figure 3. *Example of wetland area in northern portion of the project area, facing east.*

Figure 4. *Example of wetland in southeastern portion of the project area, facing north.*

Figure 5. *Example of palmetto scrub in forested areas (northeastern portion of the project area).*

Figure 6. *Example of forested area in the central portion of the project area.*

Figure 7. *View of typical shovel test profile within the project area.*

TABLE 1. SOILS TYPES WITHIN THE PROJECT AREA.

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KJA	Kinston and Johnston soils, 0 to 2 percent slopes, frequently flooded. Poorly drained to very poorly drained soils.	25.9	4.70%
LeA	Leon fine sand, 0 to 2 percent slopes. Poorly drained soils.	314.8	57.40%
LvA	Lynn Haven fine sand, 0 to 2 percent slopes. Poorly drained soils.	52.6	9.60%
LYA	Lynn Haven, Allanton and Kingsferry soils, ponded, 0 to 1 percent slopes. Very poorly drained soils.	15.1	2.80%
MaA	Mandarin fine sand, 0 to 2 percent slopes. Somewhat poorly drained soils.	140.4	25.60%
Totals for Area of Interest		548.8	100.00%

Literature and Document Search

A literature and document search was performed prior to the investigation in order to gather pertinent background information regarding the subject property and its surroundings. A 1- mile (1.6 km) radius search was conducted around the proposed project area. Research included inspections of the Georgia Archaeological Site File (GASF), Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS) database (GNAHRGIS 2019), the National Register of Historic Places (NRHP) (National Park Service 2019), and various historic maps.

Inspections of GNAHRGIS and the NRHP failed to identify any previously recorded historic properties located within a mile of the project area; however, although not yet listed within the GNAHRGIS database, a cultural resources survey conducted by TerraX immediately west of the current project area recorded six archaeological sites (9CR201 through 9CR206), four isolated finds, and two structures (a radio tower and the Georgia Southern and Florida Railway) over 50 years of age (see Pearce and Gatenbee 2020). The most common archaeological components and site types identified during the previous survey were early to mid-twentieth century artifact scatters associated with razed historic structures, and undiagnostic, presumably precontact, lithic scatters or isolates.

Historic maps were examined for evidence of previous historic structures or other features located within or adjacent to the project area. Maps inspected include the 1918 Moniac GA-FL USGS 15' topographic quadrangle; the 1942 Moniac GA-FL USGS 15' topographic quadrangle; the 1966 Saint George GA-FL USGS 7.5' topographic quadrangle; the 1966 Moniac GA-FL USGS 7.5' topographic quadrangle; and the 1994 Saint George GA-FL USGS 7.5' topographic quadrangle.

The earliest evidence for structures near the project area appears on the 1918 topographic map (Figure 8), which depicts a row of structures just south of the project area border. These structures, which are also depicted on the 1942 topographic map (Figure 9), appear fewer in number by 1966, and at this time, are depicted within the project area. The location of these structures were recorded as an archaeological site (9CR207) during the current field investigation. For information on Site 9CR207, refer to the Archaeological Survey Results section of this report. Other features depicted on the 1918 and 1942 maps include the Georgia Southern and Florida Railway located south of SR 94 and the project area (see Figures 8 and 9). For further information on the Georgia Southern and Florida Railway, refer to the Architectural Survey Results section of this report. The 1918 and 1942 maps also depict the name Clarking to the southwest of the project area. Clarking appears to be the name of a small community in this area, though background research failed to find any information relating to it. Clarking is also depicted on later topographic maps from 1966 and 1994.

Culture History

The following gives an overview of the cultural history of the Okefenokee Swamp area of the interior of the Georgia Coastal Plain, which has a rich history known from abundant evidence of Late Archaic human occupations to recent modern logging, small-town industry, and historic residential development. Although pre-Late Archaic archaeological materials are rare in the area, it is likely that human use of the region extends as far back as the early Paleoindian period. Within this chapter, the focus will be on a review of all defined cultural phases for the area as context for the archaeological components documented in the recent investigation for the Adirondack Property. This section draws heavily from a precontact and historical framework previously developed by Trowel (1998a, 1998b) and Kirkland and Cook (2007).

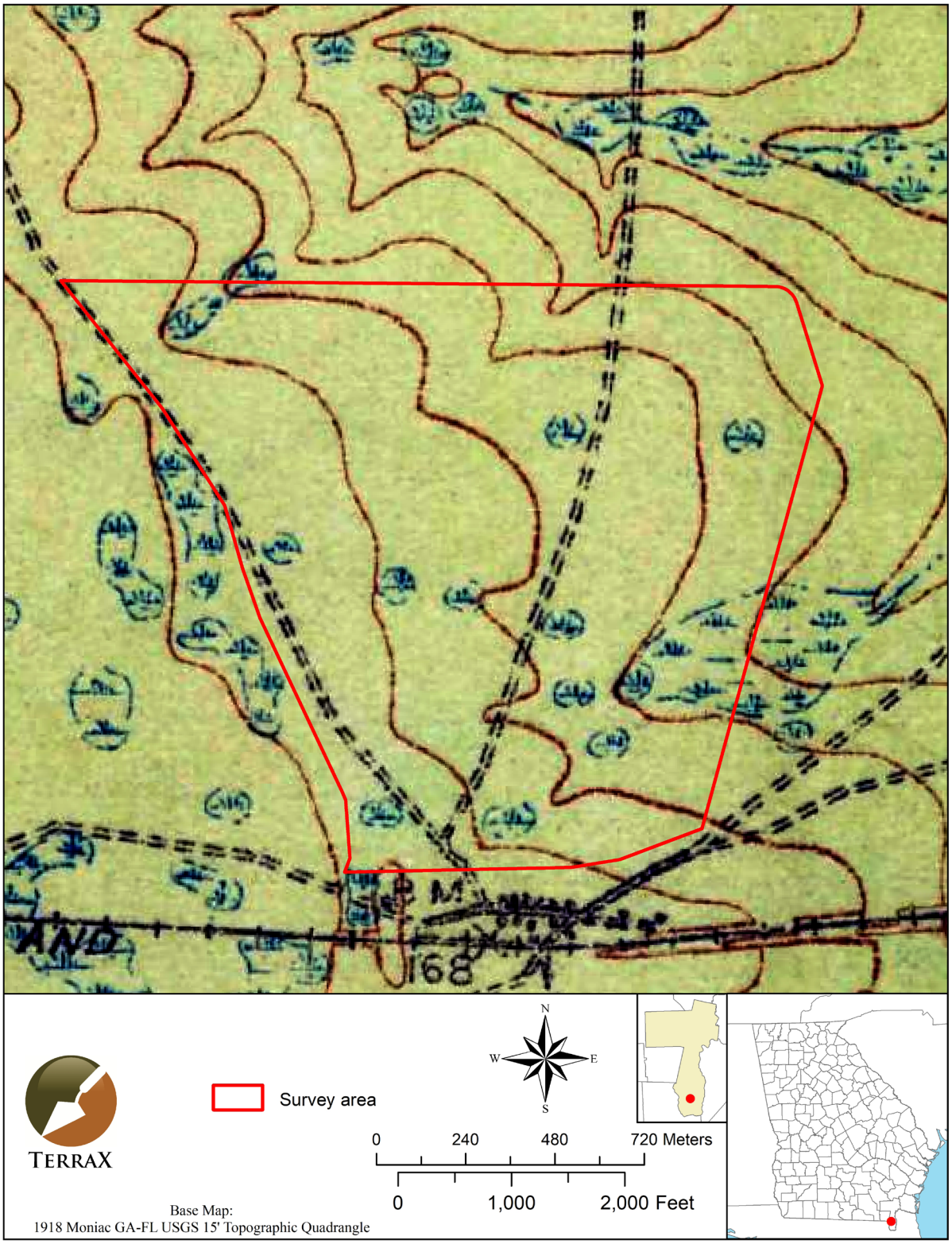

Figure 8. *1918 Moniac topographic map showing structures near the southern boundary of the project area.*

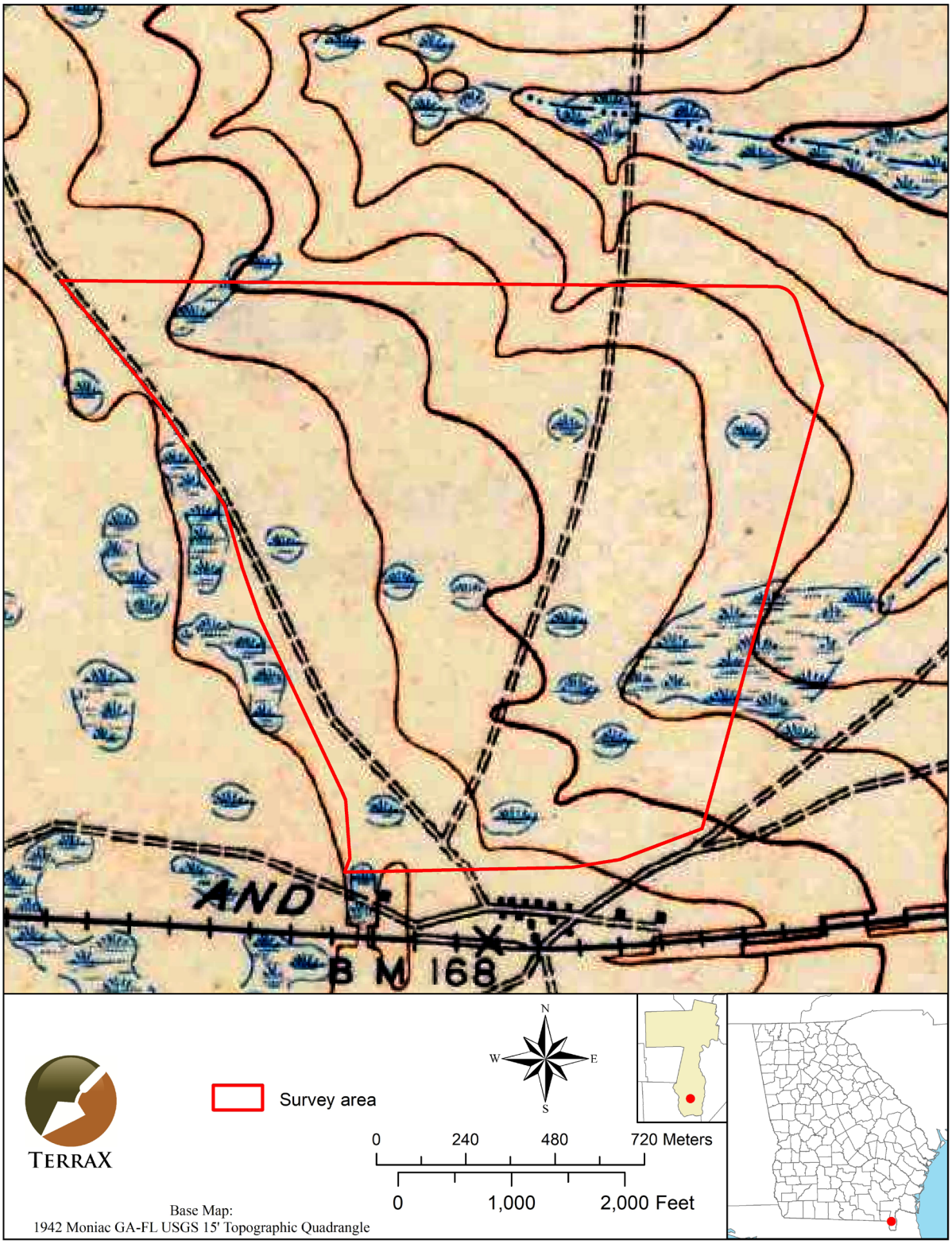

Figure 9. *1942 Moniac topographic map showing structures near the southern boundary of the project area.*

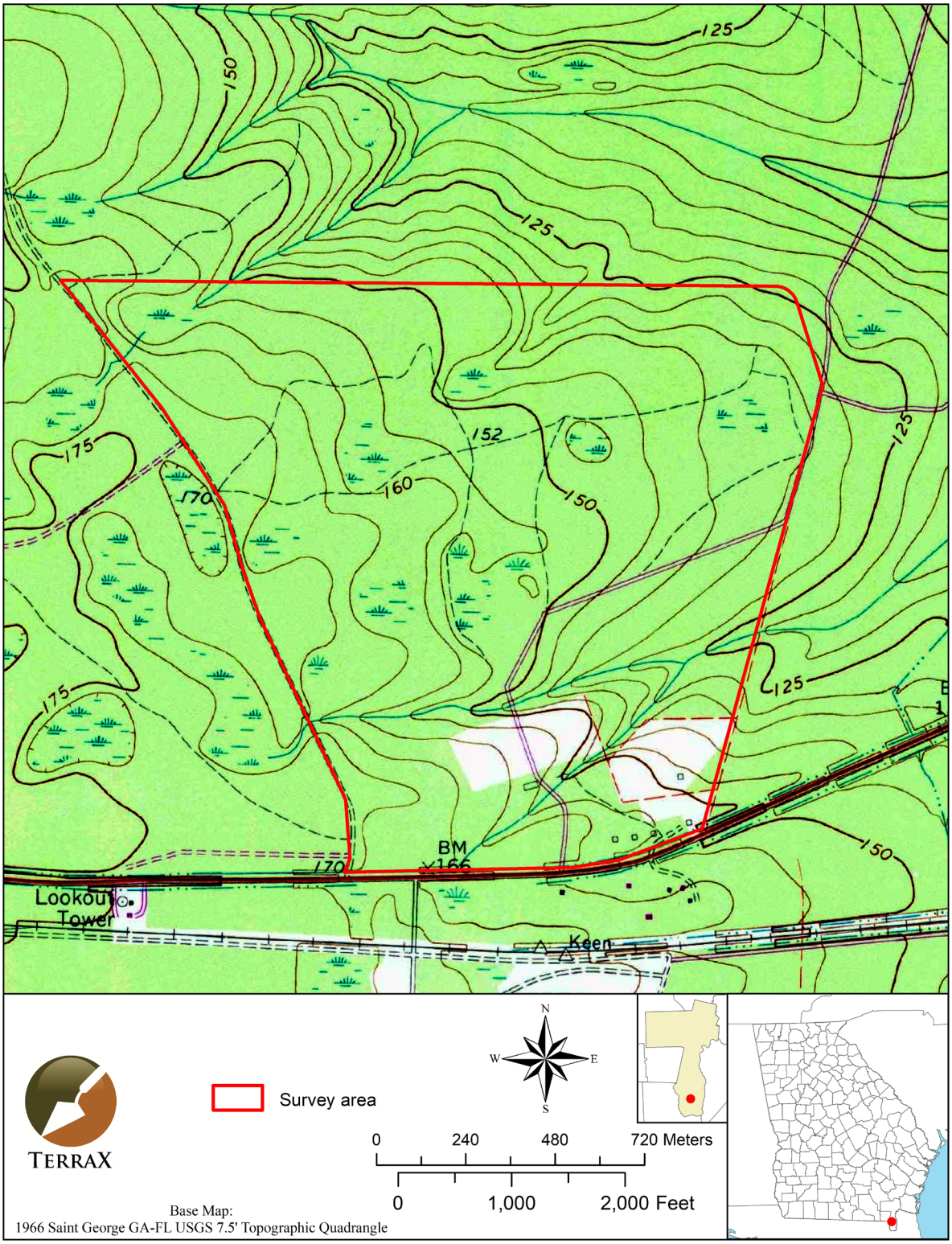

Figure 10. *1966 Saint George topographic map showing several structures near the southern boundary of the project area.*

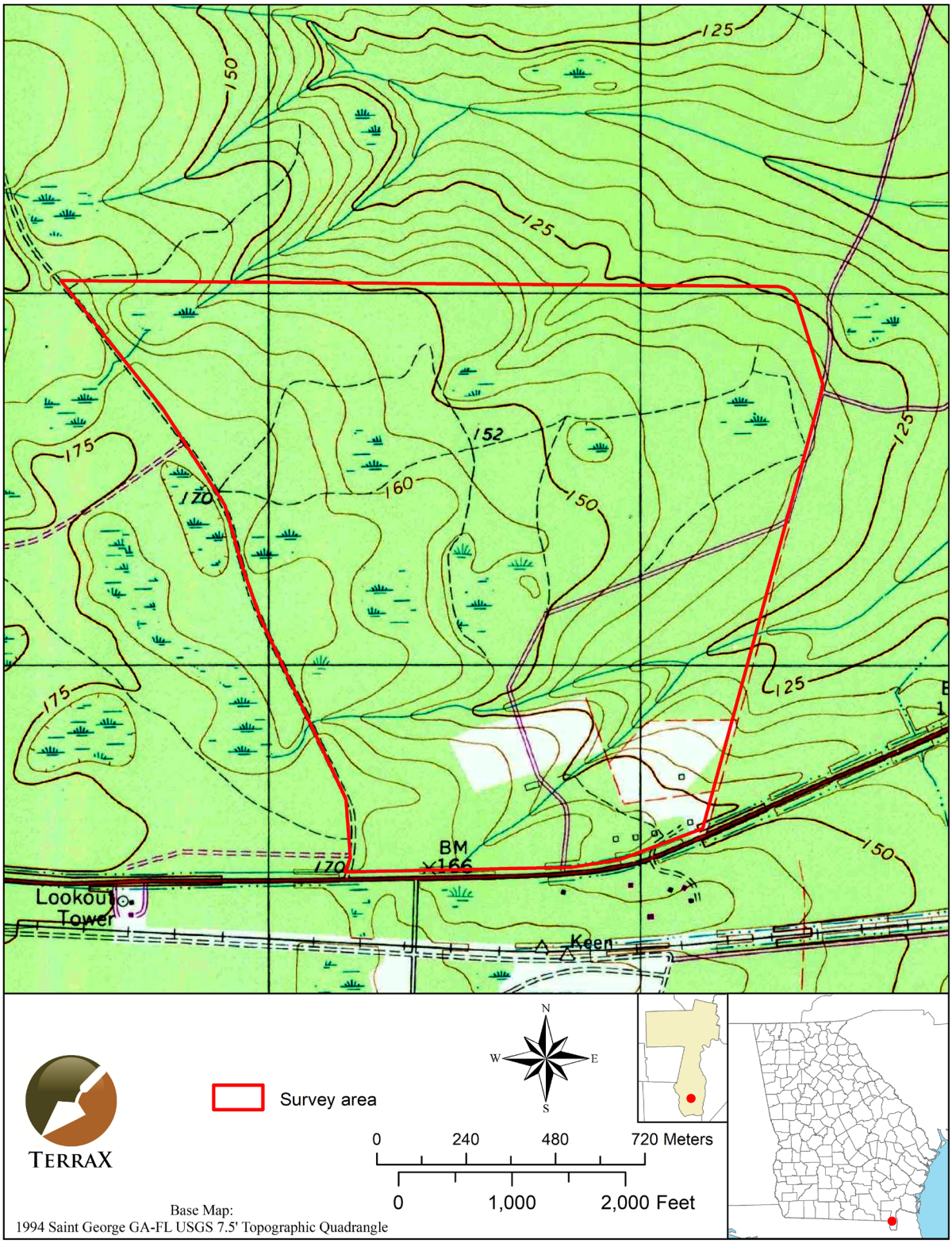

Figure 11. *1994 Saint George topographic map showing several structures near the southern boundary of the project area.*

Paleoindian

The Paleoindian period (ca. 12,000–10,000 B.P.) represents the earliest substantial human occupation in the Western Hemisphere. Paleoindian populations are conventionally described as highly adaptive, mobile hunter-gatherers whose ancestors had migrated from Siberia into North America between ca. 12,000 to 10,000 years Before Present (B.P.). This migration likely occurred near the end of the last Ice Age, during the Late Pleistocene Epoch, when glaciers were expanding and retreating from fluctuations in the climate from colder to warmer episodes. Human populations presumably moved when the colder periods of the Pleistocene captured large quantities of the Earth's water in glaciers. This lowered sea levels and exposed large portions of the continent, including a land bridge between Siberia and Alaska, which allowed human populations to follow Pleistocene mammals across to the Americas.

At present, increasing evidence is available for occupations of greater antiquity than has been traditionally recognized for the Paleoindian period. These trends, along with additional deficiencies in the conventional model of colonization, have led archaeologists to advance alternative models for the peopling of the Americas, including a route via watercraft down the Pacific coast. Currently, no consensus has been achieved within the professional archaeological community, and these models are still a topic of healthy debate (see Faught 2008; Pitblado 2011). While sites with components that are thought to predate 12,000 B.P. have been discovered elsewhere in the Southeast (e.g., Page-Ladson, FL, Cactus Hill, VA, and Topper, SC), such deposits are currently unknown in Georgia.

According to Anderson (1996:4), the general environmental situation in which North American Paleoindian groups lived was one of transition, with much of the eastern United States experiencing a period of environmental fluctuation as temperatures became warmer in the summer and colder in the winter. North American vegetation reflected these climatic changes as mature mesic oak-hickory forests replaced the Glacial spruce/pine forests that once flourished in the more stable, colder environment. The Coastal Plain of present day Georgia, Alabama, and Florida, however, supported mature oak-hickory-southern pine forests much earlier in the period. This environmental situation was considerably more stable than latitudes above 33° N, where the replacement of the Full Glacial spruce/pine boreal forest by a Post Glacial mesic-oak forest was still an ongoing process.

A regional paleoclimatic model developed by Watts (1992; Watts et al. 1996) posits that post-12,000 B.P., northeast Florida and southeast Georgia saw more xeric flora with some prairie development, low lake levels, and many dried lake basins. A few km west of Okefenokee, evidence suggests Lake Louise was dry prior to 8,500 BP and evidence for the presence of Holocene oak forests at Lake Louise between 8,500 to 5,000 BP indicates significantly lower precipitation during this interval (Delcourt 1980; Watts 1969, 1983). Specifically, it is likely that much of the Okefenokee Basin and surrounding uplands were dry and inhospitable, aside from occasional waterholes, until climate shifted from drier to wetter conditions at approximately 7,000 BP, creating a stand of water in the Okefenokee Basin enhanced by rising sea levels that are identified in peat deposits (Cohen et al. 1984:510). Although nomadic Paleoindian hunters likely utilized portions of the Okefenokee Basin supporting grazing animals prior to swamp formation, archaeological evidence of Paleoindian occupations is likely now deeply submerged under the swamp (Kirkland and Cook 2007).

In Georgia, and in the Southeast generally, the Paleoindian period has been provisionally divided into Early, Middle, and Late or Transitional subperiods based on distinctive changes in material culture and most commonly recognized via projectile point morphology. These changes are considered to roughly correlate

with the initial colonization and exploration of the Americas, the development of regional traditions, and a shift to Holocene environmental conditions with a transition to more Archaic period traits (Anderson 1990:165–166).

The Early Paleoindian period (ca. 12,000–11,000 B.P.) in the southeast is recognized by the presence of Clovis and Clovis related projectile points. These bifaces are sometimes quite large, lanceolate blades that feature roughly parallel ground haft margins, slightly concave bases, and channels or flutes created by the removal of a vertical flake from the center of one or both faces of the point (Anderson 1990:165). The size of the points reflects the hunting strategy of the early inhabitants, which focused on hunting large Pleistocene mammals.

During the Middle Paleoindian period (11,000–10,500 B.P.), projectile points include both fluted and unfluted lanceolate/auriculate forms, as well as varieties with broad blades and constricted haft elements. Point types associated with this time period include Cumberland, Suwannee, Simpson, and probable transitional Clovis variants. The loss of the distinctive "flute" on the Middle Paleoindian projectile points may be a morphological adaptation that relates to the extinction of mega-fauna (Anderson 1996).

Late or Transitional Paleoindian period (10,500–10,000 B.P.) projectile point forms include Dalton and Dalton related types. These varieties, which frequently exhibit evidence of extensive resharpening, are typically lanceolate forms with concave bases and grinding on the lateral and basal margins. The blades of these types are often serrated or beveled.

Archaic

The Archaic period in the eastern United States is dated approximately between ca. 8,000 and ca. 1,000 B.P., and is divided into three sub-periods. The three sub-periods of the Archaic period proper are believed to roughly approximate the transition from highly mobile, camp-based collector lifeways to more sedentary and opportunistic foraging lifeways.

During the Early Archaic period (10,000 to 8,000 B.P.), it is reasonable to assume there was a trend towards a more sedentary lifeway as archaeologists such as Willey and Phillips (1958) and Caldwell (1958) viewed the Archaic stage as a dramatic shift from previous Paleoindian lifeways. However, as Walthall (1980) argues, this might have been true in northern regions where the drastic climatic shift precipitated large-scale population movements and material culture change, but in the non-glacial regions of the Southeast this change would have been much more gradual, which would lead to imperceptible cultural adaptation. Anderson (1996; see also Anderson et al. 2007) discussed evidence that indicated a different trend, which emphasized a continuation of mobile foraging adaptations in the Georgia Coastal Plain region during this time as mixed hardwood forests present throughout the region created favorable settings for hunting and gathering lifeways throughout the Southeast. Anderson et al. (2007) describe Early Archaic groups as organized in small bands practicing hunting, gathering, and coming together from expansive foraging ranges for periodical communal activities in favorable locations. With this model of Archaic settlement patterns, over time annual ranges grew progressively smaller such that by the end of the Archaic, groups became largely restricted to portions of river systems.

The Early Archaic bifaces have well-documented pan-regional sequences that include the Side-Notched Tradition (10,000 to 9,500 B.P.), the Corner-Notched Tradition (9,500 to 9,000 B.P.), and the Bifurcate Tradition (9,000 to 8,000 B.P.). The Side-Notched Tradition is typically recognized by the presence of biface types such as Taylor, Big Sandy, and Bolen. Corner-Notched Tradition includes Kirk Corner-Notched and Palmer Corner-Notched. The Bifurcate Tradition includes MacCorkle, St. Albans, and LeCroy.

The Middle Archaic is denoted by the appearance of an array of stemmed bifaces (Chapman 1985). The earliest hafted biface types are the Kirk Stemmed, Kirk Serrated, and Stanley Stemmed. Morrow Mountain projectile points are one of the most common stemmed points recovered from the lower Coastal Plain region and are typically dated from 7,500 to 5,500 B.P. Later Middle Archaic points include the Guilford-related Brier Creek type (6,000 to 5,000 B.P.). In addition, Sykes, White Springs, and Benton types are usually found associated with this period.

These technological shifts in biface morphology are evidence of a continued shift in hunting strategies likely related to the Altithermal Optimum, a warm period during roughly the interval from 9,000 to 5,000 B.P. This warming forced a vegetation shift in which pine expanded across the landscape, at the expense of mixed hardwood forests. Some researchers have suggested these pine forests would not have been as productive for human usage and therefore abandoned. Elliott and Sassaman (1995) state that Middle Archaic groups may have consolidated their mobility ranges, preferring to inhabit the Piedmont region rather than the lower Coastal Plain region. Anderson et al. (2007) suggest that replacement of mixed hardwood forests by pine forests and cypress swamps restricted people for some time to remnant stands of hardwood forests within river valleys, and that human populations either stabilized or decreased during this time. Middle Archaic human occupations are known from shell midden and earthen sites with dense occupational debris and numerous burials along major drainages of the Midsouth and lower Midwest. These sites were likely occupied during much of an annual round of hunting and gathering lifeways, serving as locations of social aggregation and likely specialized burial areas (Anderson et al. 2007:459).

Long-distance exchange networks, as evidenced by the presence of coastal shell and Great Lakes copper, emerged by ca. 7500 B.P. Localized exchange networks, likely serving to reduce conflict and subsistence uncertainty among geographically close groups, were also operating by this time based on the distributions of items such as bone pins, bannerstones, and elaborate bifaces (Anderson et al. 2007). The emergence of communal monumental architecture is evidenced by the construction of earthen mound complexes by ca. 6000 B.P. in nearby Florida. Territorial circumscription between groups is identified by appearance of some evidence for conflict in the Midsouth and lower Midwest in the form of burials with embedded bifaces, scalping marks, and perimortem fractures. Variability in mortuary treatments suggests status differentiation was also emerging during this time, but is thought to have been achieved rather than ascribed based on the lack of evidence for heritable ranking (Anderson et al. 2007:459).

In the Southeast, Late Archaic components (ca. 5,000 to 3,000 B.P.) are recognized primarily based on the presence of certain projectile point forms and other trends initiated during the Middle Archaic, which continued to grow in scale throughout the Late Archaic. Diagnostic projectile point types include Savannah River Stemmed, Paris Island, Benton, Pickwick, and Ledbetter (Elliott and Sassaman 1995). Fiber-tempered pottery in much of the southeastern United States is generally considered under the rubric of Stallings Island, Orange, Wheeler, and Norwood Series, and it is thought to mark the transition between the Late Archaic and Early Woodland periods (i.e., Terminal Archaic). In the Okefenokee Basin, earliest human occupations documented thus far, such as at the Martha Dowling North site (9CR34), are associated with Late Archaic occupations with fiber-tempered pottery found within live oak hammocks around the edge of the swamp and on interior islands. The majority of this pottery is St. Simons, a thick, plain variety common along the Georgia coast (Kirkland and Cook 2007:16).

By the end of the Late Archaic (ca. 5,000-3,000 B.P.) wild plant foods were collected in such frequency that morphological changes characteristic of domestication appear in several local species such as goosefoot, sumpweed, sunflower, and gourds (Smith 1992; Anderson et al. 2007). Archaeological evidence indicates that people grew small amounts of squash, sunflowers, and other seed-bearing plants in simple gardens to supplement their hunting and gathering diets (Sassaman and Anderson 2004:105).

Woodland

Southeastern archaeologists in the United States generally distinguish the beginning of the Woodland period (ca. 3,200 to 1,050 B.P.) by the introduction and regular use of stamped pottery and increased investment in ceremonial ritual events and mortuary practices. During the Woodland period, the intensification of horticulture, construction of earthworks, and elaboration of artistic expression and burial ritual are all thought to be related to a reorganization of social structure. The Woodland period is further subdivided into three subperiods: Early, Middle, and Late.

Sand-tempered pottery first appears in the area during the Early Woodland period (Ledbetter et al. 2009). The Early Woodland Deptford ceramics were developed in Georgia around 2,800 B.P. out of the Early Woodland Refuge phase and spread north into the Carolinas and south into Florida. Early Woodland ceramic types common within the Okefenokee Basin include Satilla Plain and Satilla Simple Stamped, which are found primarily in the Satilla River drainage and headwaters of the Alapaha River, along the lower Satilla River and south to the St. Marys River estuary. These types contain a blend of fiber and sand as their temper, are thought to represent a Late Archaic to Early Woodland transitional pottery type. Check-stamped Satilla phase pottery (Willacoochee Check-Stamped), however, is not currently known from sites in the Okefenokee Basin as this type may be restricted to the north and west of the interior Coastal Plain (Kirkland and Cook 2007:16).

The Middle Woodland period is marked by the popularity of check-stamped ceramics, represented in the Deptford series, and complicated-stamped ceramics with complex, curvilinear patterns known as Swift Creek. Deptford series pottery, dominated by simple stamped with some check-stamped, is found throughout the Okefenokee Basin but in low quantities and associated with sparse chert flakes. This suggests Deptford peoples had limited seasonal use of the area. More permanent occupations are known from large shell middens and a house at Cumberland Island on the lower Georgia Coast (Kirkland and Cook 2007:16). This period also features elaborate burial ceremonialism and artistic expression that is thought to be related to the "Hopewellian Interaction Sphere" (Caldwell 1964), which developed throughout the Southeast and Midwest at this time. Materials associated with this interaction sphere include cut mica, worked galena, copper-covered panpipes, copper ear spools, copper beads, Flint Ridge chalcedony blades, and fine gray-blue flint blades. Swift Creek sites are also limited in the Okefenokee Basin, except for one locale on Trail Ridge with significant quantities of Swift Creek pottery (Trowell 1998a). The low numbers of Swift Creek deposits encountered within the Basin is intriguing given that Swift Creek occupations are prevalent in surrounding areas, including along the Georgia coast, as late as A.D. 850 (Kirkland and Cook 2007:17).

The Middle and Late Woodland periods saw an increase in human occupations attributed to the Weeden Island culture in the Okefenokee Basin based on the presence of larger sites with conical sand mounds beginning ca. A.D. 500. Elliott et al. (1995) described the analytical types associated with Weeden Island assemblages as sand-tempered Carabelle Incised, Carabelle Punctated, Weeden Island Plain, and Weeden Island Red Painted. In many areas in Georgia, Swift Creek ceramics are also found in association with Weeden Island wares. Late Weeden Island ceramic types including Weeden Island Incised, Punctated, and Plain; Carabelle Incised and Punctated; Keith Incised; Tucker Ridge-Pinched; and Wakulla Check-Stamped are found throughout the basin. Villages attributed to the Weeden Island culture appear to have been preferentially placed within oak hammocks and islands within the swamp with a concentration of Weeden Island sites located southwest of the swamp. In the latter half of the Woodland period, the bow and arrow entered into common use. The change in technology allowed greater capability to kill smaller game, but also led to greater conflicts in society as is evidenced by fortifications and mass burials. By A.D. 1000, cord-marked pottery of undetermined cultural affiliation appears in the basin and is commonly located along the eastern rim and within areas of Floyds Island, Billys Island, Jones Island, Hickory Hammock, and Mixons Hammock (Trowell 1998a; Kirkland and Cook 2007:17).

Mississippian

The Mississippian period spans between 1,050 to 410 B.P. At around 1000 B.P., cord-marked pottery of an uncertain cultural affiliation appears at some sites along the eastern rim of the swamp and on Floyds Island, Billys Island, Jones Island, Hickory Hammock, and Mixons Hammock. Sherds are described as resembling either Prairie Cord Marked from north-central Florida, Omulgee Cord Marked from south-central Georgia, or Savannah Cord Marked from northern coastal Georgia. Some sites, however, are interpreted as containing only Savannah phase ceramics such as Savannah Complicated Stamped (Trowell 1998a; Kirkland and Cook 2007).

Compared to some portions of the southeast that saw increasingly intensive Mississippian Period occupations, the Okefenokee Swamp area may be characterized by a decline in utilization of the area based on decreasing frequencies of Mississippian ceramic types compared to earlier Weeden Island types. An alternative explanation for the pattern observed in the region is that the Woodland tradition persisted into the Mississippian Period within the Okefenokee Swamp area (Schnell and Wright 1993:35-36).

Mississippian sites from the eastern portion of the Okefenokee Swamp in areas such as Cowhouse Island and Bugaboo Island contain Lamar pottery associated with the Lamar Mississippian culture that spanned all of Georgia, and portions of Tennessee, South Carolina, Florida, and Alabama, and to a far lesser extent, the Irene culture (Williams and Shapiro 1990; Trowell 1998a). Grit-tempered types including Lamar Plain, Lamar Complicated Stamped, and Lamar Bold Incised identify Lamar ceramic styles (Williams and Thompson 1999). Lamar pottery is commonly found north and northeast of the swamp and is less prevalent to the east, southeast, and south (Trowell 1998a; Kirkland and Cook 2007). The Lamar culture extends through the Protohistoric period. It is a horticultural based society with sites typically associated with major floodplains. Maize, beans, and squash were present as basic food supplies and augmented by local nuts and fruit collections. Deer, box turtle, and turkey were the primary meat, and shellfish have been noted in the Piedmont and River and Valleys (Hally and Rudolph 1986; Wynn 1990).

Irene phase pottery is traditionally associated with the historic Guale Indians living along the coast north of the Satilla River. Irene ceramics have been found in small quantities in the Okefenokee but the Guale groups were likely not heavily utilizing the swamp due to the fact that Timucua groups who made San Pedro pottery occupied the swamp and the region south of the Satilla River (Kirkland and Cook 2007:17).

Historic American Indian

The Historic American Indian period dates from ca. 410 to 115 B.P. The first documented Europeans to enter the general area were members of the De Soto expedition. De Soto had sailed with Pizarro for Peru and returned to Spain a fabulously rich man. Politically well connected, he was granted the right to conquer Florida by Charles V of Spain, which, at that time, included the project area. De Soto landed near Tampa Bay in A.D. 1539 with 1,000 men and spent the next four years wandering the interior of the southeastern U.S. determined to duplicate his earlier success (Alchian 2012). This invasion brought great grief to every group that was unfortunate enough to have been encountered by De Soto and his men. The Spanish left a path of destruction across the lands they traveled, torturing and murdering indiscriminately as they sought anything of value they could steal from the local inhabitants.

Two Timucuan-speaking chiefdoms, the Ibihica and Oconi, occupied the eastern Okefenokee Swamp and Trail Ridge areas at European contact and both were later assimilated into the Spanish Florida mission system. Spanish records indicate that Oconi was located on an island in or adjacent to Okefenokee Swamp.

Ibihica, on the other hand, was comprised of five towns likely located on Trail Ridge. Missions of San Lorenzo de Ibihica and Santiago de Oconi were established at these towns by the 1620s and remained in operation until 1656 when Spanish soldiers imprisoned the chief of Oconi and burned both towns (Weisman et al. 1998; Kirkland and Cook 2007:18).

Spanish artifacts have been recovered from a previous survey of the Trail Ridge area of the Okefenokee at the Martha Dowling North site (9CR34). The artifacts, including a fragment of San Luis Blue on White majolica, which is often associated with activities of friars, suggest the presence of a mission in the immediate area. After the evacuation of the missions in the late 1600s, the Okefenokee Swamp appears to have been void of permanent settlements until a Creek chief named Hopoithle Tustunnuggee Thlucco moved his family onto a ridge, likely the modern Mixons Hammock, into the swamp to avoid the American Revolution (Trowell 1998b; Kirkland and Cook 2007).

Georgia was the last of the original 13 colonies established by Great Britain in North America. General James Oglethorpe was granted the colony's corporate charter in 1732, and during the following year, Oglethorpe and a contingent of settlers established a camp in what was to become the city of Savannah. In 1735, Fort Augusta was established and rapidly became a focus of interior settlement. On January 7, 1755, Georgia ceased to be a trustee colony and the crown officially took up administration of the province. With Britain's victory in the French and Indian War, King George III expanded Georgia's southern boundary to the St. Marys River with a proclamation in 1763. The state's original eight counties were created during the Revolutionary War in 1777. Georgia became the fourth state to ratify the Constitution in 1788 (Jackson 2016; Cobb and Inscoe 2017).

In the early 1800s, the Okefenokee Swamp was situated between English Georgia and Spanish Florida with the English-Spanish boundary being poorly defined and with little in the way of law enforcement. As a result, the swamp became home to American Indians and white renegades for cattle rustling, revenge raiding, and slave smuggling from the St. Marys River to present-day Alabama. Between 1812 and 1842, several forts and blockhouses were built and manned periodically, especially during the mid-1830s when the Second Seminole War of Florida expanded into southern Georgia. Georgia militiamen and U.S. troops used forts as bases to patrol the region for Seminole raids, including Fort Argyle on the Ogeechee River, Fort Floyd near Waycross, and Fort Gilmer near Fargo. Fort Alert, which later became the first seat of Charlton County as Trader's Hill, was established in the eighteenth century (Trowell 1998b; Kirkland and Cook 2007).

Modern Historic

This period dates generally from ca. 115 B.P. (A.D. 1835) to present. Charlton County, in which the project lies, was created by the Georgia General Assembly in 1854 with the first county seat established at Traders Hill. Formerly known as Fort Alert, Traders Hill is located on the St. Marys River and was likely established by the English before the Revolutionary War. As the head of navigation on the St. Mary's River, Fort Alert was an important trading center of the southeast. Prior to its establishment as the county seat, Trader's Hill was a pioneer trading post consisting of a few stores and barrooms. After 1854, the town became the center of commerce and culture for Southeast Georgia and North Florida. Traders Hill remained a thriving trade center until the construction of the Savannah Florida & Western Railroad from Savannah to Jacksonville and the establishment of the town of Folkston which became the Charlton County seat in 1901 (McQueen 1932).

By the early 1890s the Okefenokee Swamp area was surrounded by railroads. The Atlantic and Gulf Railroad, running from Savannah to Valdosta, ran a few miles north of the Okefenokee Swamp by the Civil

War. In 1881, a line was built between Waycross and Jacksonville passing within a mile of the northern and eastern boundaries of the swamp (Kirkland and Cook 2007:19). The Atlantic, Valdosta and Western Railway constructed a line in 1899 that operated from Valdosta, Georgia to Jacksonville, Florida. Passing immediately south of the project area and extending for approximately 110 miles (main line) crossing southern Georgia and northern Florida, this line was nicknamed the "Jacksonville Short Line." This railroad also had approximately 45 spur-line miles, most of which were logging routes. In 1902, this line was purchased by the Georgia Southern and Florida Railway (RailGa.com 2019).

Early Euroamerican settlers in the area were largely subsistence farmers raising cattle and hogs and cultivating small corn fields and gardens. Log houses were built that were surrounded by outbuildings for grain storage, supplies, and sugar production. A pattern of a few scattered homesteads continued in the region well into the twentieth century. Although several Antebellum period rice plantations were built to the east along the lower St. Marys and Satilla Rivers, no plantations were present close to the Okefenokee Swamp (Kirkland and Cook 2007:19).

The Georgia Legislature sold the swamp to the Suwanee Canal Company, comprised of former Confederate officers and wealthy investors, in 1891. That year, the canal company began digging over twenty miles of ditches and canal to drain the swamp to the St. Marys River through Trail Ridge to create arable lands for rice, sugar cane, and cotton farming. A sawmill was built to harvest logs using steamboats and steam-powered equipment. By the early twentieth century, however, the abundant railroads allowed for the construction of sawmills, turpentine stills, and extensive logging bringing an influx of people to fill these industry jobs (Trowell 1998b; Kirkland and Cook 2007:19-20).

Over the twentieth century, the swamp property went through a few different hands. By 1901, the property owned by the former Suwannee Canal Company was in the possession of Charles Hebard of Philadelphia who owned extensive lumber businesses in Michigan and Pennsylvania. After he died in 1901, his sons took over and formed the Hebard Lumber Company of Thomas County, Georgia in 1904. They leased the Okefenokee Swamp property to a subsidiary, the Hebard Cypress Company of West Virginia, who harvested cypress from the swamp from 1909 to 1927. A large sawmill was built west of Waycross to manufacture lumber and shingles and a settlement known as Hebardville grew up around the mill. A rail line, the Waycross and Southern, was completed from Hebardville to the northwestern edge of the swamp in 1909-1910 and from there, railroads were built throughout the swamp to log cypress trees from the northern and western areas. A number of smaller logging companies had joined the effort with logging camps established on Billy's Island, at The Pocket, and on Jones Island by 1918. Logging continued until the depletion of old growth cypress by the mid-1920s by which time the larger companies were shutting down with the last logging operations completed in 1942 (Trowell 1998b; Kirkland and Cook 2007:20).

The Hebard family had built a small cabin on Floyds Island within the Okefenokee Swamp in 1925, which was used as a private hunting and fishing resort until the mid-1930s. It remains in good condition as a camping and research facility listed on the National Register of Historic Places. Calls for preservation of the Okefenokee Swamp began as early as 1902 by geographer Roland M. Harper and supported by scientists from Cornell University who began studying the swamp after 1912. Although the Okefenokee Society was organized by 1919 to further the cause of swamp preservation, the organization died two years later. In 1929, the Georgia Society of Naturalists was organized and worked to lobby the Georgia legislature to convince the federal government to purchase the property. Although several Georgia politicians introduced congressional bills thereafter to preserve the swamp, their attempts failed (Trowell 1998b; Kirkland and Cook 2007:20-21).

In 1936, the federal government finally purchased 292,979 acres owned by Herbard Lumber Company and President Roosevelt issued Executive Order 7593 to create the Okefenokee National Wildlife Refuge (ONWR) in 1937. The ONWR was established largely to provide a breeding ground for wildlife including migratory birds. Between 1938 and 1941, two Civilian Conservation Corps camps were established to develop the refuge's facilities including an all-black unit. Okefenokee Swamp Park opened on Cowhouse Island in 1946 and in 1947, the Okefenokee Recreation, Inc. of Homerville was allowed to build and operate Camp Stephen Foster on Jones Island, which was sold to the state of Georgia in 1954 to become the Stephen C. Foster State Park. The ONWR, managed by U.S. Fish and Wildlife Service since 1937, became part of the National Wilderness System in 1974 with the development of a Wilderness Canoe Trail system throughout the swamp. The Ramsar Convention recognized the swamp as a Wetland of International Importance in 1986 and the ONWR has increased to 371,000 acres since its original purchase (Trowell 1998b; Kirkland and Cook 2007:23-24).

Field Methods

The Phase I survey was guided by procedural standards established by the Georgia Council of Professional Archaeologists in concurrence with the Georgia Historic Preservation Division. Full land coverage requirements were achieved through visual inspections of the entire survey area and systematic subsurface testing. While conducting visual inspections, any exposed surfaces were carefully examined for cultural material.

Subsurface testing was performed within the proposed project area along 30-meter interval transects comprised of shovel tests spaced 30 m apart. Standard shovel tests consisted of 30 centimeter (cm) diameter cylindrical holes excavated to a minimum depth of 80 cm below surface (cmbs) or until water was encountered. Soils from each test were screened through 0.64 cm hardware cloth for the purpose of recovering any cultural material that may exist at that location. When cultural material was encountered, the material was sorted by provenience and placed into bags labeled with the pertinent excavation information before being transported to TerraX's laboratory. Any archaeological sites identified within the project area during transect testing were further examined in order to better define their horizontal and vertical limits. Delineations were conducted by establishing a datum within the area of the initial find(s). From datum, close interval shovel testing at 10 m intervals was conducted in a cruciform pattern in cardinal directions until at least two consecutive negative tests were encountered in each direction. A hand-held Trimble or Garmin GPS unit was used to record site locations and sketch maps of each were drawn by compass and pace and plotted to scale. Digital photographs were taken for any site recorded as well as for the survey area.

Laboratory Methods and Collection Curation

All cultural materials recovered during field projects are delivered to TerraX's laboratory in Tuscaloosa, Alabama, for processing. Here, materials are sorted by provenience, cleaned, and analyzed. Along with the cultural material, all project records, photographs, and maps produced while conducting the investigation are transported for curation at the Archaeological Research Center, Troy University, Troy, Alabama. A copy of the curation agreement can be found in Appendix A.

Archaeological Survey Results

The Phase I investigation included the placement of 2,481 shovel tests along 53 transects (Figure 12). An additional 42 shovel tests were placed while performing site delineations. Of the total 2,523 shovel tests placed during this study, seven recovered cultural materials, 1,939 were culturally sterile, and 577 were not excavated. The primary reason for the large number of unexcavated tests was the presence of expansive

wetlands located within the project area. Other reasons for non-excavated tests include road disturbance, wetland stream outflows, and the presence of large timber piles left behind during past logging events.

The Phase I investigation led to the identification of three archaeological loci, which include a single archaeological site (9CR207) and two isolated finds (TPA-2 and TPA-3) (Figure 13). A Georgia Archaeological Site File form was completed for the single archaeological site discovered and is included in Appendix B. The following paragraphs describe the archaeological site and isolated finds discovered during this survey. For a complete inventory of artifacts recovered from the site and isolated finds, refer to the artifact inventory in Appendix C.

Site 9CR207

Site 9CR207 consists of an historic artifact scatter located in the southeastern portion of the project area, approximately 75 m north of SR 94 and 200 m east of Line Break Road (see Figure 13). The site, measuring 240-x-90 m with a northeast-southwest orientation, lies within a pine flatwoods environment just southwest of a wetland. Vegetation consists of recently planted pine and grass (Figure 17). Silviculture activities represent the main disturbance within the site area as evidenced by pine furrows created through recent plowing.

Site 9CR207 was identified by a large extent of historic cultural material observed upon the surface during transect shovel testing; the site boundary depicted in Figure 14 reflects the extent of this surface scatter. No subsurface cultural material was recovered during transect shovel testing. Two distinct areas were identified where the scatter of cultural materials on the surface were denser than surrounding areas. Twenty-five delineation tests were placed at 10 m intervals on both north-south and east-west axes throughout the extent of these high-density scatters (Figure 14). Of these delineation tests, seven yielded subsurface cultural materials, 17 were culturally sterile, and one was unexcavated due to its location in a ditch along SR 94. No standing architectural remains were observed, although bricks were observed scattered in the southeastern portion of the site. Typical shovel test profiles in the site area revealed three strata (Figure 18). Stratum I typically extended between 0 to 15 cm and consisted of gray (10YR 5/1) sand. Stratum II generally consisted of 15 to 40 cm of dark gray (10YR 4/1) sand; in some tests, this stratum extended up to 60 cmbs. Stratum III consisted of a very dark grayish brown (10YR 3/2) spodic soil; when Stratum III was encountered, tests became inundated with water.

The assemblage recovered from the surface of Site 9CR207 consists entirely of early-to-middle twentieth century cultural materials and represents approximately 10 percent of all materials observed during a visual inspection of the area. Cultural materials include undifferentiated container glass (colorless [n=2], cobalt [n=1] milkglass [n=1]) as well as a variety of embossed glass container and container fragments (colorless [n=3], cobalt [n=1], and green [n=3]) and soda bottles (n=3). Also included are undecorated (n=2) and decorated (green banded [n=1], green glazed checkered relief molded [n=1], green glazed relief molded [n=1], green transfer printed [n=2]) whiteware fragments. Figures 15 and 16 depict a selection of cultural material recovered from the surface of Site 9CR207. Delineation shovel testing yielded container glass (colorless [n=12] and milk [n=1]) and a single undifferentiated brick fragment; most cultural material encountered within tests ranged from between 0 to 25 cmbs, although the isolated brick fragment and a single piece of colorless container glass were found at a depth up to 30 cmbs. A detailed list of cultural materials collected from Site 9CR207 can be found in Appendix C.

A review of historic topographic maps and aerial imagery shows structures present in the general site area throughout the twentieth century. The earliest evidence of structures in the general site vicinity can

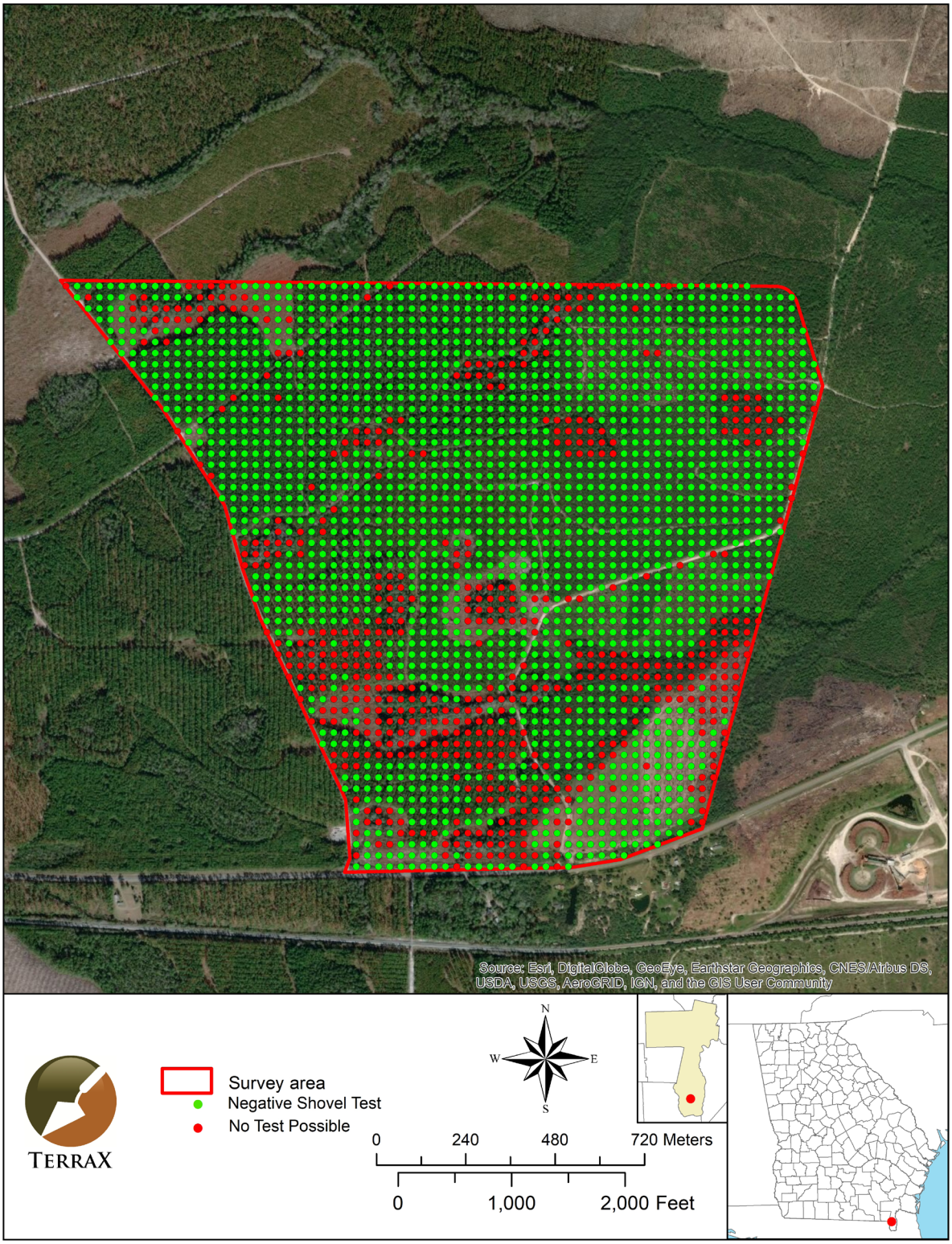

Figure 12. *Aerial map showing the locations and results for transect shovel tests placed within the survey area.*

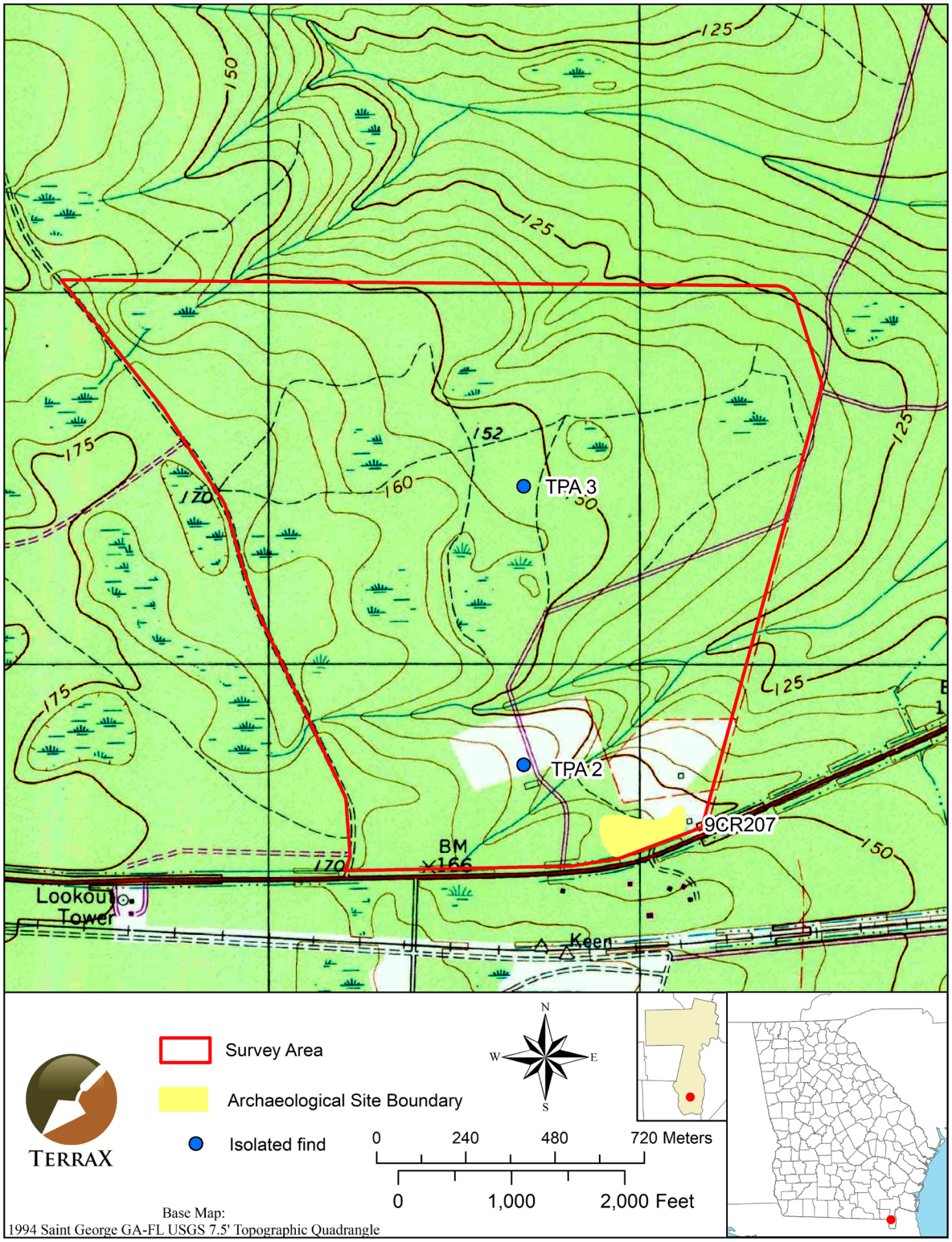

Figure 13. *Topographic map showing the locations of Site 9CR207 and Isolated Finds TPA-2 and TPA-3.*

Figure 14. *Site 9CR207 detail map.*

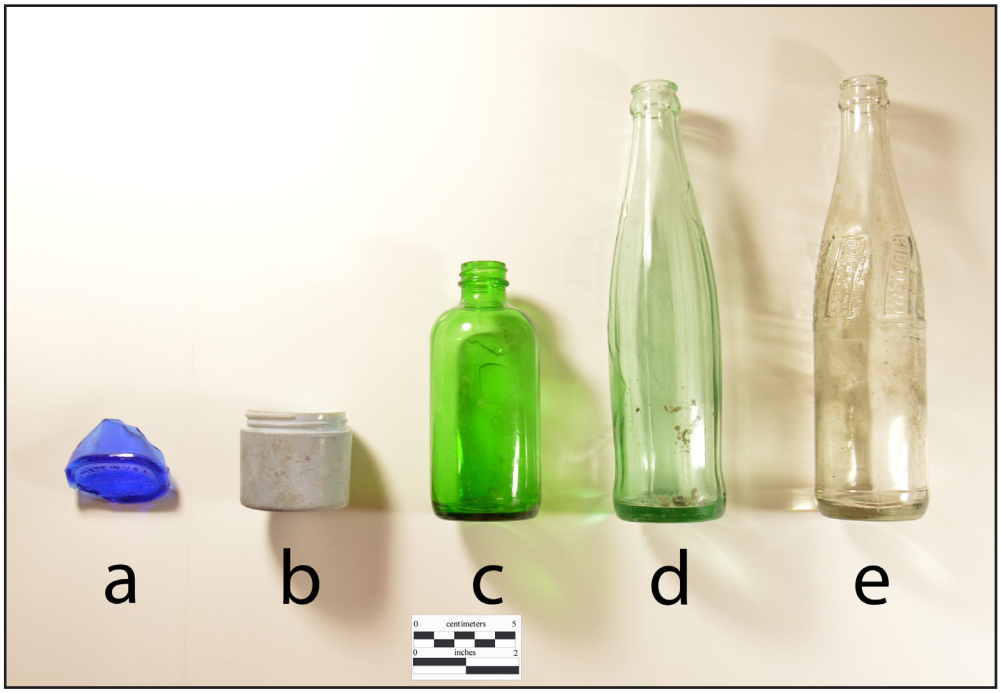

Figure 15. *Historic glass artifacts from Site 9CR207: a; cobalt blue embossed base b; milk embossed jar with machine-made large mouth external thread finish c; green embossed bottle with machine-made small mouth external thread finish d; coke bottle green R C Cola bottle with machine-made crown finish e; colorless embossed Pepsi bottle with white and red faded color applied label*

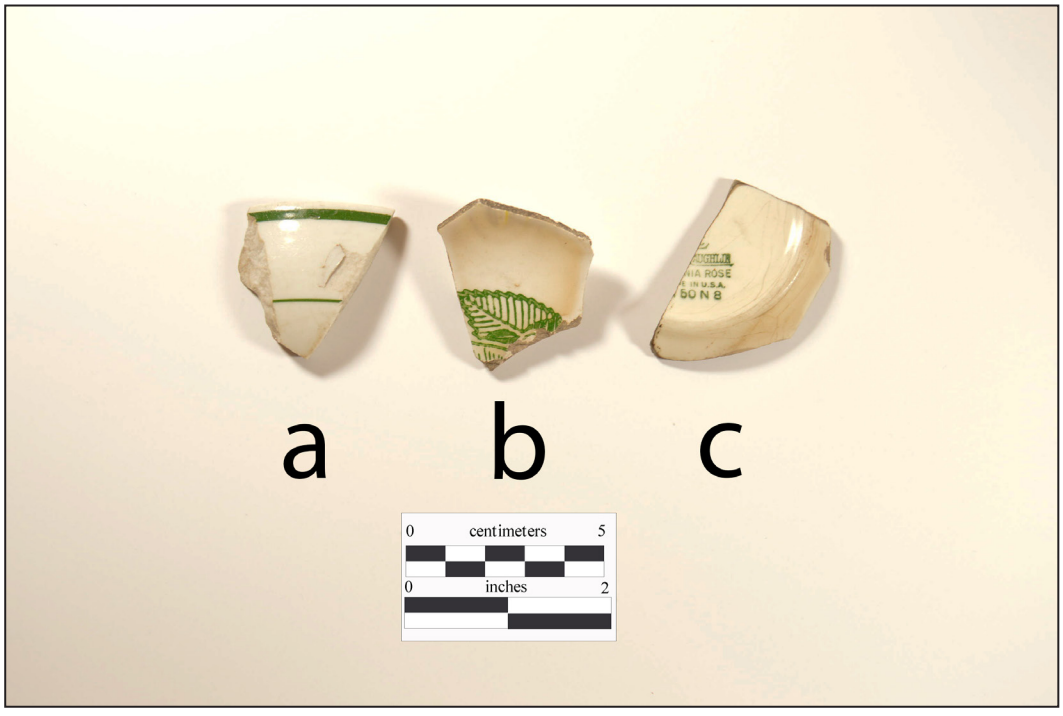

Figure 16. *Historic ceramic artifacts from Site 9CR207: a; green banded dinnerware b; green glazed relief molded whiteware rim c; undecorated partial green transfer printed Homer Laughlin maker's-mark [1973] "AUGHLIN.. NIA ROSE.. NE IN U.S.A. 60 N8" whiteware base.*

Figure 17. *View of Site 9CR207 looking west.*

Figure 18. *Typical shovel test profile at 9CR207.*

be found on the 1918 and 1942 Moniac, GA-FL USGS 15' topographic quadrangles (see Figures 8 and 9). These maps depict structures along both sides of a road roughly corresponding to the present alignment of SR 94; while these do not fall within the georeferenced project area, this may be due to inaccuracies on the early maps or perhaps attributable to the map scale. Aerial photographs taken between 1952 and 1963 show at least 11 distinct structures in the site area along the north side of SR 94. By 1970, these structures appear to have been razed and the area was used for silviculture purposes. The 1966 Saint George GA-FL USGS 7.5' topographic quadrangle clearly depicts four structures in the site area along the north side of SR 94 (see Figure 10). Despite the razing of these structures by 1970, these buildings continue to be depicted on the ensuing versions of the map (see Figure 11).

Site 9CR207 represents the remains of early-to-middle twentieth century domestic structures situated alongside SR 94. After their apparent razing some time in the 1960s, the area has been subject to repeated plowing, planting, and harvesting related to pine cultivation. These silvicultural practices destroyed architectural remains and in-situ archaeological contexts, in turn diminishing the integrity of the site. Furthermore, it does not appear that the site holds significant research potential outside of the scope of this survey. As such, TerraX recommends Site 9CR207 ineligible for NRHP inclusion under Criterion D.

Isolated Find TPA-2

Isolated Find TPA-2 was located during transect shovel testing and consisted of a singular architectural structure remnant of several bricks encased in mortar (Figure 20) found on the surface adjacent to a transect shovel test that yielded no cultural material. Vegetation in the area consists of grasses growing within a clear cut, with high surface visibility throughout. The isolated find is situated at the intersection of Line Break Road and an unnamed dirt road. Eight delineation tests were placed in a cruciform pattern around the brick fragments; seven of these tests yielded no cultural material while one was not excavated due to a large pile of pine log debris (Figure 19). A visual inspection of the surrounding area revealed no cultural material on the ground surface. Typical shovel test soils consisted of a dark gray (10YR 3/1) sand (Stratum I), ranging between 45 to 60 cmbs, atop a spodic layer of very dark grayish brown (10YR 3/2) sand (Stratum II). Tests became inundated when Stratum II was reached.

A review of historic topographic quadrangles reflects a structure just south of the location of TPA-2 on the 1966 Saint George GA-FL USGS 7.5' topographic quadrangle; this structure is also visible on the 1994 Saint George GA-FL USGS 7.5' topographic quadrangle. A review of historic aerial imagery shows a large indeterminate rectangular structure as early as 1952 and as late as 1970 located near TPA-2. By 1993, the surrounding area is obscured by tree growth and no evidence of the structure is apparent. Due to a lack of additional cultural material and the high degree of past disturbances associated with silviculture activities, TPA-2 is considered ineligible for NRHP inclusion.

Isolated Find TPA-3

Isolated Find TPA-3 consists of a single soda bottle found along the surface of an unnamed road, adjacent to a transect shovel test. The bottle was identified as a colorless embossed Pepsi bottle, with manufacture dates ranging from 1927 to 1987. Detailed information about this artifact can be found in Appendix C. A review of historic aerial imagery and topographic quadrangles revealed no structures present in the area around TPA-3.

Figure 19. *Isolated Find TPA-2 detail map.*

Figure 20. *Architectural remains at TPA-2.*

Vegetation in the area consists of medium growth planted pine and dense palmetto brush, with limited surface visibility outside of the dirt road track (Figure 22). Eight delineation tests were placed in a cruciform pattern around the nearest transect shovel test; none of these tests yielded cultural material (Figure 21). A visual inspection of the surrounding area revealed no cultural material on the ground surface. Shovel test soils consisted of three strata; a gray (10YR 6/1) sand (Stratum I) between 0 and 15 cmbs, a light gray (10YR 7/2) sand that typically extended between 40 and 50 cmbs, and a subsoil of very dark grayish brown (10YR 3/2) spodic soil. Site TPA-3 does not appear to offer any data potential outside of the scope of this survey. TerraX does not find Isolated Find TPA-3 eligible for NRHP inclusion.

Figure 21. *Isolated Find TPA-3 detail map.*

Figure 22. *View west from TPA-3.*

ARCHITECTURAL SURVEY RESULTS

A review of GNAHRGIS did not reveal any previously identified historic resources in the vicinity of the project area. A review of historic aerial imagery spanning from the 1950s to the present was performed to ascertain the history of structures in the project vicinity. The Charlton County tax records were also consulted to ascertain build dates. A total of four structures over 50 years old were identified during the course of this investigation, most of which are located near the southeastern portion of the project area across from SR 94. The structures consist of a house (8208 SR 94), a trailer (8296 SR 94), a radio tower, and the Georgia Southern and Florida Railway (GS&F). Of these four structures, only the GS&F is considered significant. The locations of these structures are shown in Figure 23. Information on each of the residential properties in the visual APE is included to demonstrate how the properties evolved and changed over time.

8024 SR 94

The tax records stated that the property was sold as vacant land in 2002, and the aerials support this. The Google Earth aerial from November 2005 showed a trailer on the property and the tax records showed it was constructed in 2002.

8208 SR 94

The house located on this property appeared on the earliest available aerial from 1952 but not on the 1942 or 1944 topo. The tax records gave a date of 1950 which seems correct. According to the tax records, a

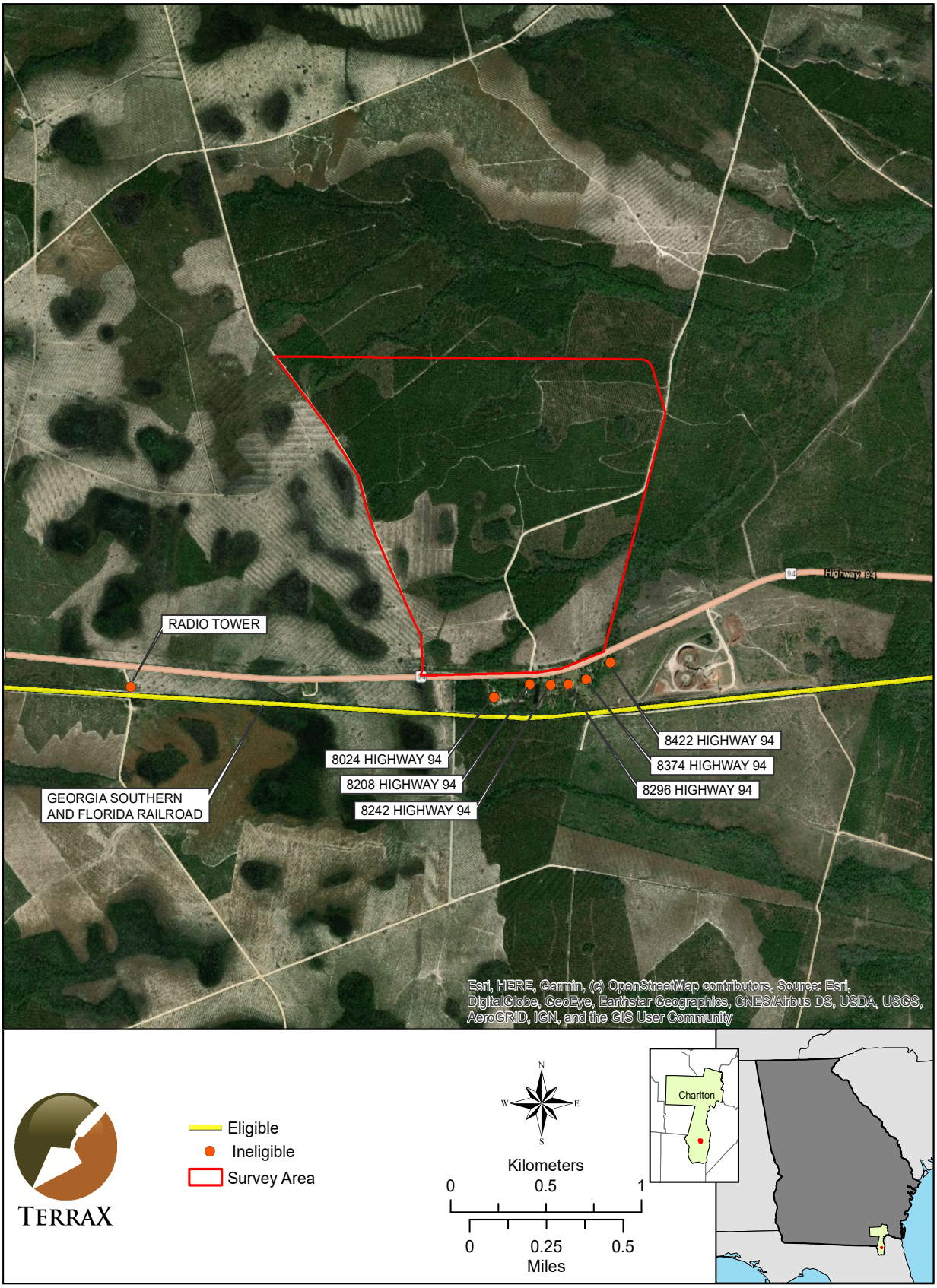

Figure 23. *Aerial map showing the location of structures in the project vicinity.*

Figure 24. *View of the house located at 8208 SR 94, facing south.*

permit was given in 2009 to demolish a trailer. The December 2007 Google Earth aerial showed a trailer located behind the house, and the September 2009 Google Earth aerial showed a different trailer in the location of the previous one.

The house is unoccupied and overgrown. It is an L-shaped half courtyard Rustic Ranch with what appears to be vertical wood siding (Figure 24). The roof is side gable with a standing seam metal roof. The windows on the L are 6/6 wood with vertical wood shutters. There is a recessed porch, but it is overgrown and not clearly visible. The research did not reveal any associations with historic events or a person, and so the house is not eligible under Criteria A or B. Under Criterion C, although the house appears to maintain most of its integrity the abandoned and overgrown nature of the house does not allow it to convey as a mid-twentieth century Rustic Ranch. Further, the house does not exhibit exceptional artistic or architectural features, and so the house is not eligible under Criterion C. For these reasons, the house is not eligible for the NRHP and the proposed project will have no effect on the structure.

8242 SR 94

Based on the historic aerials and tax records, the buildings, structures, and trailers currently on this property were in place sometime between 1993 and 2007. The two trailers on the property are from 1982 and 1984, respectively, and the structures were all built in 2003 and later.

8296 SR 94

The 1970 aerial shows a house that is oriented perpendicular to the road, and based on the 1993 aerial, that house was replaced with the current house, which is oriented parallel to the road. The mobile home located behind the house was in place by 2007. The tax records stated the trailer was built in 1966, and it could be that old. At present, it seems to be used for storage. The windows are covered with ribbed metal and there is

what appears to be a wooden framed awning constructed onto it. However, Google Earth aerials show that there was formerly a structure in front of the trailer until 2014, and it is possible that the wood frame that remains is all that is left of that structure. The research did not reveal any associations with events or persons, and the trailer's integrity is compromised due to the metal over the windows and the wood frame of either an awning or structure. The trailer is not a good example of a mid-to-late twentieth century manufactured home and does not exhibit any kind of detail or styling that sets it apart from other trailers in the area. Therefore, it is the opinion of TerraX that the trailer is not eligible for the NRHP, and the proposed project will have no effect on the structure (Figures 25 and 26).

Figure 25. *View of the non-historic house and trailer located at 8296 SR 94, facing southwest.*

Figure 26. *View of the trailer, facing southwest.*

8374 SR 94

The buildings visible on this property in the 1970 aerial were either gone or replaced by 2007.

8422 SR 94

According to the tax records, the house that was at this address was demolished on August 23, 2007, and a non-historic mobile home placed in its former location. The aerials showed a house in that location on the 2007 aerial, but by 2009 the house was gone and a trailer in its place.

Radio Tower

Based on inspections of historic aerials and topographic maps, the Radio Tower southwest of the survey tract appears to have been constructed sometime between 1963 and 1966, first appearing on the 1966 Saint George topo. A search of the FCC database did not produce any information on the tower, only the cell tower located nearby (which was originally constructed in 1995). A call to the Charlton County Commission and the tax assessor did not produce any additional information on the radio tower. The radio tower is a lattice tower with microwave antennas attached. It is unknown if the tower is still in use, but it appears to be in good condition and the area around it is clear of debris and vegetation (Figure 27).

The research did not reveal any association with events or a person or persons important to history, and therefore the tower is not eligible for NRHP inclusion under Criteria A or B. Under Criterion C, the tower is a common type found throughout Georgia, and is not an architecturally significant structure nor does it

Figure 27. *View of the radio tower, facing southeast.*

represent a major development or example of engineering. Therefore, it is the opinion of TerraX that the radio tower is not eligible for the NRHP, and the proposed project will have no effect on the structure.

Georgia Southern and Florida Railway

The Georgia Southern and Florida Railway (GS&F) was organized as the Georgia Southern and Florida Railroad in 1885. The line was also marketed as the Suwanee River Route. The line ran between Macon and Valdosta and was extended to Palatka, Florida in 1890. By 1891 the railway was bankrupt and was reorganized as the Georgia Southern and Florida Railway in 1895. The railway continued to grow into the twentieth century, extending from Valdosta to Jacksonville, Florida. The Macon and Birmingham Railway and the Hawkinsville and Florida Southern Railway were also owned by the GS&F. By 1950, the GS&F operated 397 miles of railway and included trackage rights. The majority of the securities of the GS&F were controlled by the Southern Railway, which acquired the Norfolk Southern Railway in 1974. In 1982 Southern Railway merged with the Norfolk and Western Railway to create the modern-day Norfolk Southern, which still uses the track today (Figure 28) (Classic Streamliners-Traincyclopedia 2020a, 2020b; Storey et al. 2018:63).

The railroad is eligible for NRHP inclusion under Criterion A, transportation. The property boundary for the railroad in the visual APE is the railroad ROW. No other rail-related features, such as buildings or structures associated with the railroad, are located in the visual APE. The railroad maintains its integrity as there is no indication that the track has been realigned or moved. As proposed, the current project will not have an adverse effect on the railroad.

Figure 28. *View of Georgia Southern and Florida Railway, facing east-northeast.*

Conclusions and Recommendations

TerraX, under contract with TTL, performed the Phase I cultural resources survey of the Twin Pines Minerals Adirondack Property in Charlton County, Georgia, in compliance with federal and state regulations. This survey was conducted by Field Directors Matt Lyons and Wes White and Field Technicians Richard Lahan, Brian Loomis, Stephen Holt, Alexis Russell, Mary Kate Roberts, and John Michael Wolter between the dates of March 11 and April 5, 2019.

The investigation led to the discovery of one archaeological site (9CR207) and two isolated finds (TPA-2 and TPA-3). Examinations of these loci identified early to mid-twentieth century historic archaeological deposits. Based on the results of the field investigation, none of these resources are considered significant, having been heavily impacted by numerous years of repeated pine cultivation activities. Site 9CR207 is considered to lack significant data potential, and its integrity has been compromised. Site 9CR207 is therefore recommended ineligible for NRHP listing. Archaeological loci TPA-1 and TPA-2 are precluded from NHRP listing due to their nature as isolated finds.

The architectural survey identified four structures over 50 years old within the visual APE. These include a house (8208 SR 94), a trailer (8296 SR 94), a radio tower, and the Georgia Southern and Florida Railway (GS&F). Of these four structures, only the GS&F is considered significant. The GS&F is eligible for NRHP inclusion under Criterion A, transportation. The property boundary for the railroad in the visual APE is the railroad ROW. No other rail-related features, such as buildings or structures associated with the railroad, are located in the visual APE. The railroad maintains its integrity as there is no indication that the track has been realigned or moved. As a fluid resource designed to provide transportation for both people and freight, it is expected that the setting and materials of the railroad would change over time. In general, areas that were at one time rural have become suburban with residential and commercial growth, and to maintain the safety and viability of the track the materials have been replaced over time. Because of the changing nature of the setting and materials of the railroad, it is the route that retains integrity and should not be altered. For these reasons, the project as proposed will not cause an adverse visual effect on the GS&F, but TerraX recommends avoidance of the railroad during the duration of the project. Avoidance of the railroad refers to any construction or activity that would disturb, alter, or realign the track. General use of the track for bringing in or carrying out materials or equipment would be permissible.

Based on this study, it is TerraX's opinion that no significant cultural resources will be adversely affected by the proposed mining project. Accordingly, TerraX recommends clearance for this project in regards to cultural resource concerns.

In conclusion, there is always the possibility of undetected cultural resources such as graves or other cultural features not discovered through standard survey methods. In the unlikely event that burials or cultural features are revealed during the course of the proposed mining project, all work should be halted and archaeologists with the U.S. Army Corps of Engineers, Savannah District and the Georgia State Historic Preservation Office should be alerted of the discovery.

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References

Alchian, Linda K.
2012 Spanish Explorers of the Elizabethan Age. Elizabethan Era website. Electronic document, http://www.elizabethan-era.org.uk/spanish-explorers.htm, accessed April 10, 2018.

Anderson, David G.
1990 Paleoindian Colonization of Eastern North America: A View from the Southeastern United States. In *Early Paleoindian Economies of Eastern North America*, edited by Kenneth Tankersley and Barry Isaac, pp. 163–216. JAI Press, Greenwich.

1996 Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *The Paleoindian and Early Archaic Southeast*, edited By David G. Anderson and Kenneth E. Sassaman, pp. 29–57. The University of Alabama Press, Tuscaloosa.

Anderson, David G., Michael Russo, and Kenneth E. Sassaman
2007 Mid-Holocene Cultural Dynamics in Southeastern North America. In *Climate Change and Cultural Dynamics: A Global Perspective on Mid-Holocene Transitions*, edited by David G. Anderson, Kirk A. Maasch, and Daniel H. Sandweiss pp. 457-489.

Caldwell, Joseph R.
1958 *Trend and Tradition in the Prehistory of the Eastern United States*. Memoir 88. American Anthropological Association, Menasha.

1964 Interaction Spheres in Prehistory. In *Hopewellian Studies*, edited by Joseph R. Caldwell and Robert L. Hall, pp. 133-143. Illinois State Museum, Scientific Paper 12(6), Springfield.

Chapman, Jefferson
1985 Archaeology and the Archaic Period in the Southern Ridge-and-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens, Jr. and H. Trawick Ward, pp. 137-153. The University of Alabama Press, Tuscaloosa, Alabama.

Clark, William Z. Jr. and Arnold C. Zisa
1976 Physiographic Map of Georgia. Georgia Department of Natural Resources.

Classic Streamliners-Traincyclopedia
2020a Georgia Southern and Florida Railway. Electronic document, https://www.classicstreamliners.com/rr-gs-f.html. Accessed March 30, 2020.

2020b The Norfolk Southern Railway (1881-1974). Electronic document, https://www.classicstreamliners.com/rr-ns-.html. Accessed March 30, 2020.

Cobb, James C., and John C. Inscoe
2017 Georgia History: Overview, New Georgia Encyclopedia. Electronic document, http://www.georgiaencyclopedia.org/articles/history-archaeology/georgia-history-overview, accessed April 19, 2018.

Cohen, A.D., M.J. Andrejko, William Spackman, and Dorothy Corvinis
1984 Peat Deposits of the Okefenokee Swamp. In, *The Okefenokee Swamp: Its Natural History, Geology, and Geochemistry*, edited by A.D. Cohen, D.J. Casagrande, M.J. Andrejko, and G.R. Best, pp. 493-553. Wetland Surveys, Los Alamos.

Delcourt, Paul A.
1980 Goshen Springs: Late Quaternary Vegetation Record for South Alabama. *Quaternary Research* 19:265-271.

Elliott, Daniel T., and Kenneth E. Sassaman
1995 *Archaic Period Archaeology on the Georgia Coastal Plain and Coastal Zone*. University of Georgia, Laboratory of Archaeology Series Report Number 35. Athens, Georgia.

Elliott, Daniel T., Jeffrey L. Holland, Phil Thomason, Michael Emrick, and Richard W. Stoops, Jr.
1995 *Historic Preservation Plan for the Cultural Resources on U.S. Army Installations at Fort Benning Military Reservation, Chattahoochee and Muscogee Counties, Georgia and Russell County, Alabama*. Garrow and Associates, Inc., Atlanta. Submitted to the National Park Service, Atlanta.

Faught, Michael K.
2008 Archaeological Roots of Human Diversity in the New World: A Compilation of Accurate and Precise Radiocarbon Ages from Earliest Sites. *American Antiquity* 73(4):670–698.

Georgia Council of Professional Archaeologists
2014 Georgia Standards and Guidelines for Archaeological Surveys. Electronic document, http://georgia-archaeology.org/GCPA/standards_for_survey/, accessed March 4, 2019.

Georgia's Natural, Archaeological, and Historic Resources GIS
2019 GNAHRGIS database. Database information compiled by Georgia's Historic Preservation Division in cooperation with the Georgia Archaeological Site File. Available online at https://www.gnahrgis.org/gnahrgis/index.do, accessed March 4, 2019.

Hally, David J., and James L. Rudolph
1986 *Mississippi Period Archaeology of the Georgia Piedmont*. Laboratory of Archaeology Series, Report No. 24. University of Georgia, Athens.

Hodler, Thomas W. and Howard A. Schretter
1986 *The Atlas of Georgia*. University of Georgia Press, Athens, Georgia.

Jackson, Edwin L.
2016 James Oglethorpe (1696–1785), *New Georgia Encyclopedia*. Electronic document, http://www.georgiaencyclopedia.org/articles/government-politics/james-oglethorpe-1696-1785, accessed May 19, 2017.

Kirkland, S. Dwight and Fred C. Cook
2007 *Cultural Resource Assessment of Okefenokee National Wildlife Refuge Following the 2007 Wildfires*. Report prepared by Southeastern Horizons, Inc. Report submitted to the U.S. Fish and Wildlife Service- Southeast Region, Savannah, Georgia.

Ledbetter, R. Jerald, Scott Jones, and Lisa D. O'Steen
2009 *The Late Archaic to Early Woodland Transition in Northwest Georgia: Evidence for Terminal Archaic (ca. 1100-600 B.C.) Period Occupation in the Region*. Georgia Department of Transportation Occasional Papers in Cultural Resource Management 14. Report prepared by Southeastern Archaeological Services, Athens, Georgia.

McQueen, Alex S.
1932 Trader's Hill (Fort Alert). In, *History of Charlton County*. Electronic document, http://www.charltoncountyarchives.org/trader'shill.html, accessed June 24, 2018.

National Park Service
2019 National Register of Historic Places. Department of the Interior, Washington, D.C. Electronic document available online at http://www.nps.gov/nr/research/, accessed March 4, 2019.

Nationwide Environmental Title Research
2019 Historic and Modern Aerial Photography and Topographic Maps. Electronic document, https//historicaerials.com/, accessed May 25, 2019.

Pearce, Kenny and Amy S. Gatenbee
2020 *A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia.* Performed for TTL, Inc. Performed by TerraXplorations, Inc.

Pitblado, Bonnie L.
2011 A Tale of Two Migrations: Reconciling Recent Biological and Archaeological Evidence for the Pleistocene Peopling of the Americas. *Journal of Archaeological Research* 19(4):327–375.

RailGa.com
2019 Atlantic, Valdosta & Western Railway. Electronic document, https://railga.com/atval.html, accessed May 25, 2019.

Sassaman, Kenneth E., and David G. Anderson
2004 Late Holocene Period, 3750 to 650 B.C. In *Handbook of North American Indians*, Volume 14, Southeast. Edited by Raymond D. Fogelson, pp. 101-114. Smithsonian Institution, Washington, D.C.

Seabrook, Charles
2017 *Lower Coastal Plain and Coastal Islands*. New Georgia Encyclopedia. Available online at https://www.georgiaencyclopedia.org/articles/geography-environment/lower-coastal-plain-and-coastal-islands, accessed August 2, 2018.

Schnell, Frank T., and Newell O. Wright, Jr.
1993 *A Cultural Resources Background Survey and Archaeological Reconnaissance at Eufaula National Wildlife Refuge, Georgia and Alabama. 2 Volumes*. Columbus Museum of Arts and Sciences, Columbus, Georgia. Submitted to Heritage Conservation and Recreation Service, Interagency Archaeological Services, Atlanta.

Storey, Steve, David Ray, Matt McDaniel, Regina Schuster, Tish Stultz, Erin Murphy, George Rounds, Chris Mroczka, Patricia Stallings, and Mike Reynolds
2018 Georgia's Railroads, 1833-2015: Historic Context and Statewide Survey. Prepared by CALYX Engineers and Consultants, VHB Brockington & Associates, and the Georgia Department of Transportation.

Trowell, Chris T.
1998a *Indians in the Okefenokee: Their History and Prehistory*. Special Publication No. 2, Okefenokee Wildlife League, Inc., Route 2, Box 3330, Folkston, Georgia 31537.

1998b *Life on the Okefenokee Frontier*. Special Publication No. 2, Okefenokee Wildlife League, Inc., Route 2, Box 3330, Folkston, Georgia 31537.

Walthall, John A.
1980 *Prehistoric Indians of the Southeast, Archaeology of Alabama and the Middle South*. University of Alabama Press, Tuscaloosa, Alabama.

Watts, W. A.
1969 A Pollen Diagram from Mud Lake, Marion County, North-Central Florida. *Geological Society of America Bulletin* 80:631-642.

1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52(4):676-690.

1980 The Late-Quaternary Vegetation History of the Southeastern United States. *Annual Review of Ecology and Systematics* 11:387-409.

1983 Vegetational History of the Eastern United States 25,000 to 10,000 Years Ago. In *Late-Quaternary Environments of the United States. The Late Pleistocene*, vol. 1, edited by H.E. Wright and S.C. Porter, pp. 294-310. University of Minnesota Press.

1992 Camel Lake: A 40,000 Year Record of Vegetational and Forest History from Northwest Florida. *Ecology* 73(3):1056-1066.

Watts, W.A., Eric C. Grimm, and T.C. Hussey
1996 Mid-Holocene Forest History of Florida and the Coastal Plain of Georgia and South Carolina. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 28-38. University Presses of Florida, Gainesville.

Web Soil Survey
2019 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Available online at http://websoilsurvey.nrcs.usda.gov/, accessed March 25, 2019.

Weisman, Russell M., S. Dwight Kirkland, and John E. Worth
1998 *An Archaeological Reconnaissance of Trail Ridge Charlton County, Georgia*. Prepared by Southern Research, Ellerslie, Georgia. Submitted to Golder and Associates, Inc., Atlanta, Georgia.

Willey, Gordon R., and Philip Phillips
1958 *Method and Theory in American Archaeology*. University of Chicago Press, Chicago, Illinois.

Williams, Mark and Gary Shapiro
1990 *Lamar Archaeology: Mississippian Chiefdoms in the Deep South*. University of Alabama Press, Tuscaloosa, Alabama.

Williams, Mark, and Victor Thompson
1999 A Guide to Georgia Indian Pottery Types. *Early Georgia*. Volume 27, Number 1, Society for Georgia Archaeology, Athens, Georgia.

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Appendix A
Curation Letter

TROY UNIVERSITY

Archaeological
Research Center

Date: November 9, 2018

Paul Jackson
TerraXplorations
3523 18th Ave NE
Tuscaloosa, Alabama 35406

Dear Paul,

As per your request, this letter is to confirm our standing agreement with you to provide curation services to Terra Explorations on an as-needed basis. As you know, we are recognized by a variety of Federal agencies as a repository meeting the standards in 36 CFR Part 79 and have formal agreements to provide curation under these guidelines to multiple federal agencies such as the Army National Guard and Natural Resources Conservation Service.

Please be advised that once a year we must be notified of all reports in which we were named as the repository. Project collections must be submitted within one calendar year of completion. Small projects may be complied for periodic submission. The AHC survey policy specifies which materials must be curated (Administrative Code of Alabama, Chapter 460-X-9). Renewal of this agreement is contingent upon compliance.

We appreciate this opportunity to be of assistance and look forward to working with you in the future.

Sincerely,

Jason Mann
Director

Appendix B
Georgia State Site Form

GEORGIA ARCHAEOLOGICAL SITE FORM
1999
Official Site Number: 9CR207

Institutional Site Number: TP-1 **Site Name:**
County: Charlton **Map Name:** Saint George GA-FL USGS
UTM Zone: (NAD27) **UTM East:** 3956700 **UTM North:** 3377200
Owner: **Address:**
Site Length: 240 meters **Width:** 90 meters **Elevation:** + - 170 meters
Orientation: 1.N-S 2.E-W 3.NE-SW 4.NW-SE 5.Round 6.Unknown
Kind of Investigation: 1.Survey 2.Testing 3.Excavation 4.Documentary 5.Hearsay 6.Unknown 7.Amateur
Standing Architecture: 1.Present 2.Absent
Site Nature: 1.Plowzone 2.Subsurface 3.Both 4.Only Surface Known 5.Unknown 6.Underwater
Midden: 1.Present 2.Absent 3.Unknown **Features:** 1.Present 2.Absent 3.Unknown
Percent Disturbance: 1.None 2. Greater than 50 3.Less than 50 4.Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.): Historic home artifact scatter
Topography (Ridge, Terrace, etc.): Pine flat
Current Vegetation (Woods, Pasture, etc.): Clear-cut pine and grasses
Additional Information:

Site 9CR207 represents the remains of early-to-middle twentieth century domestic structures situated alongside SR 94. The site was identified by a large extent of historic material observed on the surface during shovel testing through the area; the site boundary reflects the extent of this surface scatter. Two distinct areas were identified where the surface scatter is concentrated. After their apparent razing of the houses in this area sometime in the 1960s, the area has been subject to repeated plowing, planting, and harvesting related to pine cultivation. These silvicultural practices destroyed architectural remains and in-situ archaeological contexts, in turn diminishing the integrity of the site. Furthermore, it does not appear that the site appears to hold significant research potential.

SKETCH MAP
(Include sites, roads, streams, landmarks)

OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9CR207 **Institutional Site Name:** TP-1

Public Status: 1.National Historic Landmark 2.National Natural Landmark 3.Georgia Register 4.Georgia Historic Trust 5.HABS 6.HAER

National Register Standing: 1.Determined Eligible 2.Recommended Ineligible 3.Recommended Eligible 4.Nominated 5.Listed 6.Unknown 7.Removed

National Register Level of Significance: 1.Local 2.State 3.National

Preservation State(Select up to Two): 1.Undisturbed 2.Cultivated 3.Eroded 4.Submerged 5.Lake Flooded 6.Vandalized 7.Destroyed 8.Redeposited 9.Graded 10.Razed

Preservation Prospects: 1.Safe 2.Endangered by: Logging and mining 3.Unknown

RECORD OF INVESTIGATIONS

Supervisor: Matt Lyons **Affiliation:** TerraXplorations, Inc.

Date: April 2019

Report Title:

A Phase I Cultural Resources Survey of the Twin Pines Minerals Adirondack Property in Charlton County, Georgia.

Artifacts Collected:

Whiteware (decorated and undecorated), porcelain, milkglass, soda bottles, brick, glass (clear, cobalt, olive, brown)

Location of Collections: Archaeological Research Center, Troy University, Troy, Alabama

Location of Field Notes: Archaeological Research Center, Troy University, Troy, Alabama

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods:

Historic Non-Indian

Phases:

Early-to-Middle Twentieth Century

FORM PREPARATION AND REVISION

Date	Name	Institutional Affiliation
04/2019	Matt Lyons	TerraXplorations, Inc.
04/23/2020	Shaun West	TerraXplorations, Inc.

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Appendix C
Artifact Inventory

Artifact Inventory List

Site	Location	Type	Count	Weight (g)	Accession #
9CR207					
	D1/I/10-20 CMBS				***Bag: 1***
		glass (colorless container [faded white color applied label "..KLING"])	1	9.0	2019.05302
		glass (colorless container)	1	5.7	2019.05301
		Location Totals	*2*	*14.7*	
	D9/I/0-10 CMBS				***Bag: 2***
		glass (colorless container)	2	3.1	2019.05303
		glass (milk container)	1	3.4	2019.05304
		Location Totals	*3*	*6.5*	
	D10/I/5 CMBS				***Bag: 3***
		glass (colorless melted container)	1	1.2	2019.05305
		Location Totals	*1*	*1.2*	
	D11/I/5 CMBS				***Bag: 4***
		glass (colorless container)	2	4.0	2019.05306
		glass (colorless embossed base ["6 5 17 M" Hazel-Atlas Glass Co. maker's-mark [1923-ca.1982])	1	15.7	2019.05307
		Location Totals	*3*	*19.7*	
	D17/I/10-30 CMBS				***Bag: 5***
		glass (colorless base [with stippling])	1	7.7	2019.05309
		glass (colorless container)	1	1.2	2019.05308
		glass (colorless melted container)	1	2.5	2019.05310
		glass (colorless melted rectangular base)	1	10.8	2019.05311
		Location Totals	*4*	*22.2*	
	D23/I/15-30 CMBS				***Bag: 6***
		glass (colorless container)	1	4.1	2019.05312
		undifferentiated brick fragment	1	30.5	2019.05313
		Location Totals	*2*	*34.6*	
	D24/I/20-25 CMBS				***Bag: 7***
		glass (colorless container)	1	2.8	2019.05314
		Location Totals	*1*	*2.8*	
	Surface/0 CMBS				***Bag: 8***
		black, green, and pink decal whiteware	1	9.9	2019.05326
		brown glazed exterior and clear glazed interior stoneware	1	14.6	2019.05318
		glass (cobalt blue container)	1	0.7	2019.05332
		glass (cobalt blue embossed base [GENUINE PHILLIPS MADE IN U.S.A. G 22"])	1	28.1	2019.05333
		glass (coke bottle green embossed Coca-Cola bottle with machine-made crown finish [Coca-Cola TRADE MARK REGISTERED"x2 "IN US PATENTS OFFICE" "MIN CONTENT 6 FL OZS" "DOUGLAS GA L"])	1	388.1	2019.05339
		glass (coke bottle green R C Cola bottle with machine-made crown finish [with ribs and faded white color applied label "R C" and crown symbol x2 "10 FL OZ])	1	425.0	2019.05340
		glass (colorless embossed base ["HOOD CHIMICAL CO. PAT PENDING M 7 4561"])	1	113.2	2019.05328
		glass (colorless embossed bottle with machine-made small mouth external thread finish [with ribs "ES PAT PPLDFOP"])	1	61.6	2019.05334
		glass (colorless embossed Pepsi bottle ["PEPSI COLA" "DES PAT 120 277 1096" "16A5A" Chatanooga Glass Co. [1927-1987] and design, white and red faded color applied label "SPARKLING Pepsi 10 FL OZ"])	1	425.0	2019.05341

Site	Location	Type	Count	Weight (g)	Accession #
		glass (colorless embossed RECTANGULAR BASE ["JERGENS LOTION 4"])	1	15.1	2019.05329
		glass (colorless embossed tray and handle fragment [design])	1	120.9	2019.05330
		glass (green embossed bottle with machine-made small mouth external thread finish [" 7 5 2" Duraglas Owens-Illionios Glass Co. [1929- ca 1960])	1	175.9	2019.05338
		glass (green embossed bottle with machine-made small mouth external thread finish [with ribs "997" Owens-Illinios Glass Co. [1929-ca. 1960])	1	185.2	2019.05337
		glass (green embossed small bottle with machine-made small mouth external thread finish [" 3 7 1 OZ" Duraglas Owens-Illinios Glass Co. [1940-1964])	1	58.5	2019.05336
		glass (milk embossed jar with machine-made large mouth external thread finish [gray paint "9 Dorothy Gray MADE IN U.S.A."])	1	162.2	2019.05335
		glass (milk lip [blue painted])	1	8.7	2019.05331
		green banded dinnerware	1	18.8	2019.05316
		green glazed checkered relief molded whiteware rim	1	2.1	2019.05325
		green glazed relief molded whiteware rim	1	13.8	2019.05324
		green transfer printed leaf whiteware base	1	13.8	2019.05323
		green, pink, and yellow decal relief molded porcelain [2=1]	1	7.9	2019.05317
		stainless steel Emerson Super Lighter Japan Automatic	1	27.0	2019.05342
		undecorated burned whiteware rim and base	1	42.9	2019.05320
		undecorated partial green transfer printed Homer Laughlin maker's-mark [1973] "AUGHLIN.. NIA ROSE.. NE IN U.S.A. 60 N8" whiteware base	1	17.5	2019.05321
		undecorated relief molded creamware rim [2=1]	1	14.1	2019.05319
		undecorated whiteware cup rim and handle	1	17.9	2019.05327
		undifferentiated brick fragment	2	435.3	2019.05315
		Location Totals	*28*	*2803.8*	
Site Totals			*44*	*2905.5*	
TPA-3					
	Surface/0 CMBS				***Bag: 9***
		glass (colorless embossed Pepsi bottle ["PEPSI COLA" "DES PAT 120 277 1096" "4" Chatanooga Glass Co. [1927-1987] and design, white and red faded color applied label "Pepsi"])	1	425.0	2019.05343
		Location Totals	*1*	*425.0*	
Site Totals			*1*	*425.0*	
Project Totals			*45*	*3330.5*	

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Appendix D
Curriculum Vitae

www.TerraXplorations.com

Paul D. Jackson

3523 18th Ave NE, Tuscaloosa, Alabama 35406 • (205) 799-5638
pdjackson@terraxplorations.com

Founder and Co Owner
TerraXplorations, Inc.

EDUCATION

Master of Arts in Anthropology (with an emphasis in archaeology), 1996
Thesis "An Examination of Late Woodland Features in the Tombigbee, Black Warrior, and Tennessee River Valleys"
Bachelor of Arts in Anthropology, Geology Minor, 1993

BACKGROUND SYNOPSIS

Paul D. Jackson has over twenty-five years of experience in the field of archaeological and Cultural Resource Management. He has participated in hundreds of cultural resource projects. Mr. Jackson received his M.A. and B.A. in Anthropology from The University of Alabama. Prior to founding TerraX, Mr. Jackson was Vice President and regional manager for Panamerican Consultants, Inc. southeastern region.

Additionally, he has prior experience in directing survey, testing, and excavation projects in all areas of Alabama, Georgia, Indiana, Kentucky, Louisiana, Mississippi, South Carolina, and North Carolina for the NPS, USACE (Jacksonville, Mobile, Savannah and Wilmington Districts), Alabama, Mississippi, and North Carolina Departments of Transportation, and many private industries. In addition to his experience supervising and managing numerous field projects, Mr. Jackson has a special focus on lithic technology and the Late Woodland period in the Southeast.

EXPERIENCE

April 2012 to present
Founder and Co Owner, TerraXplorations, Inc.
Mr. Jackson is responsible for all archaeological projects in Alabama, Georgia, and Mississippi. Duties include being project manager and principal investigator, archaeological work, preparation of final reports, proposal writing and bid documents, and staff assignments.

- Oversaw three-year IDIQ with Fort Benning Military Reservation
- Managed 21 personnel including, 6 archaeologists, 1 architectural historian, 1 historian, 1 editor, 1 geographic information system technician, 3 lab technicians, 2 office staff, and 6 field technicians.
- Conducted and/or managed Phase I, Phase II, and Monitoring of numerous projects in Alabama, Florida, Georgia, Kentucky, Indiana, Louisiana, Mississippi, Tennessee, Texas, and Virginia.

2001 to 2012
Vice President, Panamerican Consultants Inc.

- Responsibilities include oversight of the Alabama, Mississippi, Georgia, Kentucky, South Carolina, and North Carolina operations. Duties include direction of project managers and principal investigators, archaeological work, preparation of final reports, write proposals and

bid documents, staff assignments, and all operations pertaining to archaeological resource management in the states listed above.

- ❖ Oversaw three major contracts for the Alabama Department of Transportation; a 5-year IDIQ with Fort Benning Military Reservation; and 2-year IDIQ with the Florida Forest Service.
- ❖ In the last five years oversaw, managed, and conducted some of the field work over 200 Phase II investigations and 42 historic and prehistoric archaeological mitigations at Fort Benning.
- ❖ Managed 25 personnel including, 8 archaeologists, 1 architectural historian, 1 historian, 1 editor, 1 geographic information system technician, 1 draftsperson, 3 lab technicians, 3 office staff, and 6 field technicians.

PUBLICATION LIST (SELECTED)

West, Shaun E., Kelsey Johnson and Paul D. Jackson
2018 A Phase I Cultural Resources Survey for the Proposed Texola Pipeline Project, Panola and Harrison Counties, Texas. Project conducted for Providence Engineering, Baton Rouge. Project prepared by Terraxploration, Inc., Tuscaloosa.

Jackson, Paul D. and Kelsey Johnson
2018 *A Phase I Cultural Resources Survey for the Town of Sumner Water System Improvements, Tallahatchie County, Mississippi*. Prepared for Gardner Engineering. Prepared by TerraXplorations, Inc., Tuscaloosa

West, Shaun E. and Paul D. Jackson
2018 *Phase I Archaeological Survey of SR 26 at the Ohoopee River, Emanuel and Johnson Counties, Georgia (PI#0013748).* Project conducted for Atkins North America and the Georgia Department of Transportation. Project prepared by TerraXplorations, Tuscaloosa.

Jackson, Paul D., Shaun E. West, Kenny Pearce, and Amy Carruth
2018 *A Phase I Archaeological Survey of SR 171 at Battle Ground Creek, Johnson County, Georgia.* Project conducted for Atkins North America and the Georgia Department of Transportation. Project prepared by TerraXplorations, Tuscaloosa.

West, Shaun E., and Paul D. Jackson
2018 *A Phase I Archaeological Survey of SR 29 at Pughes Creek, Laurens County, Georgia (PI#0013749).* Project conducted for Atkins North America and the Georgia Department of Transportation. Project prepared by TerraXplorations, Tuscaloosa.

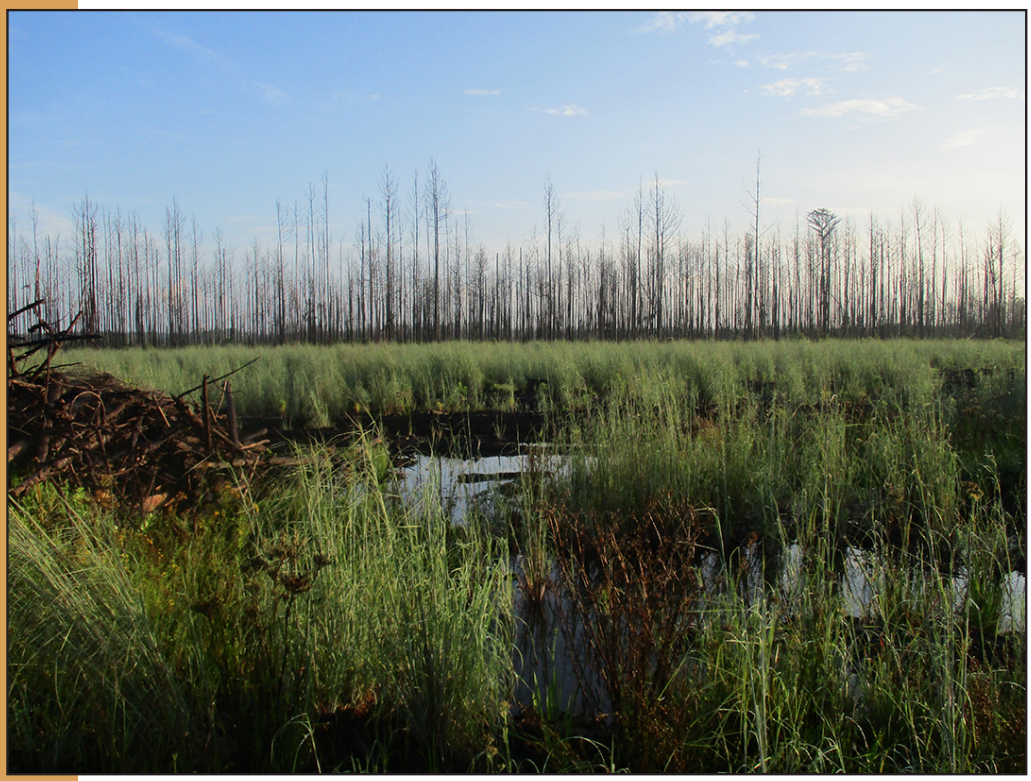
Jackson, Paul D., Lori O'Neal, Amy Carruth, and Shanda Davidson
2017 *Phase II Cultural Resources Testing at the Gold Mine Plantation in Edgard, St. John the Baptist Parish, Louisiana*. Project conduct for Ramboll Environ, New Orleans. Prepared by TerraXplorations, Inc., Tuscaloosa

Jackson, Paul D., Kelsey Johnson and Amy Carruth
2017 *A Phase I Cultural Resources Survey for the Proposed Thornberry Development Project, Madison County, Mississippi*. Project prepared for Headwaters. Prepared by TerraXplorations, Inc., Tuscaloosa

A PHASE I CULTURAL RESOURCES SURVEY OF THE TWIN PINES MINERALS KEYSTONE PROPERTY IN CHARLTON COUNTY, GEORGIA

Prepared by
TerraXplorations, Inc.

Prepared for
TTL, Inc.



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A PHASE I CULTURAL RESOURCES SURVEY OF THE TWIN PINES MINERALS KEYSTONE PROPERTY IN CHARLTON COUNTY, GEORGIA

BY

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Lead Federal Agency
U.S. Army Corps of Engineers, Savannah District

Principal Investigator
Shaun E. West

TerraX Report No. 2018.190

April, 2020

ABSTRACT

Between August 13 and September 10, 2018, TerraXplorations, Inc. (TerraX) of Tuscaloosa, Alabama, performed a Phase I cultural resources survey for proposed mining at the Twin Pines Minerals Keystone Property in Charlton County, Georgia. The Phase I survey was performed by Principal Investigator Shaun E. West, Field Director Matt Lyons, and Field Technicians Shawna Felkel, Stephen Holt, Abigail Peeples, Tyler Reece, Jeff Thompson, and Ashley Weller. Shanda Davidson served as Architectural Historian for this project. The purpose of this study was to determine if any prehistoric or historic properties exist within the limits of the project area, and if so, to document and assess each based on the National Register of Historic Places (NRHP) criteria. The lead federal agency for this project is the U.S. Army Corps of Engineers, Savannah District.

The project area is located along State Road 94 on Trail Ridge approximately 3.75 miles (6 kilometers) west of Saint George and 2.7 miles (4.3 kilometers) southeast of the Okefenokee National Wildlife Refuge. The property encompasses three discrete tracts of land (totaling 1,031.60 acres [417.47 hectares]) identified as Area 1, Area 2, and Area 3 in this report. Archaeological investigations of this property led to the discovery of six sites (9CR201-9CR206) and four isolated finds (K1, K2, K4, and K8), which contained multiple cultural components including possible Middle Archaic, post-Archaic, possible Middle Woodland (Swift Creek), unknown aboriginal, and late nineteenth to mid-twentieth century historic with unknown aboriginal and early to mid-twentieth century historic manifestations being most common. Based on the results of the field investigation, none of these resources are considered significant, having been heavily impacted by numerous years of repeated pine cultivation activities. All six archaeological sites are recommended ineligible for NRHP inclusion under Criterion D based on their lack of integrity.

The architectural survey identified two historic resources within the visual APE. These include the Georgia Southern and Florida Railway and a radio tower. Of these two resources, only the railroad is considered significant. The Georgia Southern and Florida Railway is eligible for NRHP inclusion under Criterion A, transportation. The property boundary for the railroad in the visual APE is the railroad ROW. No other rail-related features, such as buildings or structures associated with the railroad, are located in the visual APE. The railroad maintains its integrity as there is no indication that the track has been realigned or moved. As a fluid resource designed to provide transportation for both people and freight, it is expected that the setting and materials of the railroad would change over time. In general, areas that were at one time rural have become suburban with residential and commercial growth, and to maintain the safety and viability of the track the materials have been replaced over time. Because of the changing nature of the setting and materials of the railroad, it is the route that retains integrity and should not be altered. For these reasons, the project as proposed will not cause an adverse visual effect on the GS&F Railroad, but TerraX recommends avoidance of the railroad during the duration of the project. Avoidance of the railroad refers to any construction or activity that would disturb, alter, or realign the track. General use of the track for bringing in or carrying out materials or equipment would be permissible.

Based on this study, it is TerraX's opinion that no significant cultural resources will be adversely effected by the proposed mining project. Accordingly, TerraX recommends clearance for this project in regards to cultural resource concerns.

In conclusion, there is always the possibility of undetected cultural resources such as graves or other cultural features not discovered through standard survey methods. In the unlikely event that burials or cultural features are revealed during the course of the proposed mining project, all work should be halted and archaeologists with the U.S. Army Corps of Engineers, Savannah District and the Georgia State Historic Preservation Office should be alerted of the discovery.

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A PHASE I CULTURAL RESOURCES SURVEY OF THE TWIN PINES MINERALS KEYSTONE PROPERTY IN CHARLTON COUNTY, GEORGIA

Introduction

TerraXplorations, Inc. (TerraX) of Tuscaloosa, Alabama, was contracted by TTL, Inc. of Tuscaloosa, Alabama, to conduct a cultural resources survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia. Mining of heavy minerals is proposed within the boundaries of the subject property. This process would involve excavation and extraction of the minerals on site. Once completed, spoil sand would then be redeposited into the excavation pits.

The Phase I survey for the Twin Pines Minerals Keystone Property was performed between August 13 and September 10, 2018, by Principal Investigator Shaun E. West, Field Director Matt Lyons, and Field Technicians Shawna Felkel, Stephen Holt, Abigail Peeples, Tyler Reece, Jeff Thompson, and Ashley Weller. Shanda Davidson served as Architectural Historian for this project. The purpose of this study was to determine if any prehistoric or historic properties exist within the limits of the project area, and if so, to document and assess each based on the National Register of Historic Places (NRHP) criteria. The lead federal agency for this project is the U.S. Army Corps of Engineers, Savannah District.

The project area is located along State Road 94 on Trail Ridge approximately 3.75 miles (6 kilometers [km]) west of Saint George and 2.7 miles (4.3 km) southeast of the Okefenokee National Wildlife Refuge. The property encompasses three discrete tracts of land (totaling 1,031.60 acres [417.47 hectares]) identified as Area 1, Area 2, and Area 3 in this report (Figure 1). Area 1 is the largest of the three tracts totaling 951.21 acres (384.94 hectares). It is bounded by Angel Road to the north, Trail Ridge Road to the east, State Road 94 to the south, and T-Model Road to the west. Several small dirt roads and firebreaks traverse the interior of this area. Area 2, totaling 53.42 acres (21.61 hectares), lies immediately south of Area 1 and is bordered by State Road 94 to the north, a small grassy field and lookout tower to the east, the Georgia Southern and Florida Railroad to the south, and planted pine forest to the west. Area 3, the smallest of these tracts, totals 26.43 acres (10.69 hectares) located immediately south of Area 1 and east of Area 2. It is bordered by State Road 94 to the north, a gravel road to the east, the Georgia Southern and Florida Railroad to the south, and a small grassy field and lookout tower to the west. The project area can be found on the 1994 Saint George and 1994 Moniac, GA-FL USGS 7.5' series topographic quadrangles (Figure 2). Photographs depicting the present condition of the land within the project area are provided (Figures 3-8).

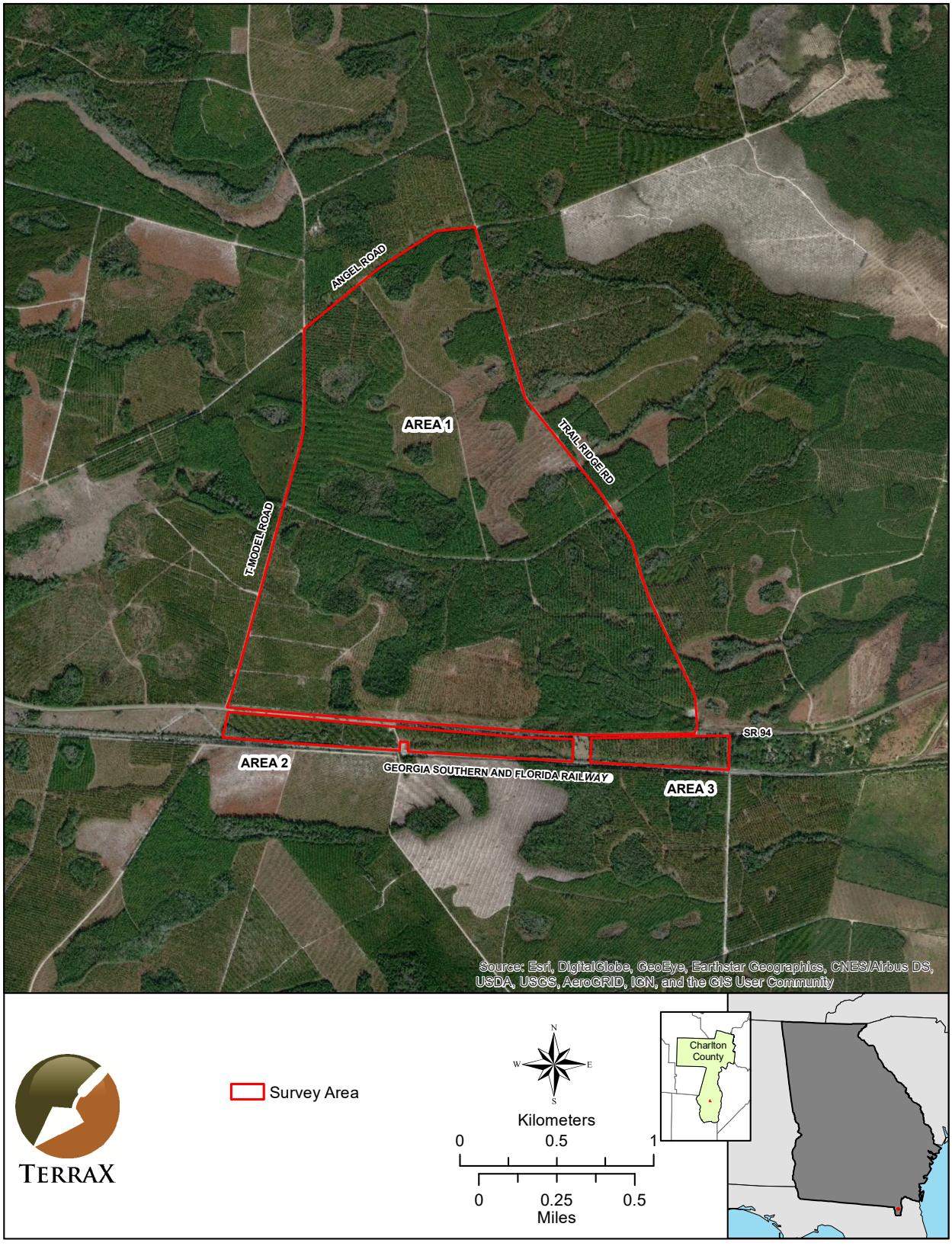


Figure 1. *Aerial map showing the survey area.*

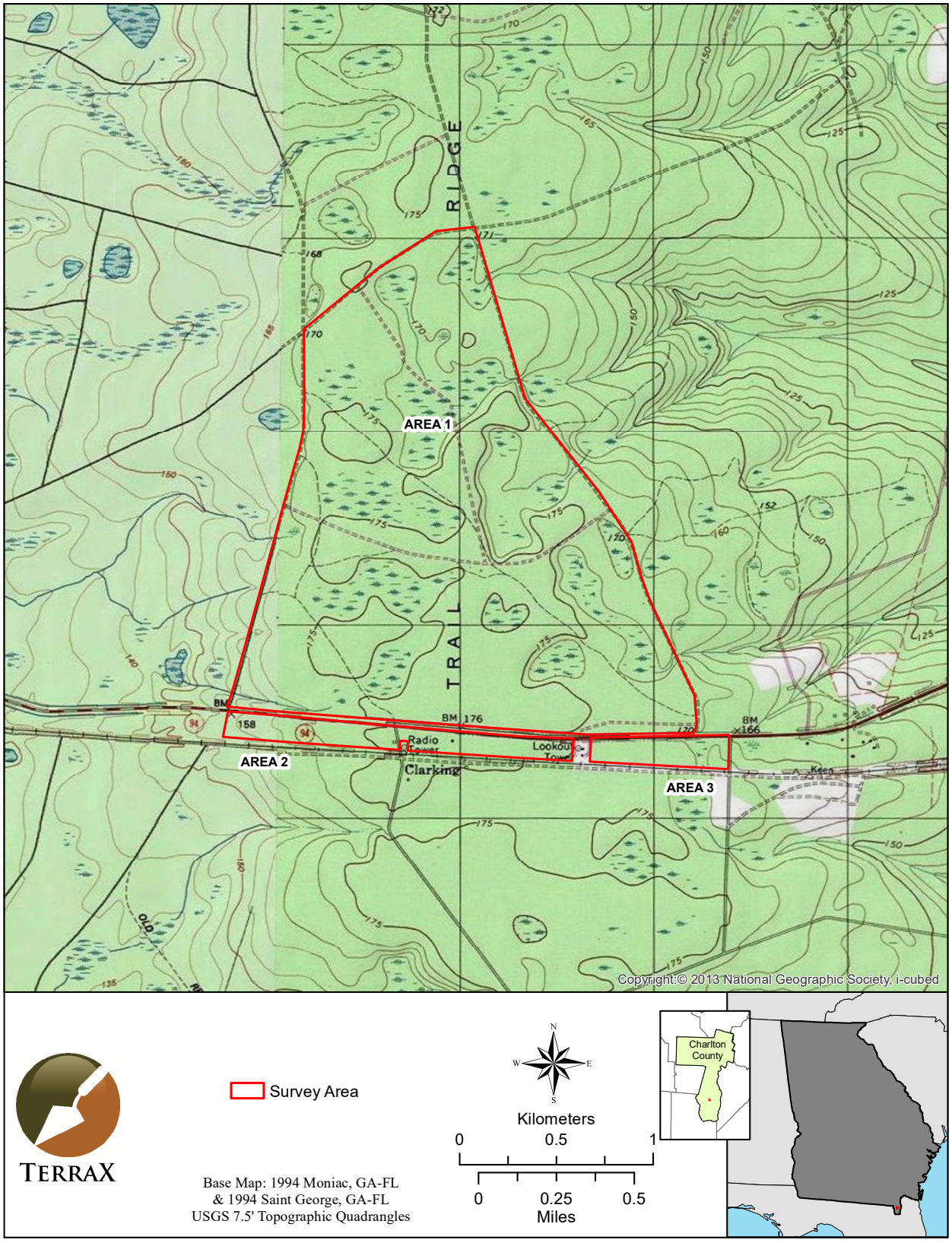


Figure 2. *Topographic map showing the survey area.*

Figure 3. *Example of planted pine forest in project area (southwest portion of Area 1), facing north.*

Figure 4. *Example of wetland in project area (southeast portion of Area 1), facing west.*

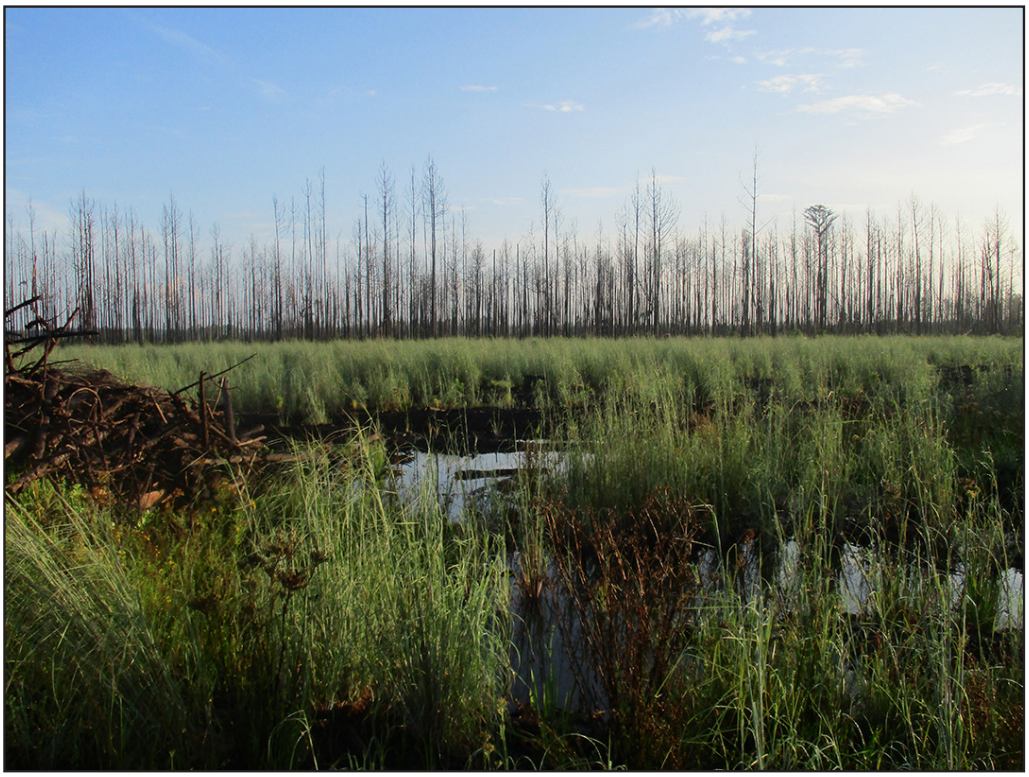


Figure 5. *Example of wetland in project area (west-central portion of Area 1), facing north.*

Figure 6. *Example of area that had recently been logged, plowed, and replanted in pine (central portion of Area 2), facing east.*

Figure 7. *Example of planted pine forest in project area (western portion of Area 2), facing north.*

Figure 8. *View of recently logged, plowed, and replanted area with wetland in background (eastern portion of Area 3), facing west.*

Project Area Environment

The project area is located in the south-central portion of Charlton County in southeast Georgia in the Barrier Island Sequence District of the Coastal Plain Province. The Barrier Island Sequence District was created by the advance and retreat of Pleistocene sea levels forming six discrete shoreline deposit complexes that occur parallel to the present coastline in a step-like progression of decreasing elevations towards the sea. The project is situated within the Wicomico shoreline deposit complex (relief varies between 50 and 75 feet). The Wicomico shoreline includes an abnormally large barrier island referred to as Trail Ridge. This large barrier island obstructed the drainage of an enormous salt marsh, and in doing so, is thought to have helped create what is now known as the Okefenokee Swamp. The western boundary of the Barrier Island Sequence District, which borders the Okefenokee Basin District, lies at the western base of Trail Ridge (Clark and Zisa 1976; Hodler and Schretter 1986; Seabrook 2017).

The project area is situated within a rural setting and is primarily utilized for pine cultivation and hunting. The area consists of a pine flatwoods environment that is characterized by low, flat topography; relatively poorly drained, acidic, sandy soil; and open woodlands dominated by pines with an extensive shrub layer that typically includes palmetto, gallberry, fetterbush, wax myrtle, dwarf live oak, tarflower, and blueberries. Elevations within the project area typically range between 170 and 175 ft. above mean sea level (AMSL), though lower elevations (155-160 ft. AMSL) occur in the southwestern corner of the area. Vegetation in forested portions of the property typically consists of stands of planted pines varying in age and interspersed with undergrowth comprised of palmetto, brush, briars, and patches of grass. Along drainages and wetlands, both cypress and pine are common. At the time of this investigation, large sections of pine forest had recently been logged, plowed, and replanted in pine. Along with pine saplings, new growth in these areas included grass, palmetto, and brush. Notable disturbances observed within the project area were associated with silviculture activities and road construction with repeated episodes of pine cultivation representing the most significant impact.

The flat topography, soils, and seasonal precipitation significantly influence hydrology of the pine flatwoods. During the rainy season, standing water is common and lasts for various periods of time due to poorly drained soils and the low, flat topography. During times of little precipitation, droughty conditions can occur due to evaporation of water from upper soil layers and the inability of water to move upward through impermeable hardpan from lower horizons. The project area contains several small drainages typically associated with large wetland areas, which cover a large percentage of the area. Waters within the project area drain either west into the Okefenokee Swamp or east into Boone Creek or Mims Creek. The Okefenokee is drained by the Suwannee River and the St. Marys River. St. Marys River, which empties into the Atlantic Ocean, drains the portion of the swamp that lies nearest the project. Both Boone Creek and Mims Creek also flow into the St. Marys River.

Soils encountered during the field investigation consisted of deep sands, which were formed in sandy marine deposits. Shovel tests typically exposed three strata with the bottom zone comprised of a spodic horizon that frequently coincided with the water table (Figure 9). A review of the Web Soil Survey (2018) identified five soil types within the project area. For information on these soil types, refer to Table 1.

Figure 9. *View of typical shovel test profile within project area.*

Table 1. Soil Types within the Project Area.

Map Unit Symbol	Map Unit Name/Description	Acres in Project Area	Percent of Project Area
LeA	Leon fine sand, 0 to 2 percent slopes. This soil type is described as poorly drained soil found on flatwoods. It is formed in sandy marine deposits.	503.4	48.8%
LoA	Leon fine sand, frequently ponded, 0 to 2 percent slopes. This soil type is very poorly drained and is found in depressions on flatwoods. It is formed in sandy marine deposits.	10.3	1.0%
LvA	Lynn Haven fine sand, 0 to 2 percent slopes. This poorly drained soil is found on flatwoods. It is formed in sandy marine deposits.	221.1	21.4%
LYA	Lynn Haven, Allanton and Kingsferry soils, ponded, 0 to 1 percent slopes. These are very poorly drained soils found in depressions and drainageways. They are formed in sandy marine deposits.	184.3	17.9%
MaA	Mandarin fine sand, 0 to 2 percent slopes. Mandarin fine sand is reported as somewhat poorly drained soils found on rises and knolls. It is formed in sandy marine deposits.	112.5	10.9%
Totals for Project Area		**1,031.6**	**100%**

Literature and Document Search

A literature and document search was performed prior to the investigation in order to gather pertinent background information regarding the subject property and its surroundings. A 1-mile (1.6 km) radius search was conducted around the proposed project area. Research included inspections of the Georgia Archaeological Site File (GASF), Georgia's Natural, Archaeological, and Historic Resources GIS (GNAHRGIS) database (GNAHRGIS 2020), the National Register of Historic Places (NRHP) (National Park Service 2020), and various historic maps.

Research of the GASF failed to identify any previous cultural resource surveys or previously recorded archaeological sites within a mile of the project area.

Inspections of the GNAHRGIS database (GNAHRGIS 2020) and the NRHP (National Park Service 2020) failed to identify any previously recorded historic properties located within a mile of the project area.

Historic maps were examined for evidence of previous historic structures or other features located within or adjacent to the project area. Maps inspected include the 1918 Moniac, GA-FL USGS 15' topographic quadrangle; the 1942 Moniac, GA-FL USGS 15' topographic quadrangle; the 1966 Saint George, GA-FL USGS 7.5' topographic quadrangle; the 1967 Moniac, GA-FL USGS 7.5' topographic quadrangle; the 1994 Moniac, GA-FL USGS 7.5' topographic quadrangle; and the 1994 Saint George, GA-FL USGS 7.5' topographic quadrangle.

The earliest evidence for a structure in the project area appears on the 1918 topographic map (Figure 10), which depicts a structure along the eastern border of Area 3. This structure, which is also depicted on the 1942 topographic map (Figure 11), appears to no longer be extant by 1966 as it is not shown on the 1966 topographic map. The location of this structure was recorded as an archaeological site (9CR203) during the field investigation. For information on Site 9CR203, refer to the Archaeological Survey Results section of this report. Other features depicted on the 1918 and 1942 maps include the Georgia Southern and Florida Railway bordering Areas 2 and 3 to the south and a few dirt roads that run along the margins of Area 1 with one of these extending into Areas 2 and 3 (see Figures 10 and 11). For further information on the Georgia Southern and Florida Railway, refer to the Architectural Survey Results section of this report. The 1918 and 1942 maps also depict the name Clarking immediately south of the railroad and Areas 2 and 3. Clarking appears to be the name of a small community in this area, though background research failed to find any information relating to it. Clarking is also depicted on later topographic maps from 1966 and 1994.

The 1966 and 1994 Saint George topographic maps (Figures 12 and 13) both depict two structures within the central portion of Area 2, neither of which are extant. The easternmost structure, depicted as a filled in square, appears to represent a dwelling that coincides with the location of Site 9CR204 recorded during this investigation. The westernmost structure, depicted as a hollow square located just northwest of a radio tower, possibly represents an outbuilding. No evidence of this possible outbuilding was found during the investigation; however, a historic site (9CR205) possibly relating to it was recorded some 60 m to the southwest. For further information on Sites 9CR204 and 9CR205, refer to the Archaeological Survey Results section of this report. The 1966 map shows a radio tower just outside of the project boundary for Area 2 and a lookout tower and a building located outside of the project boundary between Area 2 and Area 3 (see Figure 12). The 1994 map also shows the radio tower, the lookout tower, and the building with an additional building depicted just south of the lookout tower (see Figure 13). At present, the radio tower remains; however the two buildings and lookout tower are no longer extant. Falling outside of the survey boundary, the radio tower will not be physically impacted by the proposed project.

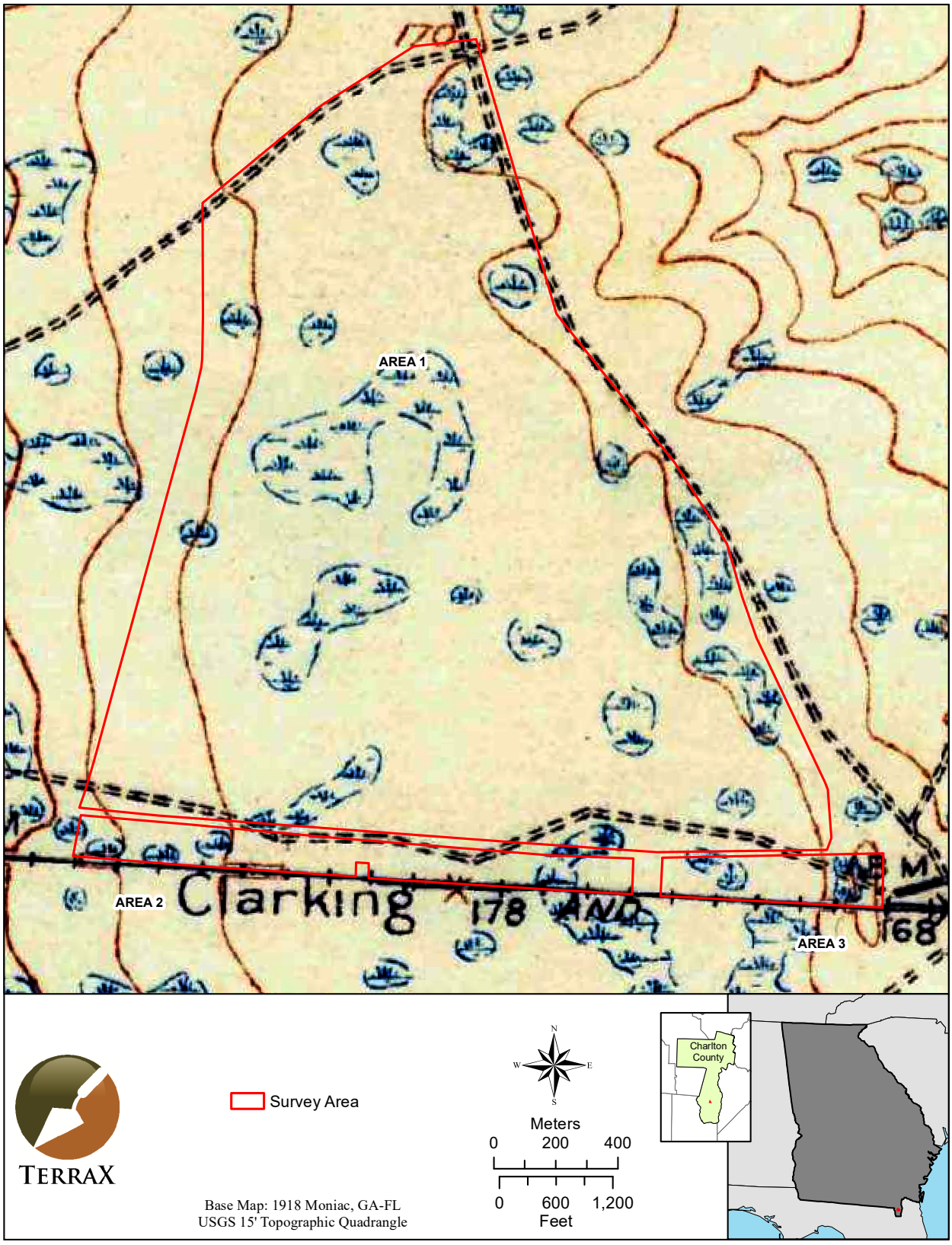


Figure 10. *1918 Moniac topographic map showing a structure near the eastern boundary of Area 3.*

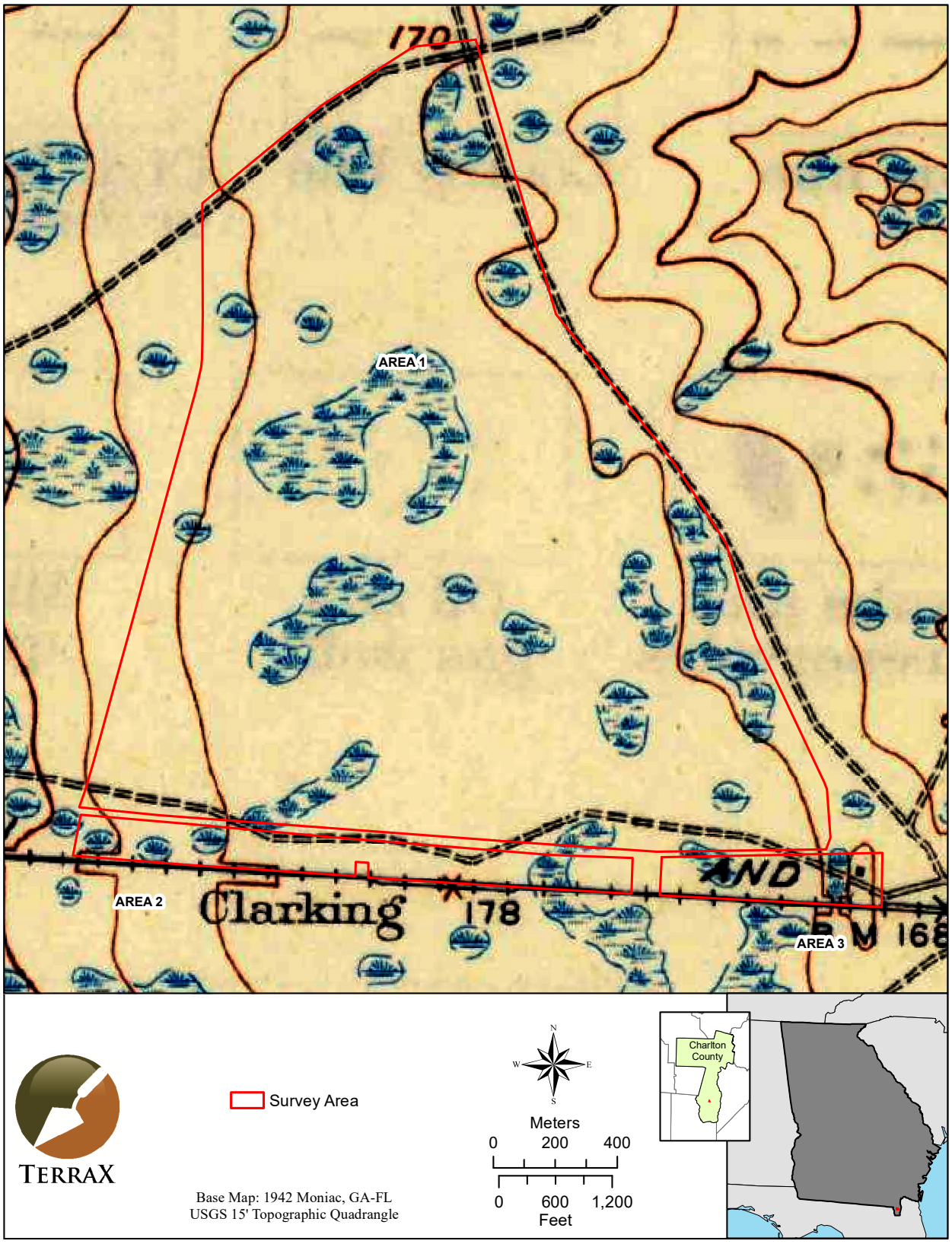


Figure 11. *1942 Moniac topographic map showing a structure near the eastern boundary of Area 3.*

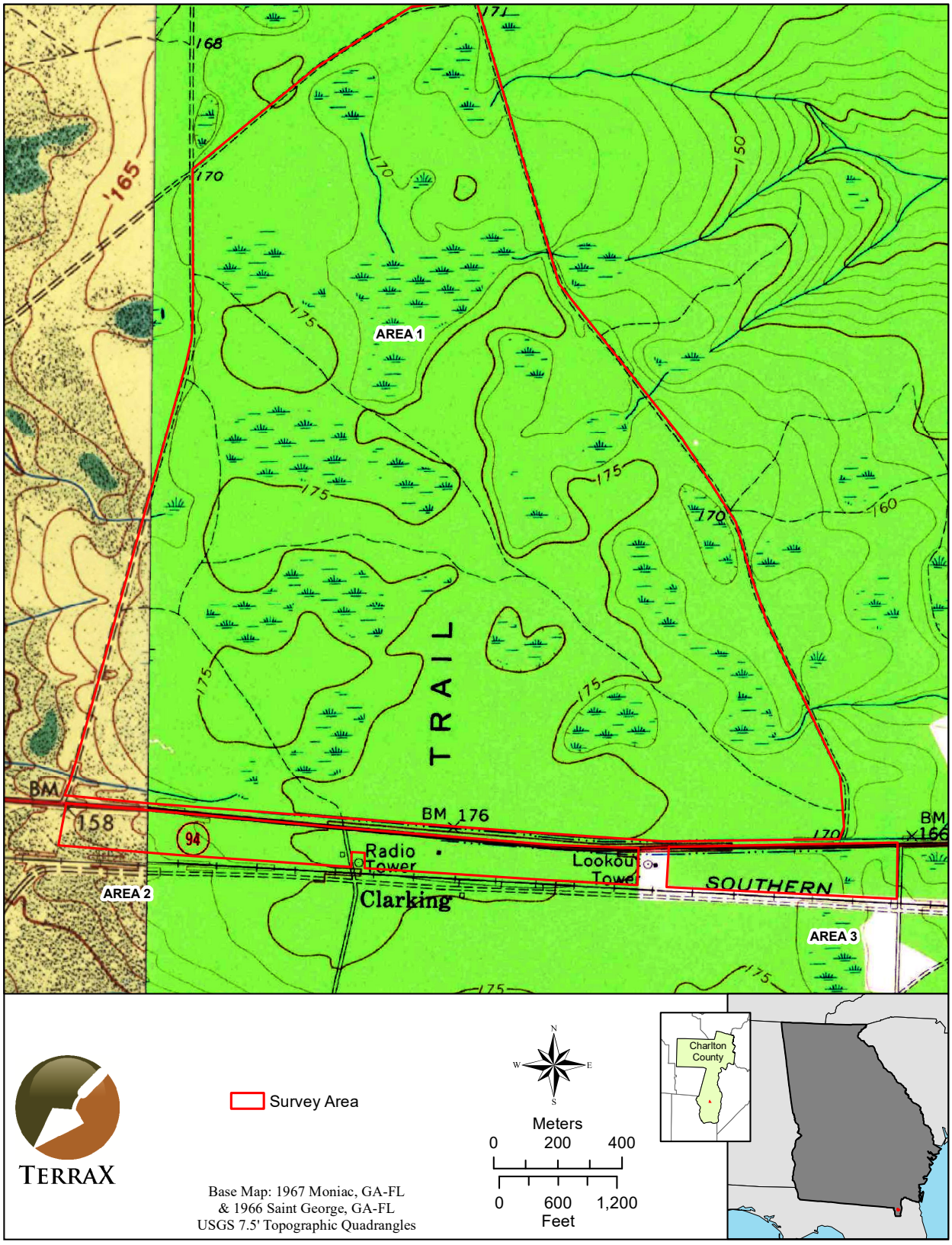


Figure 12. *1966 Saint George topographic map showing two structures in the central portion of Area 2 and three other structures (radio tower, lookout tower, and building) just outside the survey boundary for Area 2.*

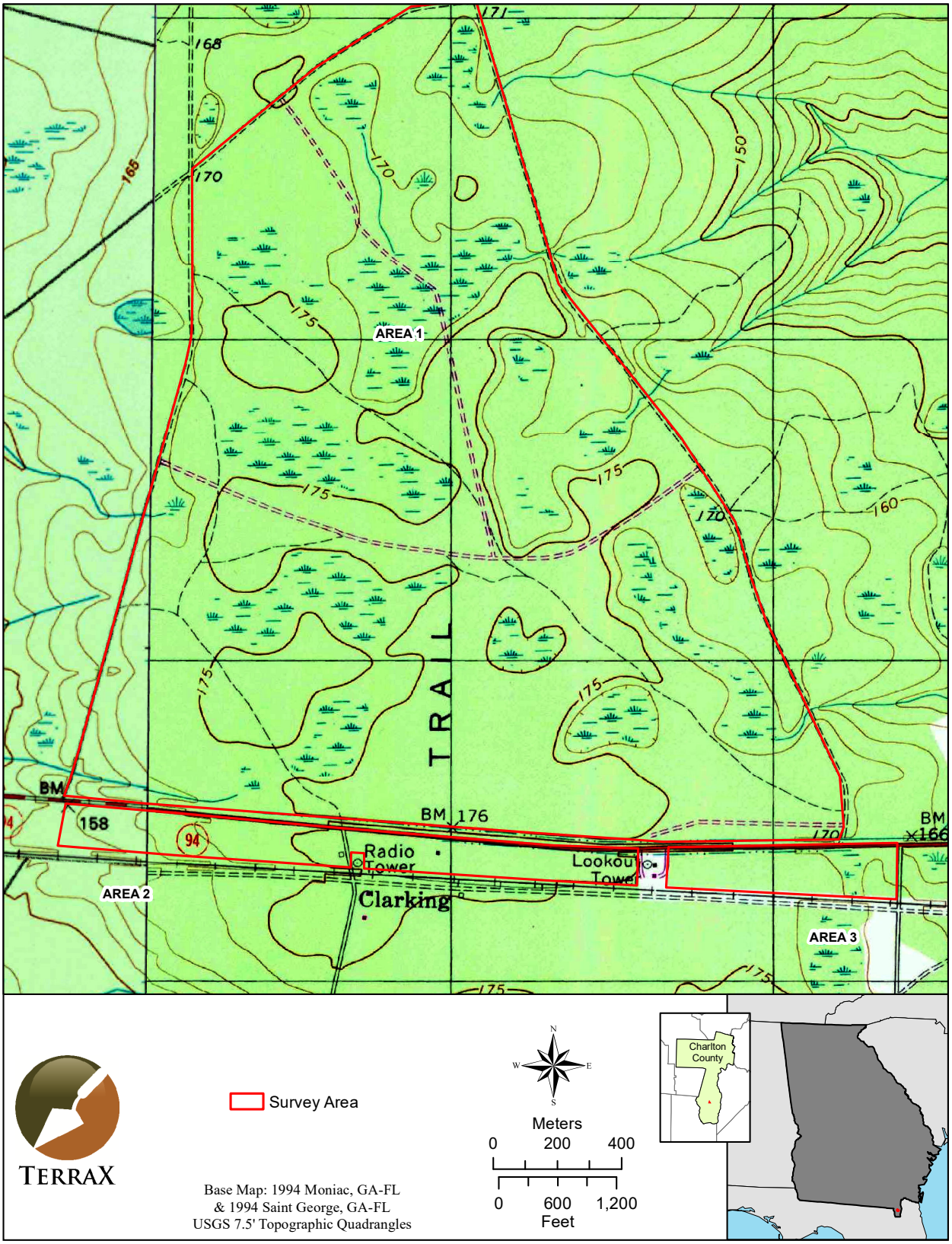


Figure 13. *1994 Saint George topographic map showing two structures in the central portion of Area 2 and four other structures (radio tower, lookout tower, and two buildings) just outside the survey boundary for Area 2.*

Culture History

The following gives an overview of the cultural history of the Okefenokee Swamp area of the interior of the Georgia Coastal Plain, which has a rich history known from abundant evidence of Late Archaic human occupations to recent modern logging, small-town industry, and historic residential development. Although pre-Late Archaic archaeological materials are rare in the area, it is likely that human use of the region extends as far back as the early Paleoindian period. Within this chapter, the focus will be on a review of all defined cultural phases for the area as context for the archaeological components documented in the recent investigation for the Keystone Property. This section draws heavily from a precontact and historical framework previously developed by Trowel (1998a, 1998b) and Kirkland and Cook (2007).

Paleoindian

The Paleoindian period (ca. 12,000–10,000 B.P.) represents the earliest substantial human occupation in the Western Hemisphere. Paleoindian populations are conventionally described as highly adaptive, mobile hunter-gatherers whose ancestors had migrated from Siberia into North America between ca. 12,000 to 10,000 years Before Present (B.P.). This migration likely occurred near the end of the last Ice Age, during the Late Pleistocene Epoch, when glaciers were expanding and retreating from fluctuations in the climate from colder to warmer episodes. Human populations presumably moved when the colder periods of the Pleistocene captured large quantities of the Earth's water in glaciers. This lowered sea levels and exposed large portions of the continent, including a land bridge between Siberia and Alaska, which allowed human populations to follow Pleistocene mammals across to the Americas.

At present, increasing evidence is available for occupations of greater antiquity than has been traditionally recognized for the Paleoindian period. These trends, along with additional deficiencies in the conventional model of colonization, have led archaeologists to advance alternative models for the peopling of the Americas, including a route via watercraft down the Pacific coast. Currently, no consensus has been achieved within the professional archaeological community, and these models are still a topic of healthy debate (see Faught 2008; Pitblado 2011). While sites with components that are thought to predate 12,000 B.P. have been discovered elsewhere in the Southeast (e.g., Page-Ladson, FL, Cactus Hill, VA, and Topper, SC), such deposits are currently unknown in Georgia.

According to Anderson (1996:4), the general environmental situation in which North American Paleoindian groups lived was one of transition, with much of the eastern United States experiencing a period of environmental fluctuation as temperatures became warmer in the summer and colder in the winter. North American vegetation reflected these climatic changes as mature mesic oak-hickory forests replaced the Glacial spruce/pine forests that once flourished in the more stable, colder environment. The Coastal Plain of present day Georgia, Alabama, and Florida, however, supported mature oak-hickory-southern pine forests much earlier in the period. This environmental situation was considerably more stable than latitudes above 33° N, where the replacement of the Full Glacial spruce/pine boreal forest by a Post Glacial mesic-oak forest was still an ongoing process.

A regional paleoclimatic model developed by Watts (1992; Watts et al. 1996) posits that post-12,000 BP northeast Florida and southeast Georgia saw more xeric flora with some prairie development, low lake levels, and many dried lake basins. A few km west of Okefenokee, evidence suggests Lake Louise was dry prior to 8,500 BP and evidence for the presence of Holocene oak forests at Lake Louise between 8,500 to 5,000 BP indicates significantly lower precipitation during this interval (Delcourt 1980; Watts 1969, 1983). Specifically, it is likely that much of the Okefenokee Basin and surrounding uplands were dry

and inhospitable, aside from occasional waterholes, until climate shifted from drier to wetter conditions at approximately 7,000 BP, creating a stand of water in the Okefenokee Basin enhanced by rising sea levels that are identified in peat deposits (Cohen et al. 1984:510). Although nomadic Paleoindian hunters likely utilized portions of the Okefenokee Basin supporting grazing animals prior to swamp formation, archaeological evidence of Paleoindian occupations is likely now deeply submerged under the swamp (Kirkland and Cook 2007).

In Georgia, and in the Southeast generally, the Paleoindian period has been provisionally divided into Early, Middle, and Late or Transitional subperiods based on distinctive changes in material culture and most commonly recognized via projectile point morphology. These changes are considered to roughly correlate with the initial colonization and exploration of the Americas, the development of regional traditions, and a shift to Holocene environmental conditions with a transition to more Archaic period traits (Anderson 1990:165–166).

The Early Paleoindian period (ca. 12,000–11,000 B.P.) in the southeast is recognized by the presence of Clovis and Clovis related projectile points. These bifaces are sometimes quite large, lanceolate blades that feature roughly parallel ground haft margins, slightly concave bases, and channels or flutes created by the removal of a vertical flake from the center of one or both faces of the point (Anderson 1990:165). The size of the points reflects the hunting strategy of the early inhabitants, which focused on hunting large Pleistocene mammals.

During the Middle Paleoindian period (11,000–10,500 B.P.), projectile points include both fluted and unfluted lanceolate/auriculate forms, as well as varieties with broad blades and constricted haft elements. Point types associated with this time period include Cumberland, Suwannee, Simpson, and probable transitional Clovis variants. The loss of the distinctive "flute" on the Middle Paleoindian projectile points may be a morphological adaptation that relates to the extinction of mega-fauna (Anderson 1996).

Late or Transitional Paleoindian period (10,500–10,000 B.P.) projectile point forms include Dalton and Dalton related types. These varieties, which frequently exhibit evidence of extensive resharpening, are typically lanceolate forms with concave bases and grinding on the lateral and basal margins. The blades of these types are often serrated or beveled.

ARCHAIC

The three sub-periods of the Archaic period proper are believed to roughly approximate the transition from highly mobile, camp-based collector lifeways to more sedentary and opportunistic foraging lifeways. This period ranges from ca. 10,000 to 3,000 B.P.

During the Early Archaic period, it is reasonable to assume there was a trend towards a more sedentary lifeway as archaeologists such as Willey and Phillips (1958) and Caldwell (1958) viewed the Archaic stage as a dramatic shift from previous Paleoindian lifeways. However, as Walthall (1980) argues, this might have been true in northern regions where the drastic climatic shift precipitated large-scale population movements and material culture change, but in the non-glacial regions of the Southeast this change would have been much more gradual, which would lead to imperceptible cultural adaptation. Anderson (1996; see also Anderson et al. 2007) discussed evidence that indicated a different trend, which emphasized a continuation of mobile foraging adaptations in the Georgia Coastal Plain region during this time as mixed hardwood forests present throughout the region created favorable settings for hunting and gathering lifeways throughout the Southeast. Anderson et al. (2007) describe Early Archaic groups as organized

in small bands practicing hunting, gathering, and coming together from expansive foraging ranges for periodical communal activities in favorable locations. With this model of Archaic settlement patterns, over time annual ranges grew progressively smaller such that by the end of the Archaic, groups became largely restricted to portions of river systems.

Considering the cultural material typically present from this time, we find a change in biface morphology from the previous period to be the most evident modification, with Early Archaic sites recognized by successive side- and corner-notched and bifurcated-based points from high-quality materials rather than the long, fluted blades from the Paleoindian period (Anderson et al. 2007). The Early Archaic bifaces have well-documented pan-regional sequences that include the Side-Notched Tradition (10,000 to 9,500 B.P.), the Corner-Notched Tradition (9,500 to 9,000 B.P.), and the Bifurcate Tradition (9,000 to 8,000 B.P.). The Side-Notched Tradition is typically recognized by the presence of biface types such as Taylor, Big Sandy, and Bolen. Corner-Notched Tradition includes Kirk Corner-Notched and Palmer Corner-Notched. The Bifurcate Tradition includes MacCorkle, St. Albans, and LeCroy.

The Middle Archaic is denoted by the appearance of an array of stemmed bifaces (Chapman 1985). The earliest hafted biface types are the Kirk Stemmed, Kirk Serrated, and Stanley Stemmed. Morrow Mountain projectile points are one of the most common stemmed points recovered from the lower Coastal Plain region and are typically dated from 7,500 to 5,500 B.P. Later Middle Archaic points include the Guilford-related Brier Creek type (6,000 to 5,000 B.P.). In addition, Sykes, White Springs, and Benton types are usually found associated with this period.

These technological shifts in biface morphology are evidence of a continued shift in hunting strategies because of the Altithermal Optimum, a warm period during roughly the interval from 9,000 to 5,000 B.P. This warming forced a vegetation shift in which pine expanded across the landscape, at the expense of mixed hardwood forests. Some researchers have suggested these pine forests would not have been as productive for human usage and therefore abandoned. Elliott and Sassaman (1995) state that Middle Archaic groups may have consolidated their mobility ranges, preferring to inhabit the Piedmont region rather than the lower Coastal Plain region. Anderson et al. (2007) suggest that replacement of mixed hardwood forests by pine forests and cypress swamps restricted people for some time to remnant stands of hardwood forests within river valleys, and that human populations either stabilized or decreased during this time. Middle Archaic human occupations are known from shell midden and earthen sites with dense occupational debris and numerous burials along major drainages of the Midsouth and lower Midwest. These sites were likely occupied during much of an annual round of hunting and gathering lifeways, serving as locations of social aggregation and likely specialized burial areas (Anderson et al. 2007:459).

Long-distance exchange networks, as evidenced by the presence of coastal shell and Great Lakes copper, emerged by ca. 7500 B.P. Localized exchange networks, likely serving to reduce conflict and subsistence uncertainty among geographically close groups, were also operating by this time based on the distributions of items such as bone pins, bannerstones, and elaborate bifaces (Anderson et al. 2007). The emergence of communal monumental architecture is evidenced by the construction of earthen mound complexes by ca. 6000 B.P. in nearby Florida. Territorial circumscription between groups is identified by appearance of some evidence for conflict in the Midsouth and lower Midwest in the form of burials with embedded bifaces, scalping marks, and parry fractures. Variability in mortuary treatments suggests status differentiation was also emerging during this time but is thought to have been achieved rather than ascribed based on the lack of evidence for heritable ranking (Anderson et al. 2007:459).

In the Southeast, Late Archaic components (ca. 5,000 to 3,000 B.P.) are recognized primarily based on the presence of certain projectile point forms and other trends initiated during the Middle Archaic, which

continued to grow in scale throughout the Late Archaic. Diagnostic projectile point types include Savannah River Stemmed, Paris Island, Benton, Pickwick, and Ledbetter (Elliott and Sassaman 1995). Fiber-tempered pottery in much of the Southeastern United States is generally considered under the rubric of Stallings Island, Orange, Wheeler, and Norwood Series, and it is thought to mark the transition between the Late Archaic and Early Woodland periods (i.e., Terminal Archaic). In the Okefenokee Basin, earliest human occupations documented thus far, such as at the Martha Dowling North site (9CR34), are associated with Late Archaic occupations with fiber-tempered pottery found within live oak hammocks around the edge of the swamp and on interior islands. The majority of this pottery is St. Simons, a thick, plain variety common along the Georgia coast (Kirkland and Cook 2007:16).

By the end of the Late Archaic (ca. 4450-3200 B.P.) wild plant foods were collected in such frequency that morphological changes characteristic of domestication appear in several local species such as goosefoot, sumpweed, sunflower, and gourds (Smith 1992; Anderson et al. 2007). Archaeological evidence indicates that people grew small amounts of squash, sunflowers, and other seed-bearing plants in simple gardens to supplement their hunting and gathering diets (Sassaman and Anderson 2004:105).

Woodland

Southeastern archaeologists in the U.S. generally distinguish the beginning of the Woodland period (ca. 3,200 to 1,050 B.P.) by the introduction and regular use of stamped pottery and increased investment in ceremonial ritual events and mortuary practices. During the Woodland period, the intensification of horticulture, construction of earthworks, and elaboration of artistic expression and burial ritual are all thought to be related to a reorganization of social structure. The advent of horticulture would have meant that, at least for part of the year, groups would have had to remain sedentary in order to plant, tend, and harvest crops. The Woodland period is further subdivided into three subperiods: Early, Middle, and Late.

Although many technologies used during the Woodland period were actually developed during the earlier Archaic periods, it was during the Woodland stage that changes in social organization and economy from small dispersed bands of hunter-gatherers to large, semi-permanent settlements began to take place. A much heavier reliance on horticulture followed and these changes are evidenced in the archaeological record.

The first use of sand-tempered pottery appears in the Early Woodland period (Ledbetter et al. 2009). The Early Woodland Deptford ceramics were developed in Georgia around 2,800 B.P. out of the Early Woodland Refuge phase and spread north into the Carolinas and south into Florida. Early Woodland ceramic types common within the Okefenokee Basin include Satilla Plain and Satilla Simple Stamped, which are found primarily in the Satilla River drainage and headwaters of the Alapaha River, along the lower Satilla River and south to the St. Marys River estuary. Check-stamped Satilla phase pottery (Willacoochee Check-Stamped), however, is not currently known from sites in the Okefenokee Basin as this type may be restricted to the north and west of the interior Coastal Plain (Kirkland and Cook 2007:16).

The Middle Woodland period is marked by the popularity of check-stamped ceramics, represented in the Deptford and Cartersville series, and complicated-stamped ceramics with complex, curvilinear patterns known as Swift Creek. Deptford series pottery, dominated by simple stamped with some check-stamped, is found throughout the Okefenokee Basin but in low quantities and associated with sparse chert flakes. This suggests Deptford peoples had limited seasonal use of the area. More permanent occupations are known from large shell middens and a house at Cumberland Island on the lower Georgia Coast (Kirkland and Cook 2007:16). This period also features elaborate burial ceremonialism and artistic expression that is thought to be related to the "Hopewellian Interaction Sphere" (Caldwell 1964), which developed throughout the

Southeast and Midwest at this time. Materials associated with this interaction sphere include cut mica, worked galena, copper-covered panpipes, copper ear spools, copper beads, Flint Ridge chalcedony blades, and fine gray-blue flint blades. Swift Creek sites are also limited in the Okefenokee Basin, except for one locale on Trail Ridge with significant quantities of Swift Creek pottery (Trowell 1998a). The low numbers of Swift Creek deposits encountered within the Basin is intriguing given that Swift Creek occupations are prevalent in surrounding areas, including along the Georgia coast, as late as A.D. 850 (Kirkland and Cook 2007:17).

The Middle and Late Woodland periods saw an increase in human occupations attributed to the Weeden Island culture in the Okefenokee Basin based on the presence of larger sites with conical sand mounds from ca. A.D. 500. Elliott et al. (1995) described the analytical types associated with Weeden Island assemblages as sand-tempered Carabelle Incised, Carabelle Punctated, Weeden Island Plain, and Weeden Island Red Painted. In many areas in Georgia, Swift Creek ceramics are also found in association with Weeden Island wares. Late Weeden Island ceramic types including Weeden Island Incised, Punctated, and Plain; Carabelle Incised and Punctated; Keith Incised; Tucker Ridge-Pinched; and Wakulla Check-Stamped are found throughout the basin. Villages attributed to the Weeden Island culture appear to have been preferentially placed within oak hammocks and islands within the swamp with a concentration of Weeden Island sites located southwest of the swamp. In the latter half of the Woodland period, the bow and arrow entered into common use. The change in technology allowed greater capability to kill smaller game, but also led to greater conflicts in society as is evidenced by fortifications and mass burials. By A.D. 1000, cord-marked pottery of undetermined cultural affiliation appears in the basin and is commonly located along the eastern rim and within areas of Floyds Island, Billys Island, Jones Island, Hickory Hammock, and Mixons Hammock (Trowell 1998a; Kirkland and Cook 2007:17).

Mississippian

The Mississippian period (1,050 to 410 B.P.) represents the last major period of unadulterated Native American cultural development in the Southeast. It can also be said that this period was witness to the zenith of eastern Woodland culture in terms of organization and complexity. Indeed, this was a time when almost simultaneous expansion occurred over many parts of the Southeast. This resulted in the development of large, hierarchical societies centered at impressive mound complexes such as Cahokia in present-day Illinois, Spiro in Oklahoma, Moundville in Alabama, and Etowah in northwest Georgia. The hallmarks of the Mississippian culture include intensive corn agriculture, sedentary communities, platform mound construction, extensive exchange networks involving raw materials and ornately-crafted goods, shared symbolism, and most importantly, a hierarchical sociopolitical structure (Schnell and Wright 1993).

At around 1000 B.P., cord-marked pottery of an uncertain cultural affiliation appears at some sites along the eastern rim of the swamp and on Floyds Island, Billys Island, Jones Island, Hickory Hammock, and Mixons Hammock. Sherds are described as resembling either Prairie Cord Marked from north-central Florida, Omulgee Cord Marked from south-central Georgia, or Savannah Cord Marked from northern coastal Georgia. Some sites, however, are interpreted as containing only Savannah phase ceramics such as Savannah Complicated Stamped (Trowell 1998a; Kirkland and Cook 2007).

Compared to some portions of the southeast that saw increasingly intensive Mississippian Period occupations, the Okefenokee Swamp area may be characterized by a decline in utilization of the area based on decreasing frequencies of Mississippian ceramic types compared to earlier Weeden Island types. An alternative explanation for the pattern observed in the region is that the Woodland tradition persisted into the Mississippian Period within the Okefenokee Swamp area (Schnell and Wright 1993:35-36).

Mississippian sites from the eastern portion of the Okefenokee Swamp in areas such as Cowhouse Island and Bugaboo Island contain Lamar pottery associated with the Lamar Mississippian culture that spanned all of Georgia, and portions of Tennessee, South Carolina, Florida, and Alabama, and to a far lesser extent, the Irene culture (Williams and Shapiro 1990; Trowell 1998a). Grit-tempered types including Lamar Plain, Lamar Complicated Stamped, and Lamar Bold Incised identify Lamar ceramic styles (Williams and Thompson 1999). Lamar pottery is commonly found north and northeast of the swamp and is less prevalent to the east, southeast, and south (Trowell 1998a; Kirkland and Cook 2007). The Lamar culture extends through the Protohistoric period. It is a horticultural based society with sites typically associated in the major floodplains. Maize, beans, and squash were present as basic food supplies and augmented by local nuts and fruit collections. Deer, box turtle, and turkey were the primary meat, and shellfish have been noted in the Piedmont and River and Valleys (Hally and Rudolph 1986; Wynn 1990).

Irene phase pottery is traditionally associated with the historic Guale Indians living along the coast north of the Satilla River. It has been found in small quantities in the Okefenokee but the Guale groups were likely not heavily utilizing the swamp due to the fact that Timucua groups who made San Pedro pottery occupied the swamp and the region south of the Satilla River (Kirkland and Cook 2007:17).

Historic American Indian

The Historic American Indian period dates from ca. 410 to 115 B.P (A.D. 1835). The first documented Europeans to enter the general area were members of the De Soto expedition. De Soto had sailed with Pizarro for Peru and returned to Spain a fabulously rich man. Politically well connected, he was granted the right to conquer Florida by Charles V of Spain, which, at that time, included the project area. De Soto landed near Tampa Bay in A.D. 1539 with 1,000 men and spent the next four years wandering the interior of the southeastern U.S. determined to duplicate his earlier success (Alchian 2012). This invasion brought great grief to every group that was unfortunate enough to have been encountered by De Soto and his men. The Spanish left a path of destruction across the lands they traveled, torturing and murdering indiscriminately as they sought anything of value they could steal from the local inhabitants.

By A.D. 1600, archaeological evidence indicates that most of the large Mississippian civic-ceremonial centers either were abandoned or had suffered substantial declines in population. The populations of these centers apparently dispersed into smaller villages, hamlets, and farmsteads. The scattered tribal units encountered by the earliest explorers probably bore little resemblance to the highly integrated cultural systems of the Mississippian peoples.

Two Timucuan-speaking chiefdoms, the Ibihica and Oconi, occupied the eastern Okefenokee Swamp and Trail Ridge areas at European contact and both were later assimilated into the Spanish Florida mission system. Spanish records indicate that Oconi was located on an island in or adjacent to Okefenokee Swamp. Ibihica, on the other hand, was comprised of five towns likely located on Trail Ridge. Missions of San Lorenzo de Ibihica and Santiago de Oconi were established at these towns by the 1620s and remained in operation until 1656 when Spanish soldiers imprisoned the chief of Oconi and burned both towns (Weisman et al. 1998; Kirkland and Cook 2007:18).

Spanish artifacts have been recovered from a previous survey of the Trail Ridge area of the Okefenokee at the Martha Dowling North site (9CR34). The artifacts, including a fragment of San Luis Blue on White majolica, which is often associated with activities of friars, suggest the presence of a mission in the immediate area. After the evacuation of the missions in the late 1600s, the Okefenokee Swamp appears to have been void of permanent settlements until a Creek chief named Hopoithle Tustunnuggee Thlucco

moved his family onto a ridge, likely the modern Mixons Hammock, into the swamp to avoid the American Revolution (Trowell 1998b; Kirkland and Cook 2007).

Georgia was the last of the original 13 colonies established by Great Britain in North America. General James Oglethorpe was granted the colony's corporate charter in 1732, and during the following year, Oglethorpe and a contingent of settlers established a camp in what was to become the city of Savannah. In 1735, Fort Augusta was established and rapidly became a focus of interior settlement. On January 7, 1755, Georgia ceased to be a trustee colony and the crown officially took up administration of the province. With Britain's victory in the French and Indian War, King George III expanded Georgia's southern boundary to the St. Marys River with a proclamation in 1763. The state's original eight counties were created during the Revolutionary War in 1777. Georgia became the fourth state to ratify the Constitution in 1788 (Jackson 2016; Cobb and Inscoe 2017).

In the early 1800s, the Okefenokee Swamp was situated between English Georgia and Spanish Florida with the English-Spanish boundary being poorly defined and with little in the way of law enforcement. As a result, the swamp became home to American Indians and white renegades for cattle rustling, revenge raiding, and slave smuggling from the St. Marys River to Alabama. Between 1812 and 1842, several forts and blockhouses were built and manned periodically, especially during the mid-1830s when the Second Seminole War of Florida expanded into southern Georgia. Georgia militiamen and U.S. troops used forts as bases to patrol the region for Seminole raids, including Fort Argyle on the Ogeechee River, Fort Floyd near Waycross, and Fort Gilmer near Fargo. Fort Alert, which later became the first seat of Charlton County as Trader's Hill, was established in the eighteenth century (Trowell 1998b; Kirkland and Cook 2007).

Modern Historic

This period dates generally from ca. 115 B.P. (A.D. 1835) to present. Charlton County, in which the project lies, was created by the Georgia General Assembly in 1854 with the first county seat established at Traders Hill. Formerly known as Fort Alert, Traders Hill is located on the St. Marys River and was likely established by the English before the Revolutionary War. As the head of navigation on the St. Mary's River, Fort Alert was an important trading center of the southeast. Prior to its establishment as the county seat, Trader's Hill was a pioneer trading post consisting of a few stores and barrooms. After 1854, the town became the center of commerce and culture for Southeast Georgia and North Florida. Traders Hill remained a thriving trade center until the construction of the S.F.&W Railroad from Savannah to Jacksonville and the establishment of the town of Folkston which became the Charlton County seat in 1901 (McQueen 1932).

By the early 1890s the Okefenokee Swamp area was surrounded by railroads. The Atlantic and Gulf Railroad, running from Savannah to Valdosta, ran a few miles north of the Okefenokee Swamp by the Civil War. In 1881, a line was built between Waycross and Jacksonville passing within a mile of the northern and eastern boundaries of the swamp (Kirkland and Cook 2007:19). The Atlantic, Valdosta and Western Railway constructed a line in 1899 that operated from Valdosta, Georgia to Jacksonville, Florida. Passing immediately south of the project area and extending for approximately 110 miles (main line) crossing southern Georgia and northern Florida, this line was nicknamed the "Jacksonville Short Line." This railroad also had approximately 45 spur-line miles, most of which were logging routes. In 1902, this line was purchased by the Georgia Southern and Florida Railway (RailGa.com 2018).

Early Euroamerican settlers were largely subsistence farmers raising cattle and hogs and cultivating small corn fields and gardens. Log houses were built that were surrounded by outbuildings for grain storage, supplies, and sugar production. A pattern of a few scattered homesteads continued in the region well into

the twentieth century. Although several Antebellum period rice plantations were built to the east along the lower St. Marys and Satilla Rivers, no plantations were present close to the Okefenokee Swamp (Kirkland and Cook 2007:19).

The Georgia Legislature sold the swamp to the Suwanee Canal Company, comprised of former Confederate officers and wealthy investors, in 1891. That year, the canal company began digging over twenty miles of ditches and canal to drain the swamp to the St. Marys River through Trail Ridge to create arable lands for rice, sugar cane, and cotton farming. A sawmill was built to harvest logs using steamboats and steam-powered equipment. By the early twentieth century, however, the abundant railroads allowed for the construction of sawmills, turpentine stills, and extensive logging bringing an influx of people to fill these industry jobs (Trowell 1998b; Kirkland and Cook 2007:19-20).

Over the twentieth century, the swamp property went through a few different hands. By 1901, the property owned by the former Suwanne Canal Company was in the possession of Charles Hebard of Philadelphia who owned extensive lumber businesses in Michigan and Pennsylvannia. After he died in 1901, his sons took over and formed the Hebard Lumber Company of Thomas County, Georgia in 1904. They leased the Okefenokee Swamp property to a subsidiary, the Hebard Cypress Company of West Virginia, who harvested cypress from the swamp from 1909 to 1927. A large sawmill was built west of Waycross to manufacture lumber and shingles and a settlement known as Hebardville grew up around the mill. A rail line, the Waycross and Southern, was completed from Hebardville to the northwestern edge of the swamp in 1909-1910 and from there, railroads were built throughout the swamp to log cypress trees from the northern and western areas. A number of smaller logging companies had joined the effort with logging camps established on Billy's Island, at The Pocket, and on Jones Island by 1918. Logging continued until the depletion of old growth cypress by the mid-1920s by which time the larger companies were shutting down with the last logging operations completed in 1942 (Trowell 1998b; Kirkland and Cook 2007:20).

The Hebard family had built a small cabin on Floyds Island within the Okefenokee Swamp in 1925, which was used as a private hunting and fishing resort until the mid-1930s. It remains in good condition as a camping and research facility listed on the National Register of Historic Places. Calls for preservation of the Okefenokee Swamp began as early as 1902 by geographer Roland M. Harper and supported by scientists from Cornell University who began studying the swamp after 1912. Although the Okefenokee Society was organized by 1919 to further the cause of swamp preservation, the organization died two years later. In 1929, the Georgia Society of Naturalists was organized and worked to lobby the Georgia legislature to convince the federal government to purchase the property. Although several Georgia politicians introduced congressional bills thereafter to preserve the swamp, their attempts failed (Trowell 1998b; Kirkland and Cook 2007:20-21).

In 1936, the federal government finally purchased 292,979 acres owned by Herbard Lumber Company and President Roosevelt issued Executive Order 7593 to create the Okefenokee National Wildlife Refuge (ONWR) in 1937. The ONWR was established largely to provide a breeding ground for wildlife including migratory birds. Between 1938 and 1941, two Civilian Conservation Corps camps were established to develop the refuge's facilities including an all-black unit. Okefenokee Swamp Park opened on Cowhouse Island in 1946 and in 1947, the Okefenokee Recreation, Inc. of Homerville was allowed to build and operate Camp Stephen Foster on Jones Island, which was sold to the state of Georgia in 1954 to become the Stephen C. Foster State Park. The ONWR, managed by U.S. Fish and Wildlife Service since 1937, became part of the National Wilderness System in 1974 with the development of a Wilderness Canoe Trail system throughout the swamp. The Ramsar Convention recognized the swamp as a Wetland of International Importance in 1986 and the ONWR has increased to 371,000 acres since its original purchase (Trowell 1998b; Kirkland and Cook 2007:23-24).

Field Methods

The Phase I survey was guided by procedural standards established by the Georgia Council of Professional Archaeologists in concurrence with the Georgia Historic Preservation Division. Full land coverage requirements were achieved through visual inspections of the entire survey area and systematic subsurface testing. While conducting visual inspections, any exposed surfaces were carefully examined for cultural material.

Subsurface testing was performed within the proposed project area along 30-meter (m) interval transects comprised of shovel tests spaced 30 m apart. Standard shovel tests consisted of 30 centimeter (cm) diameter cylindrical holes excavated to a minimum depth of 80 cm below surface (cmbs) or until water was encountered. Soils from each test were screened through 0.64 cm hardware cloth for the purpose of recovering any cultural material that may exist at that location. When cultural material was encountered, the material was sorted by provenience and placed into bags labeled with the pertinent excavation information before being transported to TerraX's laboratory. Any archaeological sites identified within the project area during transecting were further examined in order to better define their horizontal and vertical limits. Delineations were conducted by establishing a datum within the area of the initial find(s). From datum, close interval shovel testing was conducted in a cruciform pattern in cardinal directions until at least two consecutive negative tests were encountered in each direction. Close interval testing varied between 10 and 15-m intervals with 15-m interval tests being utilized within the interior of sites and 10-m interval tests being utilized along the outer margins of sites in order to establish more accurate boundaries. In some instances, additional close interval shovel testing was performed when deemed appropriate for adequately defining the extent of a site. A hand-held Trimble or Garmin GPS unit was used to record site locations and sketch maps of each were drawn by compass and pace and plotted to scale. Digital photographs were taken for any site recorded as well as for the survey area.

The Phase I investigation included the placement of 4,637 shovel tests along 102 transects (Figure 14). An additional 115 shovel tests were placed while performing site delineations. Of the total 4,752 shovel tests placed during this study, nine recovered cultural materials, 1,245 were culturally sterile, and 3,498 were not excavated. The primary reason for the large number of unexcavated tests was the presence of expansive wetlands located within the project area. Other reasons for non-excavated tests include road disturbance and the presence of large timber piles left behind during past logging events.

This study also included an architectural assessment of any historic resources located within or in view of the project area. A survey of resources appearing to be at least 50 years old was performed using the standard criteria set forth by the National Park Service to determine the eligibility of historic properties for inclusion on the National Register. Shanda Davidson, Architectural Historian for TerraX, performed the assessment.

Laboratory Methods and Collection Curation

All cultural materials recovered during field projects are delivered to TerraX's laboratory in Tuscaloosa, Alabama for processing. Here, materials are sorted by provenience, cleaned, and analyzed. Along with the cultural material, all project records, photographs, and maps produced while conducting the investigation are transported for curation at the Archaeological Research Center, Troy University, Troy, Alabama. A copy of the curation agreement can be found in Appendix A.

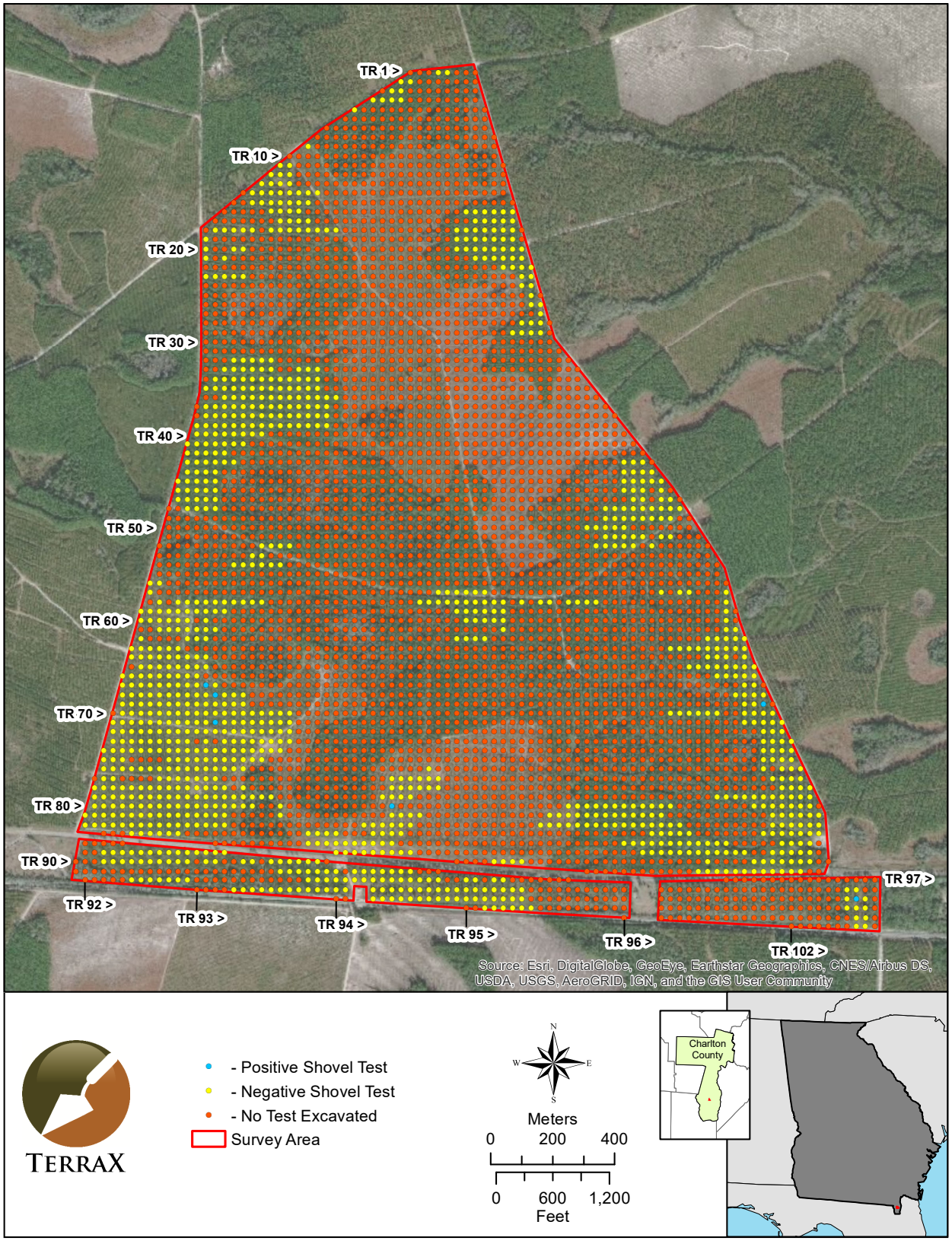


Figure 14. *Aerial map showing the locations and results for transect shovel tests placed within the survey area.*

Archaeological Survey Results

The Phase I investigation led to the identification of 10 archaeological loci, which include six archaeological sites (9CR201-9CR206) and four isolated finds (K1, K2, K4, and K8) (Figures 15 and 16). Georgia Archaeological Site File forms were completed for all archaeological sites discovered and are included in Appendix B. The following paragraphs describe the archaeological sites and isolated finds discovered during this survey. For a complete inventory of artifacts recovered from these sites and isolated finds, refer to the artifact inventory in Appendix C.

Site 9CR201

Site 9CR201 consists of a lightly deposited unknown aboriginal lithic scatter located in the southwestern portion of Area 1 approximately 280 m east of T-Model Road (see Figure 15). The site, measuring 53-x-10 m with a northwest-southeast orientation, lies within a pine flatwoods environment just southwest of a wetland. Vegetation consists of planted pine interspersed with palmetto, brush, and grass (Figure 17). Silviculture activities represent the main disturbance within the site area as evidenced by pine furrows created through past plowing.

Site 9CR201 was identified by two positive transect shovel tests (TR 67 ST 10 and TR 68 ST 11). Site delineation included the excavation of 17 additional tests, all of which were culturally sterile (Figure 18). Typical shovel tests profiles in the site area revealed three strata comprised of 15 to 25 cm of gray (10YR 5/1) sand followed by 10 to 20 cm of light gray (10YR 7/1) sand, which was underlain by a very dark grayish brown (10YR 3/2) sandy spodic layer. Positive test TR 67 ST 10 deviated from the typical soil profile consisting of only two strata composed of 70 cm of light gray (10YR 7/1) sand over the very dark grayish brown (10YR 3/2) sandy spodic layer. All tests became inundated with the exposure of the spodic layer. The two positive shovel tests recovered three chert flakes within Stratum I between 10 and 65 cmbs. Visual inspections of the site surface failed to locate additional artifacts.

Based on its sparse nature and lack of diagnostic material, Site 9CR201 appears to hold no significant research value beyond the findings of this investigation. Accordingly, it is recommended ineligible for NRHP inclusion.

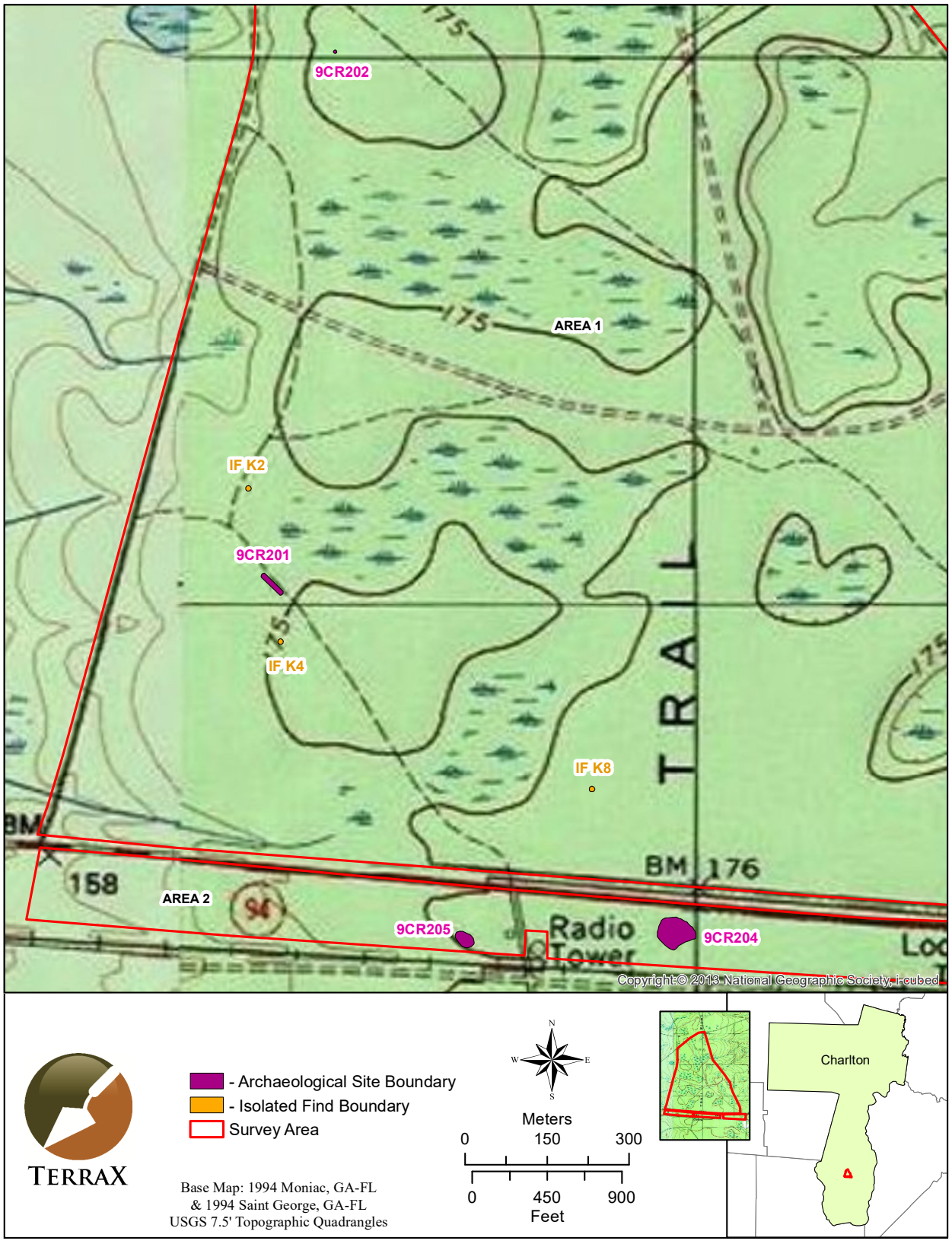


Figure 15. *Topographic map showing the locations of Sites 9CR201, 9CR202, 9CR204, and 9CR205 and Isolated Finds K2, K4, and K8.*

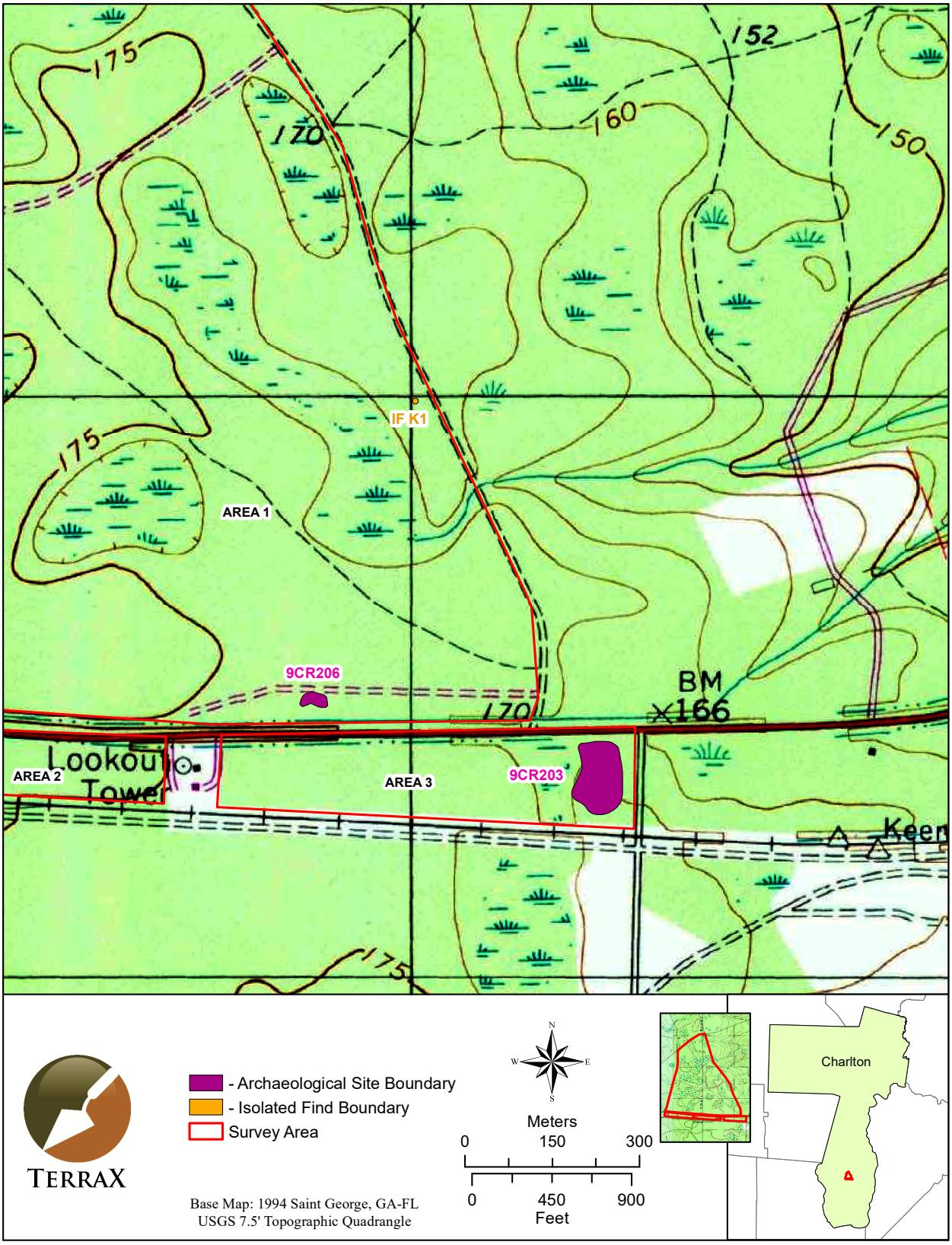


Figure 16. *Topographic map showing the locations of Sites 9CR203 and 9CR206 and Isolated Find K1.*

Figure 17. *View of Site 9CR201 looking north from Transect 68 Shovel Test 11.*

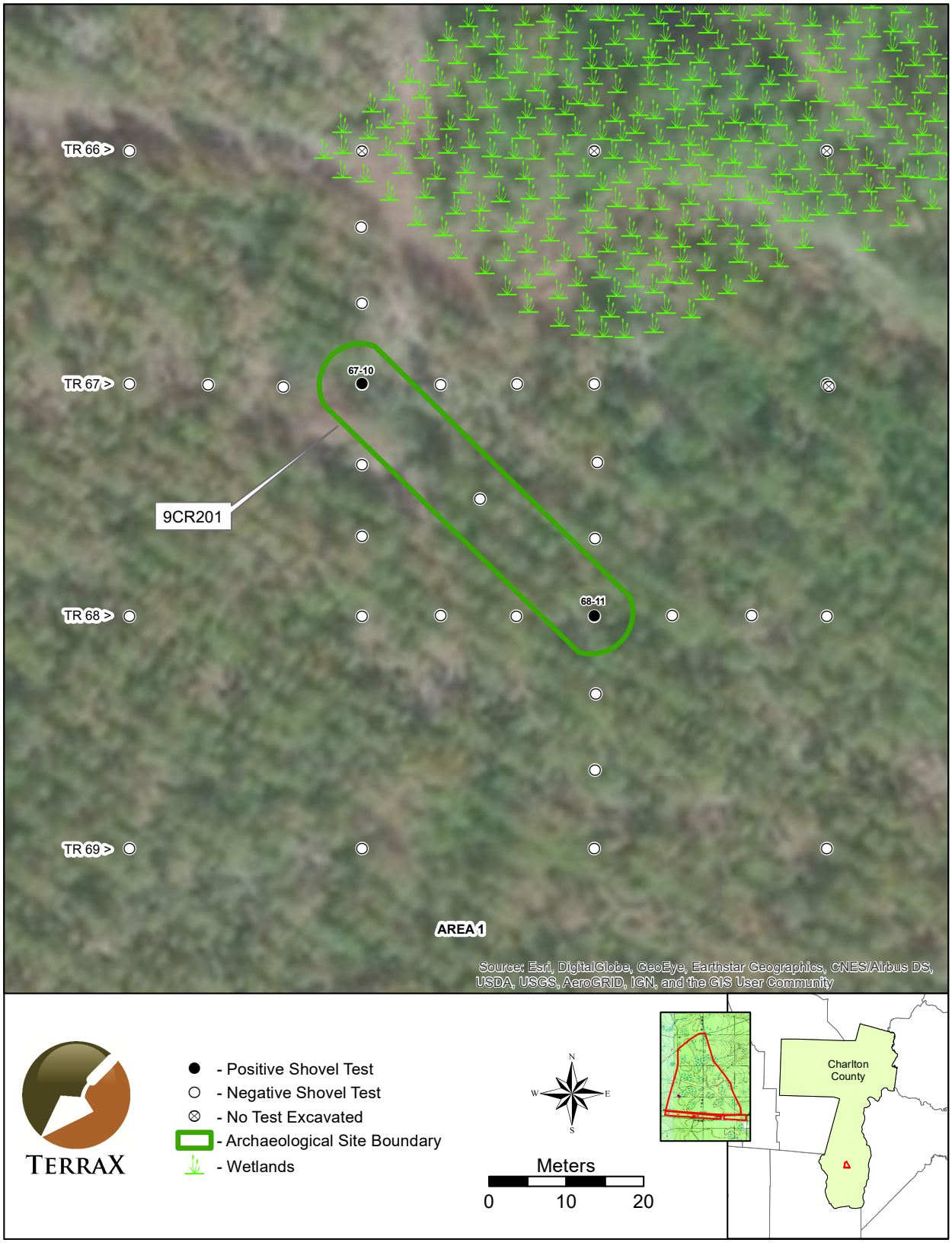


Figure 18. *Site 9CR201 detail map.*

Site 9CR202

Site 9CR202 represents a light density historic non-aboriginal ceramic scatter. The site measures 5 m in diameter and is located within a pine flatwoods environment in the northwestern portion of Area 1 approximately 150 m east of T-Model Road (see Figure 15). Past silviculture activities represent the most significant disturbances to this area. At the time of the investigation, ponded water was present in the site area, which had recently been logged, plowed, and replanted in pine (Figure 19). In addition to pine saplings, vegetation in the area also included tall grass and palmetto.

The site was identified through surface inspections as initial transect shovel tests placed in the area produced negative results. Delineation at Site 9CR202 included the excavation of seven additional shovel tests, all of which were culturally sterile (Figure 20). Subsurface examinations exposed poorly drained sandy soils with typical soil profiles consisting of 15 to 20 cm of dark gray (10YR 4/1) sand followed by 5 to 10 cm of gray (10YR 6/1) sand over a very dark grayish brown (10YR 3/2) sandy spodic layer. The water table was typically encountered around 30 cmbs and coincided with the appearance of the spodic layer.

Visual inspections led to the discovery of all artifacts recovered from this site. This material consists of seven fragments of Albany slipped stoneware, possibly from the same vessel (Figure 21). The presence of this stoneware type suggests the site dates to the late nineteenth or early twentieth century. A review of historic topographic maps and aerial imagery showed no historic structures or other features at this location.

Based on the data collected, Site 9CR202 appears to hold no research value beyond the findings of this investigation. The sparse artifact assemblage was found out of context on the surface and shovel testing in the area failed to locate further material. Additionally, this area has been significantly disturbed by repeated episodes of pine cultivation. As such, the site is recommended ineligible for NRHP inclusion.

Figure 19. *View of Site 9CR202 looking west.*

Figure 20. *Site 9CR202 detail map.*

Figure 21. *Albany slipped stoneware rim fragment recovered from Site 9CR202.*

Site 9CR203

Site 9CR203 is a multicomponent site consisting of a historic house site and light density aboriginal artifact scatter. The site, measuring 125-x-85 m oriented north-south, lies along the eastern boundary of Area 3 immediately south of State Road 94, west of a gravel road, and north of the Georgia Southern and Florida Railway (see Figure 16). The site is situated within a pine flatwoods environment on a slight rise bordered by wetlands to the north, east, and west. It has been significantly disturbed by past silviculture activities associated with pine cultivation. At the time of the investigation, the area had recently been logged, plowed, and replanted in pine (Figure 22). Additional evidence of disturbance includes three push piles located in the central and northern portions of the site.

Site 9CR203 was initially detected by a scatter of surface artifacts and one positive transect shovel test (TR 99 ST 22). Subsequent delineation included the placement of 23 additional shovel tests. Of these tests, two were positive, 17 were negative, and four were not excavated falling within wetland areas (Figure 23). Subsurface examinations typically exposed three strata comprised of 10 to 30 cm of gray (10YR 5/1) sand followed by 30 to 45 cm of light gray (10YR 7/1) sand over a very dark grayish brown (10YR 3/2) sandy spodic layer. Tests within the site area commonly became inundated just above or within the spodic layer. Some tests, including positive test TR 99 ST 22, deviated from the typical soil profile consisting of only two strata composed of 20 to 70 cm of gray (10YR 5/1) sand over the very dark grayish brown (10YR 3/2) sandy spodic layer. The three positive shovel tests contained a light collection of historic artifacts recovered from Stratum I between 15 and 60 cmbs. This material includes two pieces of colorless container glass (one with Owen's suction scar) and one terracotta herty cup rim fragment (Figure 24c).

Visual inspections led to the recovery of the majority of the artifacts found at this site, which includes both historic and aboriginal material. The historic artifact scatter was distributed throughout the site while the aboriginal material was confined to its southern end. A sample of the historic material was collected that consists of container glass fragments (amber [n=1], amethyst [n=7], aqua [n=1], cobalt blue [n=1], colorless [n=3], green [n=1], and milk [n=1]), an amber bottleneck with small mouth external thread finish (Figure 25a), an amber glass Orange Crush soda bottle fragment with white decal label (Figure 25e), a cobalt blue

glass base with Vicks Vaporub maker's mark (Figure 25d), an amethyst bottle neck with straight brandy finish (Figure 25b), a colorless glass wine bottle base, a colorless glass base with Owens-Illinois Glass Co. maker's mark (1929-ca. 1960), a yellow decorative glass plate fragment (Figure 25c), a green annular banded ironstone rim (Figure 24e), a piece of white annular banded yellowware (Figure 24F), a pink glazed whiteware plate fragment (Figure 24a), two relief molded whiteware rims (Figure 24d), a whiteware handle fragment, 11 pieces of undecorated whiteware (one with unknown maker's mark), one piece of undecorated porcelain (Figure 24b), and one pressed brick fragment. The aboriginal artifacts, all of which were collected, include a chert possible Bakers Creek projectile point (Figure 26a), a chert possible Stanly Stemmed projectile point (Figure 26b), two chert flakes, a sand-tempered plain rim sherd (Figure 26d), a sand-tempered plain sherd (Figure 26c), and one sherdlet. Stanly Stemmed points date to the Middle Archaic period, while Bakers Creek points are associated with Middle Woodland, Swift Creek occupations. The presence of the plain sand-tempered pottery indicates a post-Archaic component.

A review of historic topographic maps and aerial imagery was conducted in order to document the presence or absence of historic structures at this location. Both the 1918 and 1942 Moniac, GA-FL 15' topographic maps show a single structure at this location (Figures 27 and 28). This structure seems to have been razed prior to 1966 as it is not depicted on the 1966 Saint George, GA-FL 7.5' topographic map. Based on the map review and the historic artifact assemblage, the historic component appears to represent a house site dating from the late nineteenth or early twentieth century to the mid-twentieth century.

Based on the data collected, Site 9CR203 appears to hold little research potential beyond the findings of this investigation. The site area has been heavily impacted by repeated episodes of pine cultivation. As a result, the artifact assemblage was found to be out of context and was primarily confined to the surface. Though some bricks were present scattered on the surface, no architectural features associated with the former dwelling were observed. Considering its poor condition and lack of intact cultural deposits, this site is recommended ineligible for NRHP inclusion.

Figure 22. *View of Site 9CR203 looking north toward State Road 94.*

Figure 23. *Site 9CR203 detail map.*

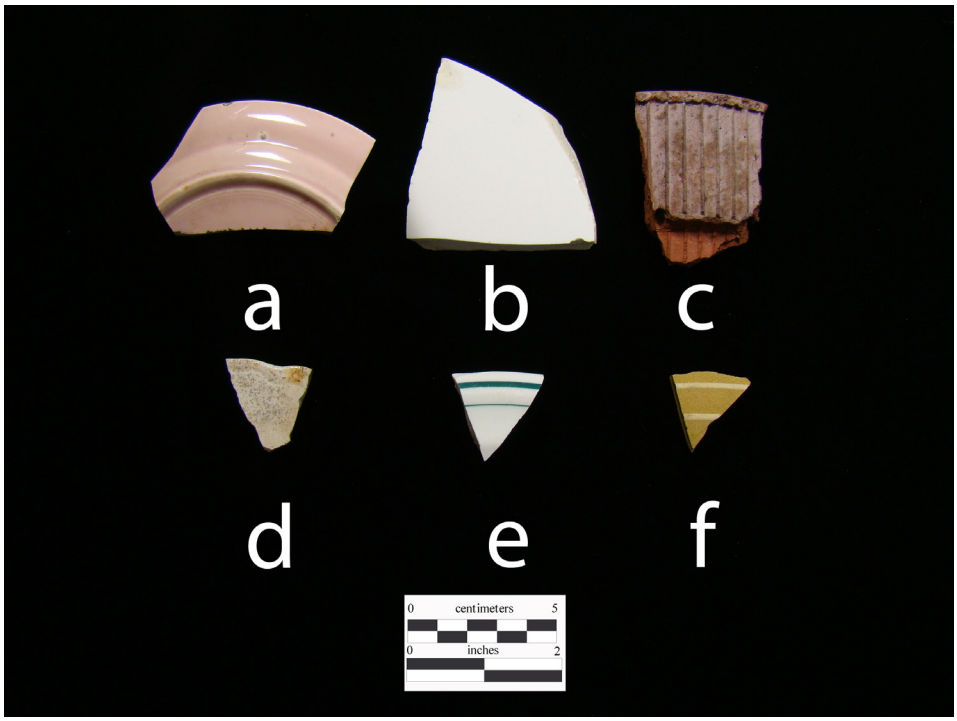


Figure 24. *Historic ceramic artifacts recovered from Site 9CR203: a) pink glazed whiteware plate fragment; b) undecorated porcelain; c) terracotta herty cup rim; d) relief molded whiteware rim; e) green annular banded ironstone; f) white annular banded yellowware.*

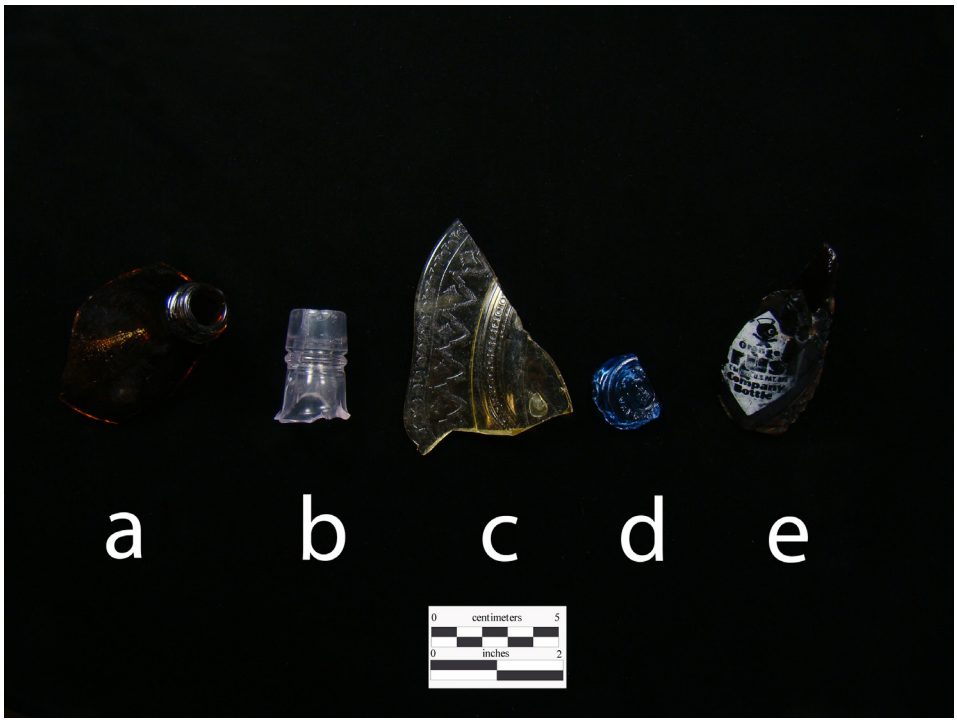


Figure 25. *Historic glass artifacts recovered from Site 9CR203: a) amber embossed bottleneck with small mouth external thread finish; b) amethyst bottleneck with straight brandy finish; c) yellow decorative plate fragment; d) cobalt blue Vicks Vaporub container base; e) amber Orange Crush soda bottle fragment with white decal label.*

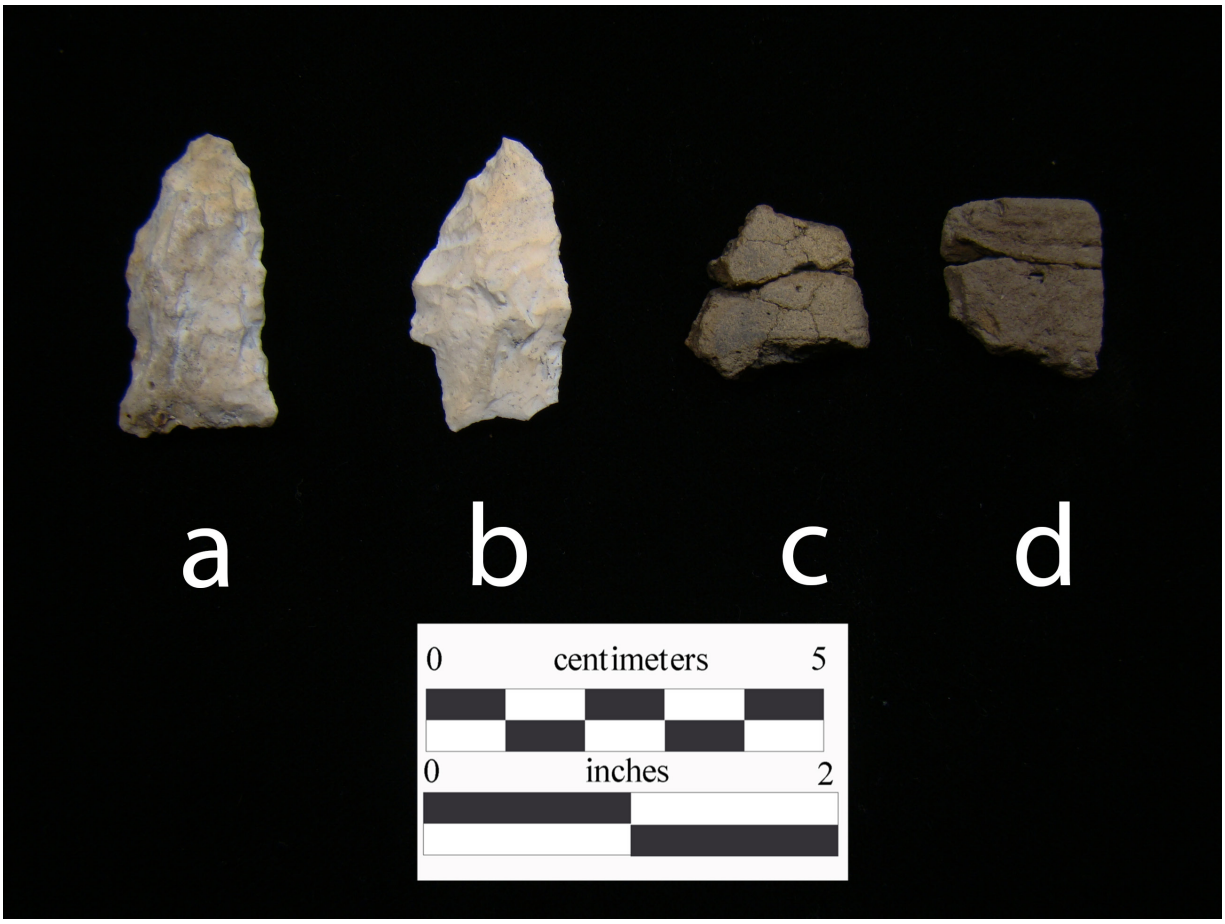


Figure 26. *Aboriginal artifacts recovered from Site 9CR203: a) possible Bakers Creek projectile point; b) possible Stanly Stemmed projectile point; c) sand-tempered plain sherd; d) sand-tempered plain rim sherd.*

Site 9CR204

Site 9CR204 consists of a historic house site measuring approximately 70-x-60 m with an east-west orientation. It is located in the central portion of Area 2 just south of State Road 94 and north of the Georgia Southern and Florida Railway (see Figure 15). A radio tower and cellular tower lie some 200 m west of the site. The site is situated within a pine flatwoods environment and is bordered to the north by a wetland area. Silviculture activities represent the main disturbance within the site area. At the time of the investigation, the area had recently been logged, plowed, and replanted in pine (Figure 29). Further evidence of disturbance includes a push pile observed in the northern portion of the site.

The site was discovered through visual inspections of the surface as initial transect shovel tests placed in the area produced negative results. Delineation at Site 9CR204 included the excavation of 15 additional shovel tests. Of these tests, one was positive, 13 were negative, and one was not excavated due to standing water (Figure 30). Subsurface examinations commonly exposed three strata composed of 15 to 30 cm of dark gray (10YR 4/1) sand followed by 10 to 30 cm of light gray (10YR 7/1) sand over a very dark grayish brown (10YR 3/2) sandy spodic layer. The water table was typically encountered 30 to 40 cmbs. The lone positive shovel test recovered one undecorated whiteware rim sherd (Figure 31e), one terracotta herty cup fragment (Figure 31d), and one undifferentiated brick fragment from Stratum I between 0 and 20 cmbs.

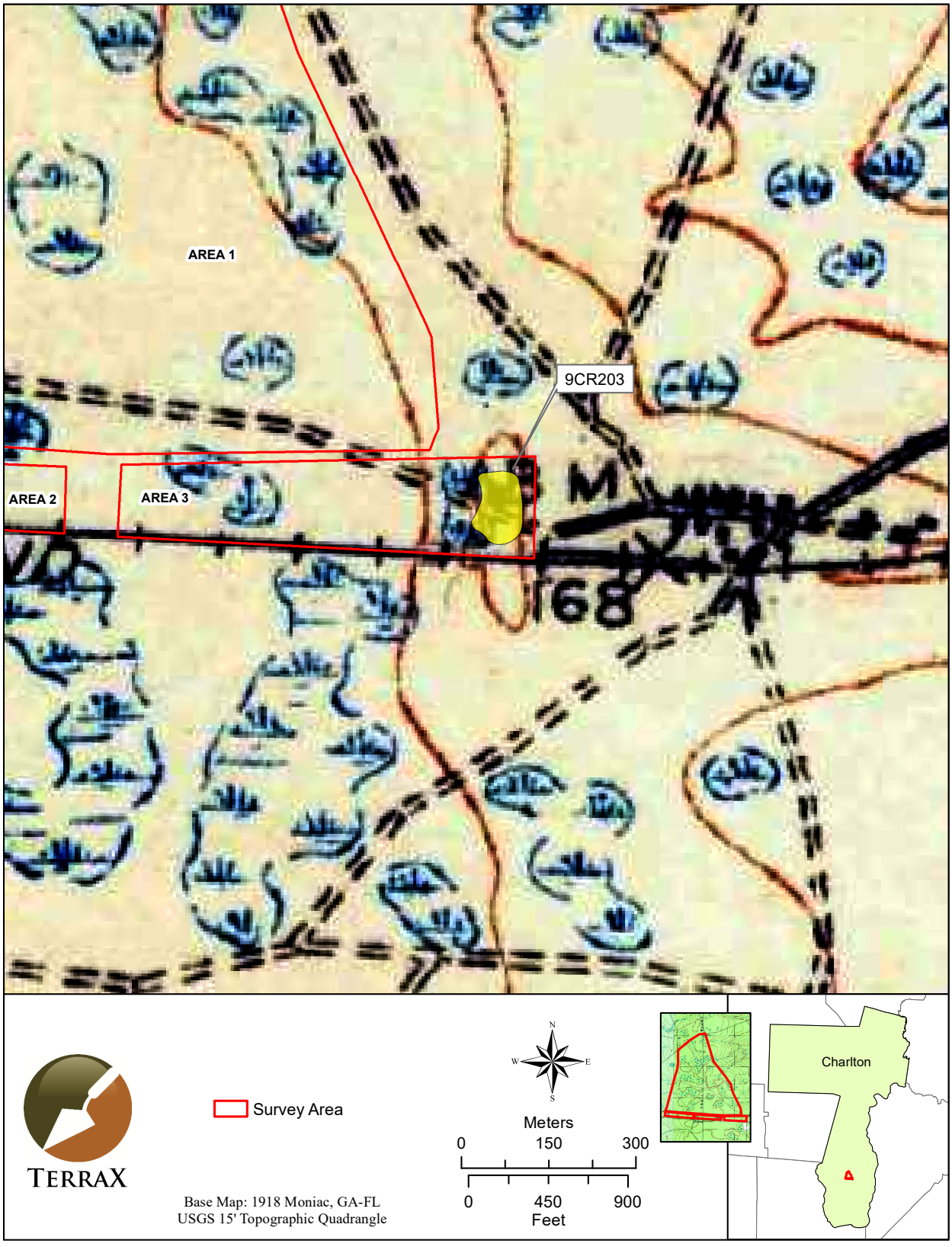


Figure 27. *1918 Moniac topographic map showing a structure at the recorded location of Site 9CR203.*

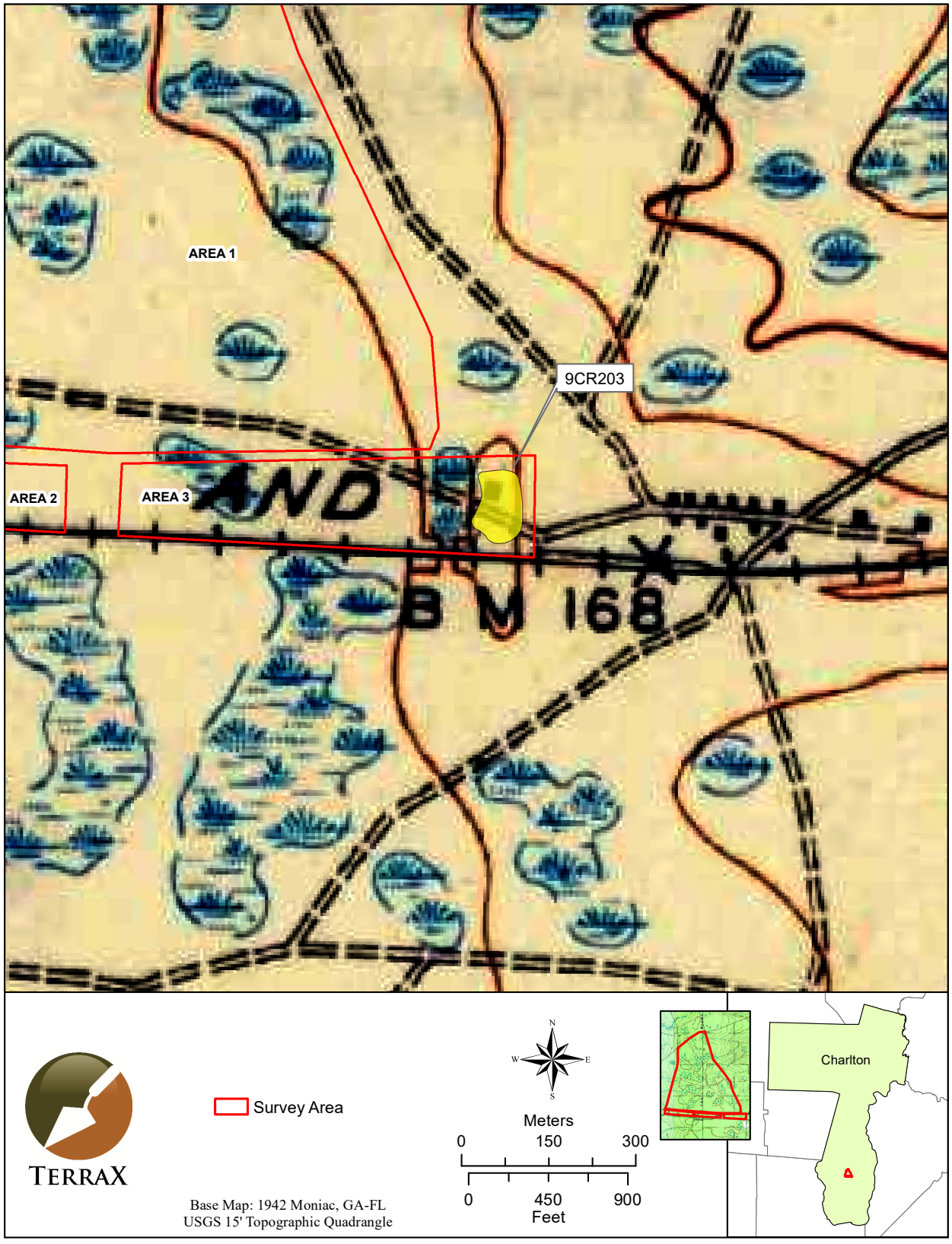


Figure 28. *1942 Moniac topographic map showing a structure at the recorded location of Site 9CR203.*

Figure 29. *View of Site 9CR204 looking west from Transect 93 Shovel Test 25.*

Surface examinations noted a moderately dense historic scatter and led to the recovery of the majority of the artifacts found at this site. A sample of this historic material was collected and includes container glass fragments (amber [n=3], amethyst [n=1], aqua [n=1], cobalt blue [n=2], colorless [n=8], green [n=3], olive green [n=1], and red [n=1]); a colorless glass base with Diamond Glass Co. maker's mark (1924-ca. 1940); an amber glass base with Glenshaw Glass Co. maker's mark (1904-present); an amber glass base with Owens-Illinois Glass Co. maker's mark (1954-present); an amber glass bottle with small mouth external thread finish, a ferrous metal screw top, and Owens-Illinois Glass Co. maker's mark (1954-present) (Figure 32m); an amber glass bottleneck with handle and small mouth external thread finish; a cobalt blue glass Phillips Milk of Magnesia bottle with ferrous metal screw top (Figure 32l); two light green glass Coca-Cola soda bottles with crown finish and Owens-Illinois Glass Co. maker's mark (1929-ca. 1960 [Figure 32e] and 1954-present [Figure 32f]); a colorless glass base with Anchor Hocking Glass Co. maker's mark (1938-ca. 1980); a colorless glass base with Ball Brothers maker's mark (1895-present); a colorless glass base with Chattanooga Glass Co. maker's mark (1927-1987); a colorless glass base with Owens-Illinois Glass Co. maker's mark (1929-ca. 1960); a colorless glass base with Tropical Glass and Box Co. maker's mark (1950-1956); a colorless glass Dixie Beverage soda bottle with crown finish and Laurens Glass Works maker's mark (1910-1996) (Figure 32a); a colorless glass Grapette soda bottle with crown finish (ca. 1950s) (Figure 32b); a colorless glass jar with large mouth external thread finish and Diamond Glass Company maker's mark (1924-ca. 1940) (Figure 32i); a colorless glass jar with large mouth external thread finish and Tygart Valley Glass Co. maker's mark (1926-1959) (Figure 32h); a colorless glass jar with small mouth reinforced extract finish and Brockway Glass Co. maker's mark (1933-ca. 1980) (Figure 32g); two colorless glass medicine bottles with small mouth external thread finish (Figures 32j-k); a colorless glass Pepsi soda bottle with crown finish and Anchor Hocking Glass Co. maker's mark (1934-ca. 1980) (Figure 32d); a colorless glass sauce bottle with small mouth external thread finish and Knox Glass Bottle Co. maker's mark (1932-1952) (Figure 32n); a colorless jar lip with large mouth external thread finish; a green glass base with Owens-Illinois Glass Co. maker's mark (1929-ca. 1960); a green glass bottleneck with crown finish; a green Royal Crown soda bottle

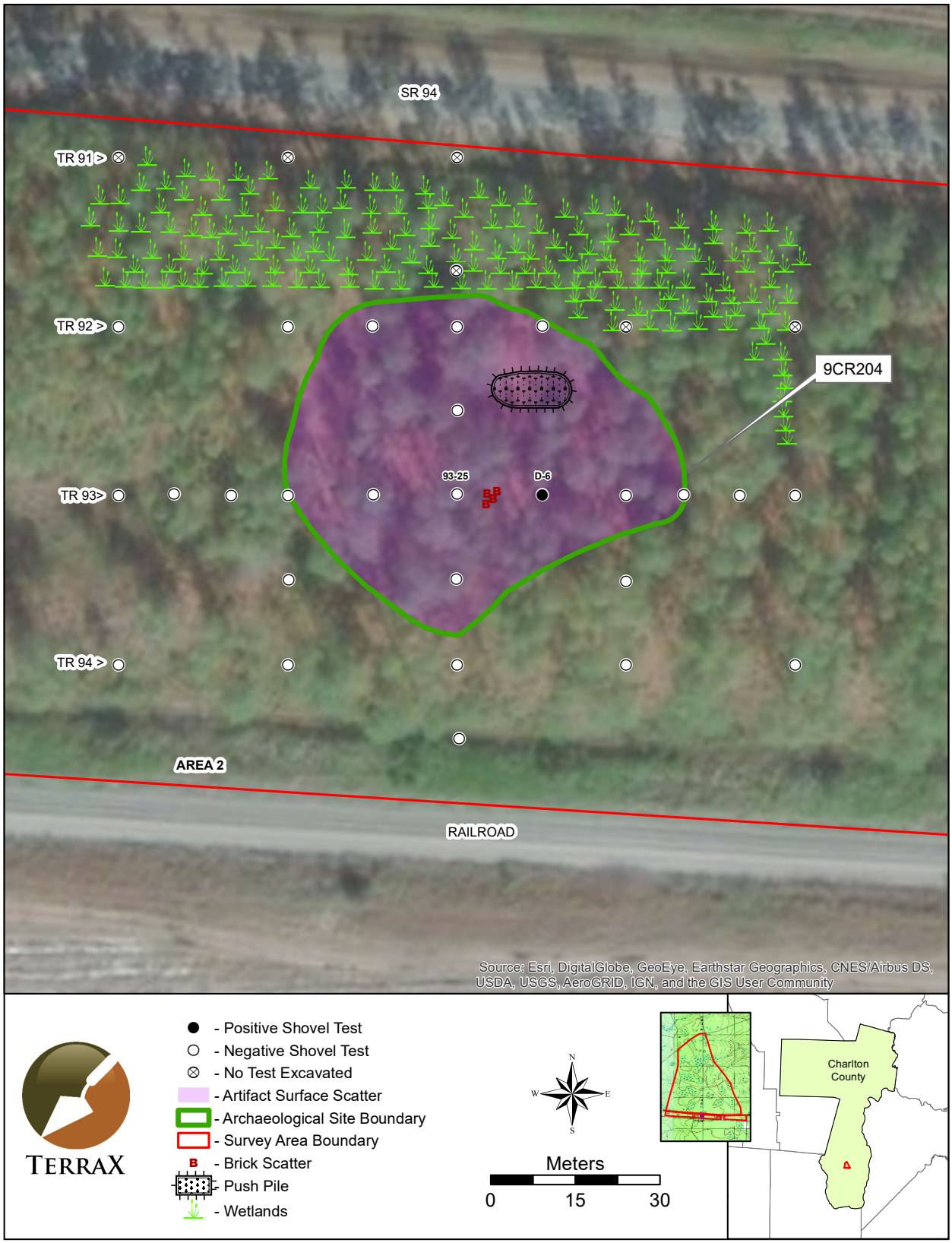


Figure 30. *Site 9CR204 detail map.*

with crown finish (Figure 32c); a light green bottleneck with crown finish; three fragments of the rim and base of a milk glass plate; a piece of polychrome decal whiteware (Figure 31a); two pieces of undecorated whiteware; a relief molded whiteware base; a yellow glazed relief molded whiteware rim (Figure 31b); an undecorated earthenware rim (Figure 31c); a silver gilded brass base of cigarette pocket lighter (Figure 33), and a ferrous metal lug wrench. In addition to these items, a brick fragment was also collected from the surface but was lost in the field.

A review of historic topographic maps and aerial imagery was conducted in order to document the presence or absence of historic structures at this location. Historic aerials indicate that the former house was built sometime between 1952 and 1963 (Nationwide Environmental Title Research 2018). The 1963 aerial depicts the house and a small outbuilding off its southwest corner (Figure 34). The 1966 Saint George, GA-FL 7.5' topographic map also depicts the house but does not show the small outbuilding (Figure 35). A subsequent aerial from 1970 no longer shows the house or outbuilding and by 1993 the site area was forested. Oddly, though not visible on the available aerials inspected after 1963, a structure is depicted at this location as recent as 1994 according to the Saint George, GA-FL 7.5' topographic map from that year. Regardless, based on the map review and the artifact assemblage, Site 9CR204 appears to represent a mid-twentieth century house site.

Field data collected at Site 9CR204 suggests that it holds little to no research value beyond the findings of this investigation. The house site has been heavily disturbed from repeated episodes of pine cultivation and harvesting. As a result of these disturbances, architectural evidence of the house has been destroyed and the cultural assemblage was found to be out of context and primarily confined to the surface. Based on its poor condition and lack of intact deposits, Site 9CR204 is recommended ineligible for NRHP consideration.

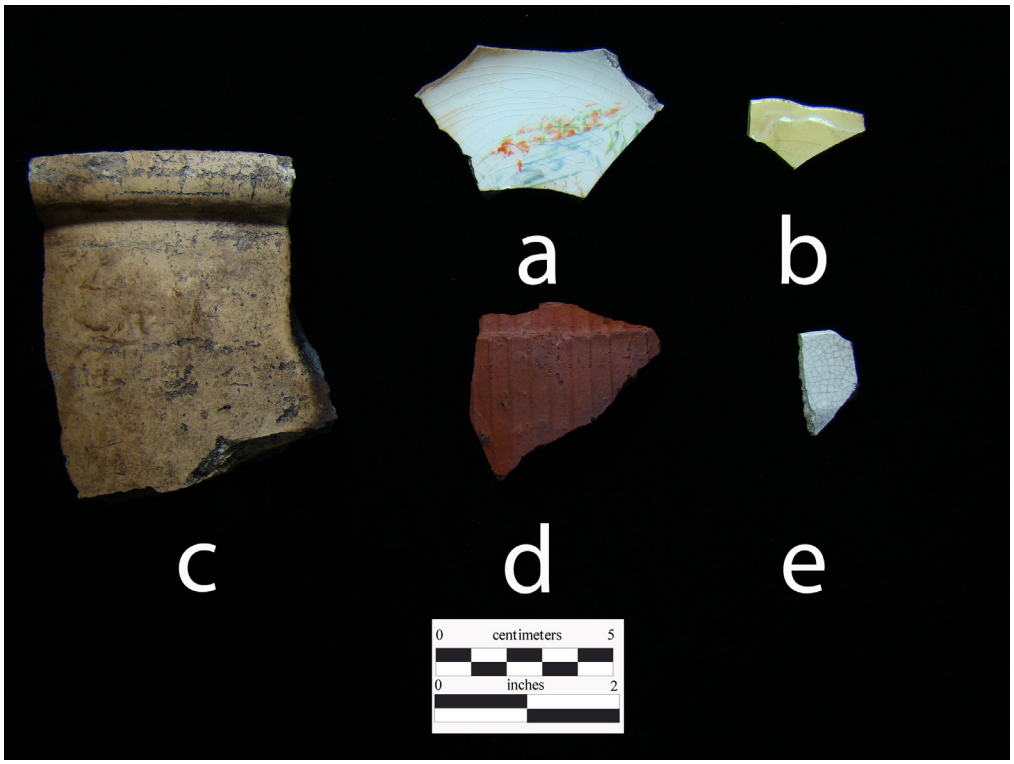


Figure 31. *Historic ceramic artifacts recovered from Site 9CR204: a) polychrome decal whiteware; b) yellow glazed relief molded whiteware rim; c) undecorated earthenware rim; d) terracotta herty cup fragment; e) undecorated whiteware rim.*

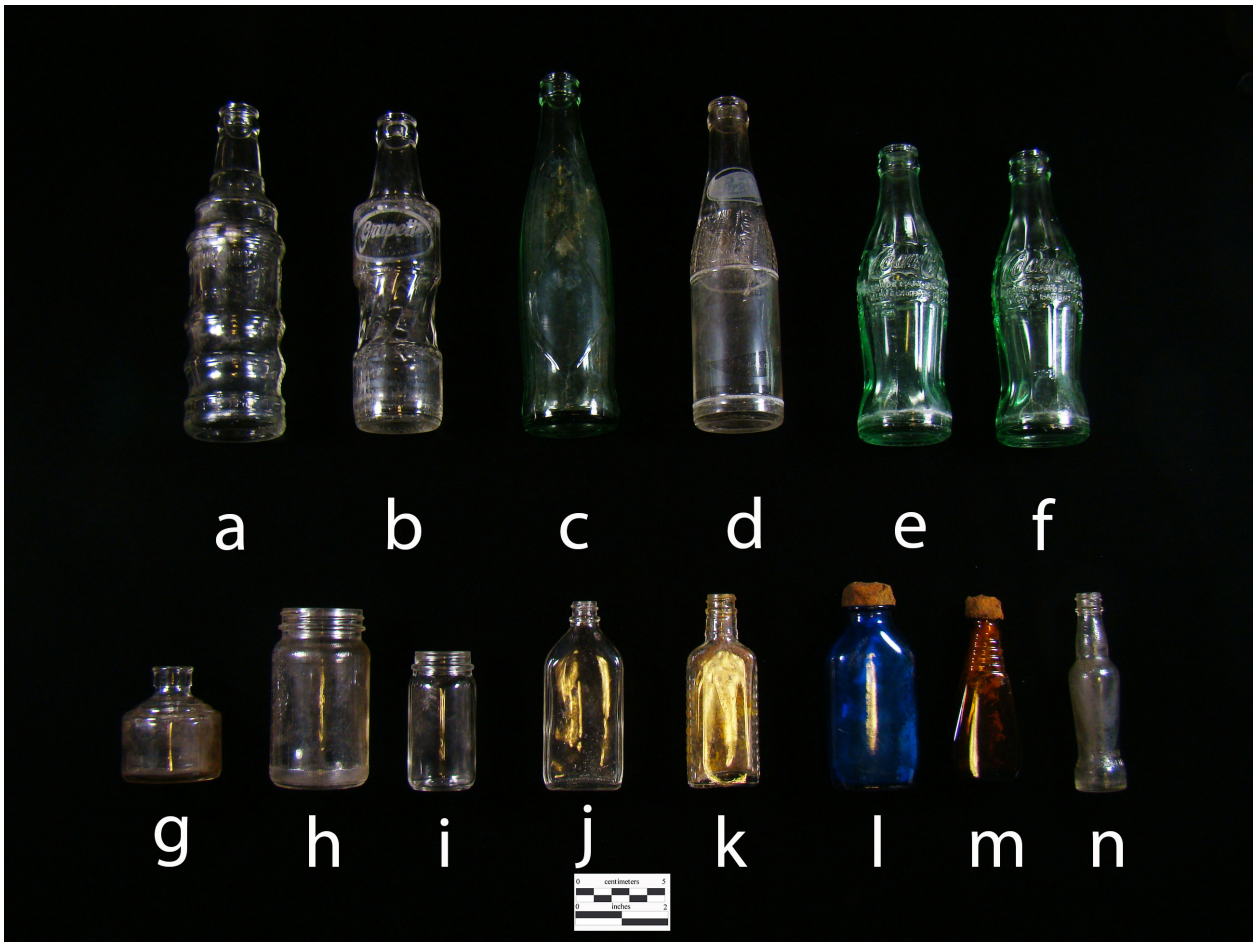


Figure 32. *Historic bottles and jars recovered from Site 9CR204: a) colorless glass Dixie Beverage soda bottle with crown finish; b) colorless glass Grapette soda bottle with crown finish; c) green glass Royal Crown soda bottle with crown finish; d) colorless glass Pepsi soda bottle with crown finish; e) light green Coca-Cola soda bottle with crown finish; f) light green Coca-Cola soda bottle with crown finish; g) colorless glass jar with small mouth reinforced extract finish; h) colorless glass jar with large mouth external thread finish; i) colorless glass jar with large mouth external thread finish; j) colorless glass medicine bottle with small mouth external thread finish; k) colorless glass medicine bottle with small mouth external thread finish; l) cobalt blue glass Phillips Milk of Magnesia bottle with small mouth external thread finish and ferrous metal screw top; m) amber glass bottle with small mouth external thread finish and ferrous metal screw top; n) colorless glass sauce bottle with small mouth external thread finish.*

Figure 33. *Silver gilded brass base of cigarette pocket lighter recovered from Site 9CR204.*

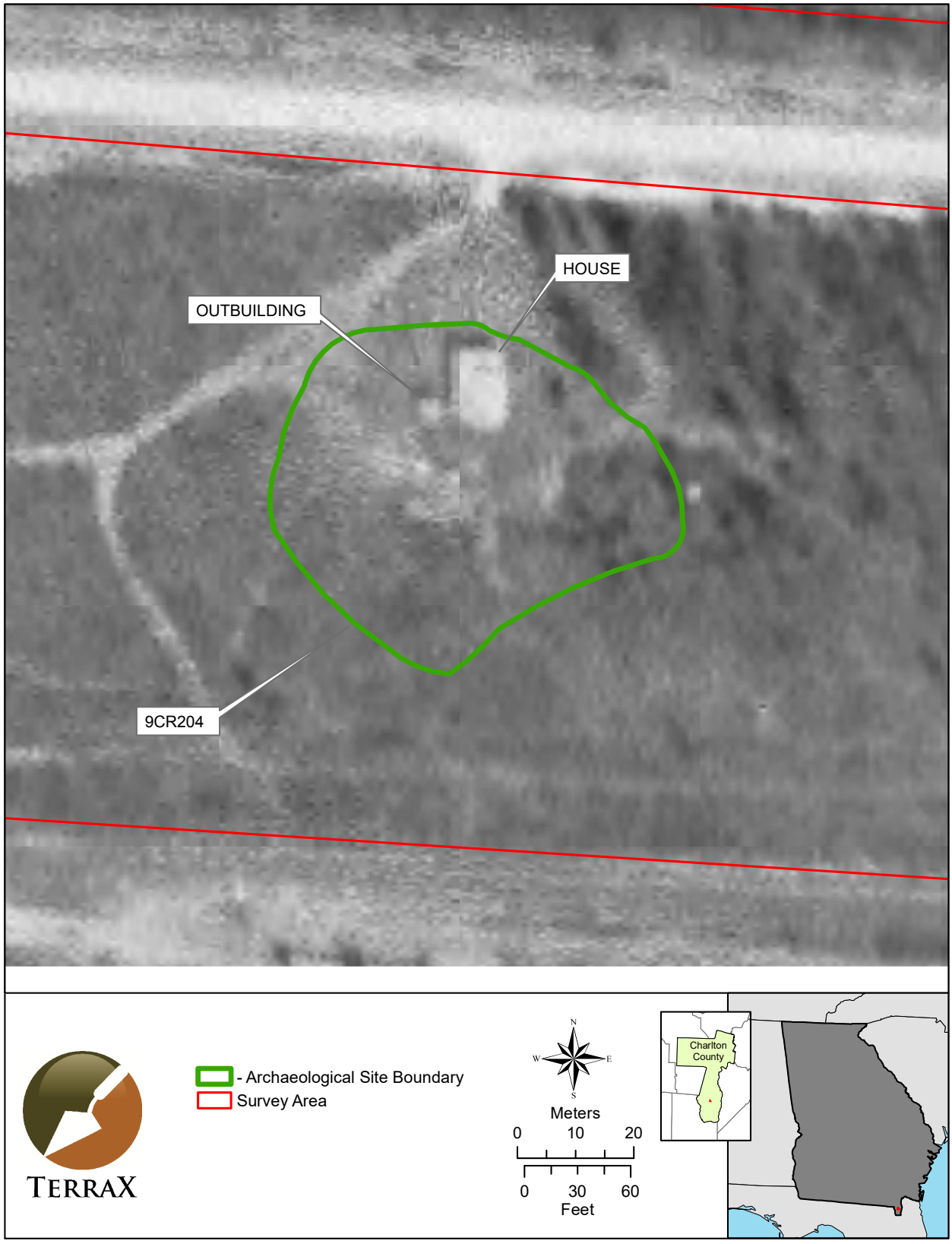


Figure 34. *1963 aerial showing a house and outbuilding at the recorded location of Site 9CR204 (Nationwide Environmental Title Research 2018).*

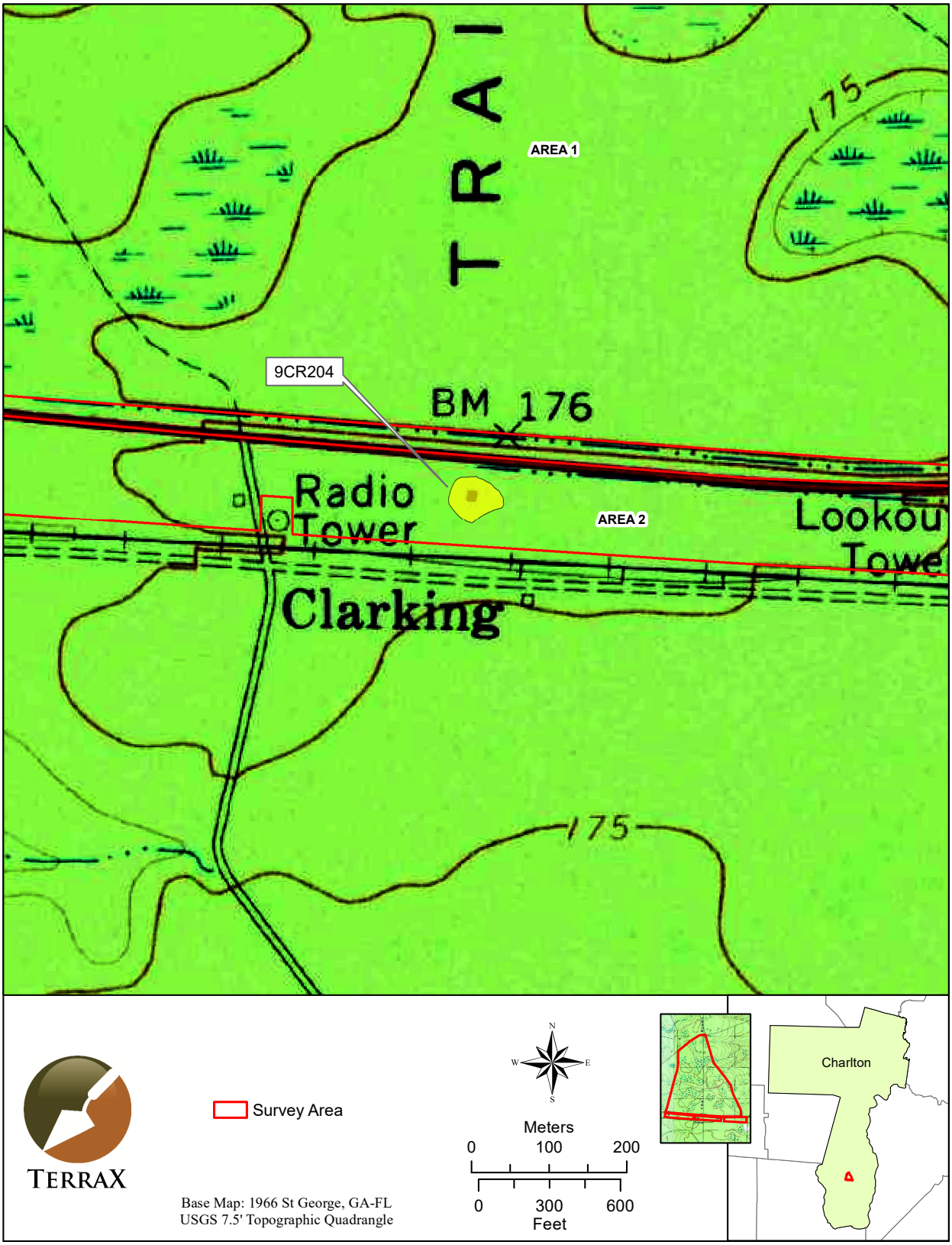


Figure 35. *1966 Saint George topographic map showing a structure at the recorded location of Site 9CR204.*

SITE 9CR205

Site 9CR205 consists of a light density historic non-aboriginal artifact scatter. The site measures 40-x-25 m with a northwest-southeast orientation. It lies south of State Road 94 and immediately north of the Georgia Southern and Florida Railway in the central portion of Area 2 (see Figure 15). The site is situated within a pine flatwoods environment and is covered by planted pine interspersed with brush, palmetto, vines, and briars (Figure 36). Silviculture activities represent the main disturbance within the site area as evidenced by eroded pine furrows created through past plowing.

Site 9CR205 was identified by a surface scatter of historic material observed in the vicinity of transect shovel test TR 93 ST14. Subsequent delineation included the excavation of nine additional tests, all of which produced negative results (Figure 37). Shovel test profiles consistently revealed three strata comprised of 10 to 20 cm of dark grayish brown (10YR 4/2) sand followed by 20 to 40 cm of gray (10YR 6/1) sand over a very dark grayish brown (10YR 3/2) sandy spodic layer. Several tests encountered the water table within the spodic layer.

Figure 36. *View of Site 9CR205 from Transect 93 Shovel Test 14, facing south toward railroad.*

Figure 37. *Site 9CR205 detail map.*

Visual inspections led to the recovery of a light collection of historic artifacts from this site, which includes container glass (cobalt blue [n=1], colorless [n=3], and green milk [n=1]), an amber glass base with Owens-Illinois Glass Co. maker's mark (1929-ca. 1960), a colorless glass bottle with small mouth external thread finish and Fairmount Glass Works maker's mark (1933-1968) (Figure 38a), a colorless glass medicine bottle with small mouth external thread finish (Figure 38b), a hand painted green whiteware rim sherd (Figure 39c), a light blue glazed whiteware base (Figure 39a), a lime green glazed whiteware rim (Figure 39b), and two undecorated whiteware base fragments (one with partial Homer Laughlin maker's mark [1877-present] [Figure 39d]).

Historic topographic maps and aerial imagery were reviewed in order to document the presence or absence of historic structures at this location. The earliest evidence of a structure at this location is a 1952 aerial (Nationwide Environmental Title Research 2018). The 1952 aerial shows one structure in the site area and another approximately 60 m to the east-northeast (Figure 40). Though the quality of the image is poor, a subsequent aerial from 1963 indicates that the structure in the site area was no longer extant at that time; however, the structure to the east-northeast was still present. The remaining structure appears to have been razed sometime between 1963 and 1970 as it is not present on the 1970 aerial. It is also shown on the 1966 Saint George, GA-FL 7.5' topographic map and is depicted as a hollow box suggesting that it may represent an outbuilding (Figure 41). Oddly, though not visible on available aerials inspected after 1963, this possible outbuilding also appears on the 1994 Saint George, GA-FL 7.5' topographic map. Results of the map review and analysis of the artifact assemblage suggest that the site dates to the mid-twentieth century and likely represents a house site.

Based on the data collected, Site 9CR205 appears to hold no research value beyond the findings of this investigation. The artifact assemblage was found out of context on the surface and shovel testing in the area failed to locate further material. The poor condition of the site is no doubt related to repeated episodes of pine cultivation in this area. Accordingly, the site is recommended ineligible for NRHP inclusion.

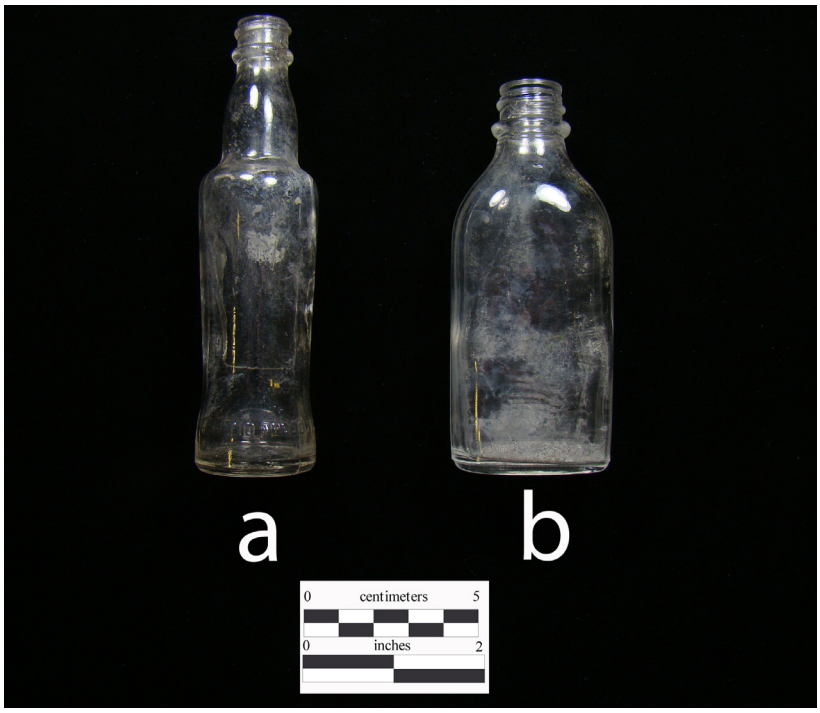


Figure 38. *Historic bottles recovered from Site 9CR205: a) colorless glass bottle with small mouth external thread finish; b) colorless glass medicine bottle with small mouth external thread finish.*

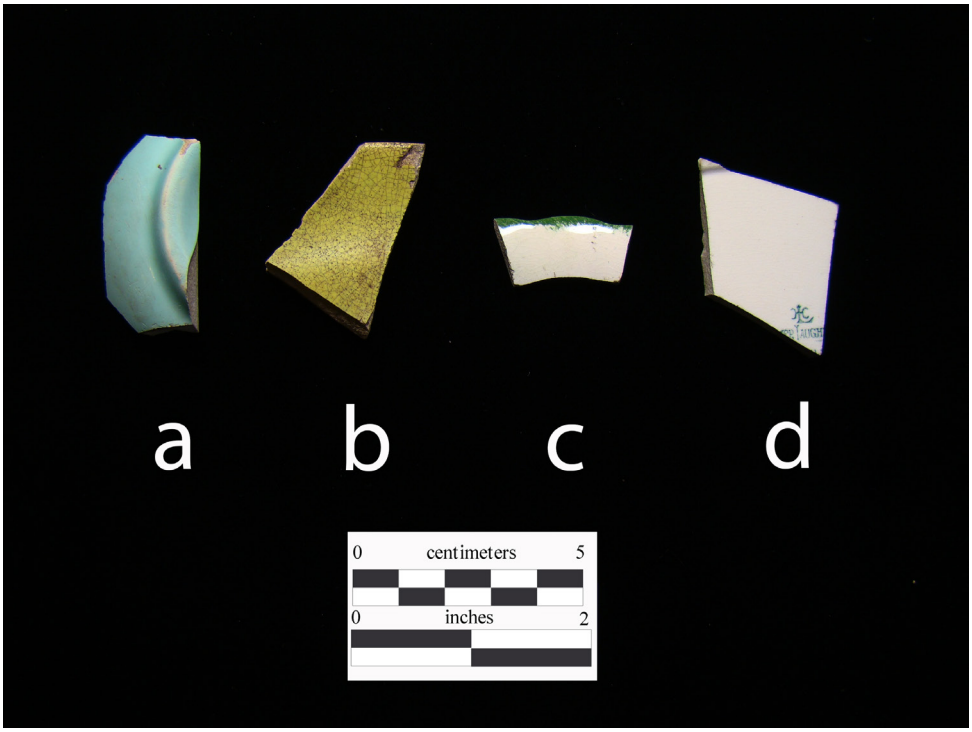


Figure 39. *Historic ceramic artifacts recovered from Site 9CR205: a) light blue glazed whiteware base; b) lime green glazed whiteware rim; c) hand painted green whiteware rim; d) undecorated whiteware base with partial Homer Laughlin maker's mark.*

Figure 40. *1952 aerial showing one structure within the recorded location of Site 9CR205 and another approximately 60 m to the east-northeast (Nationwide Environmental Title Research 2018).*

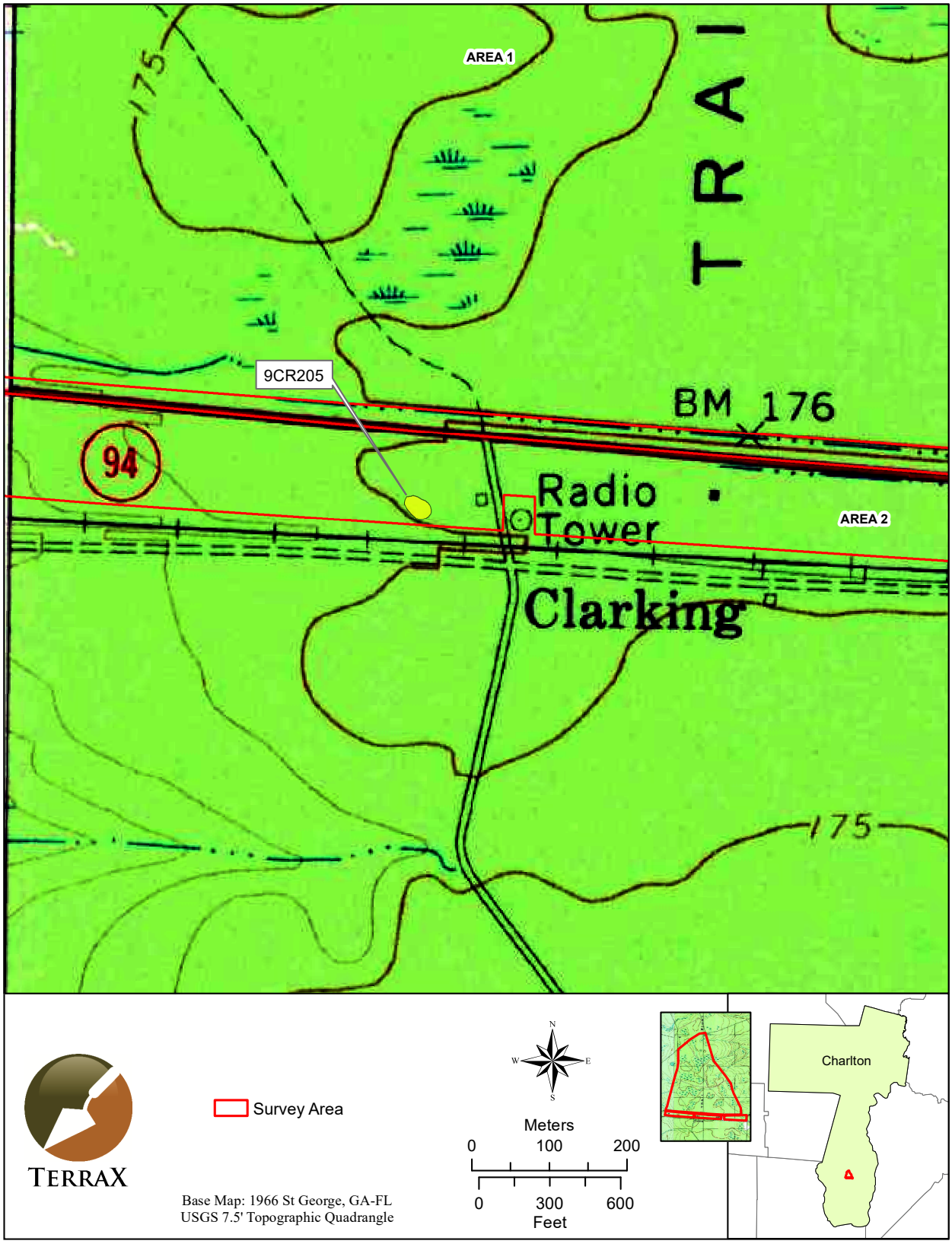


Figure 41. *1966 Saint George topographic map showing a possible outbuilding approximately 60 m east-northeast of the recorded location of Site 9CR205.*

SITE 9CR206

Site 9CR206 represents a light density historic non-aboriginal artifact scatter. The site, measuring 48-x-23 m oriented east-west, is located within a pine flatwoods environment between two intermittent wetlands in the southeastern portion of Area 1 (see Figure 16). State Road 94 lies approximately 45 m to the south. The site area, which was formally forested, has recently been logged, plowed, and replanted in pine (Figure 42).

Site 9CR206 was detected by a scatter of historic surface artifacts located around transect shovel test TR 86 ST 28. Delineation included the excavation of nine additional tests in this area; however, all were culturally sterile (Figure 43). Subsurface examinations generally exposed three strata composed of 10 to 25 cm of dark gray (10YR 4/1) sand followed by 15 to 20 cm of grayish brown (10YR 5/2) sand over a very dark grayish brown (10YR 3/2) sandy spodic layer. The water table was shallow here with tests typically becoming inundated upon reaching the spodic layer.

Visual inspections led to the recovery of all artifacts found at this site. This material included a cobalt blue Phillips Milk of Magnesia bottle (Figure 44b), a Coke bottle fragment, a colorless glass base with Anchor Hocking Glass Co. maker's mark (1938-ca. 1980), a colorless glass jar with large mouth external thread finish and Anchor Hocking Glass Co. maker's mark (1938-ca. 1980) (Figure 44a), a milk glass jar with large mouth external thread finish (Figure 44c), a colorless embossed glass base, an undecorated whiteware rim sherd (Figure 45a), and a fragment of a porcelain deer figurine (Figure 45b). Based on the artifact collection, the site appears to date to the early to mid-twentieth century.

Historic topographic maps and aerial imagery were reviewed in order to document the presence or absence of historic structures at this location. Though no structures were depicted, a road is shown passing immediately north of the site on the 1918 and 1942 Moniac, GA-FL 15' topographic maps (Figure 46 and 47). The presence of this road suggests that the artifact scatter identified here may represent historic trash dumping.

Based on a lack of intact deposits and poor integrity due to repeated logging and plowing episodes associated with pine cultivation, Site 9CR206 appears to hold no research value beyond the findings of this investigation. Consequentially, the site is recommended ineligible for NRHP consideration.

Figure 42. *View of Site 9CR206 from Transect 86 Shovel Test 28, facing east.*

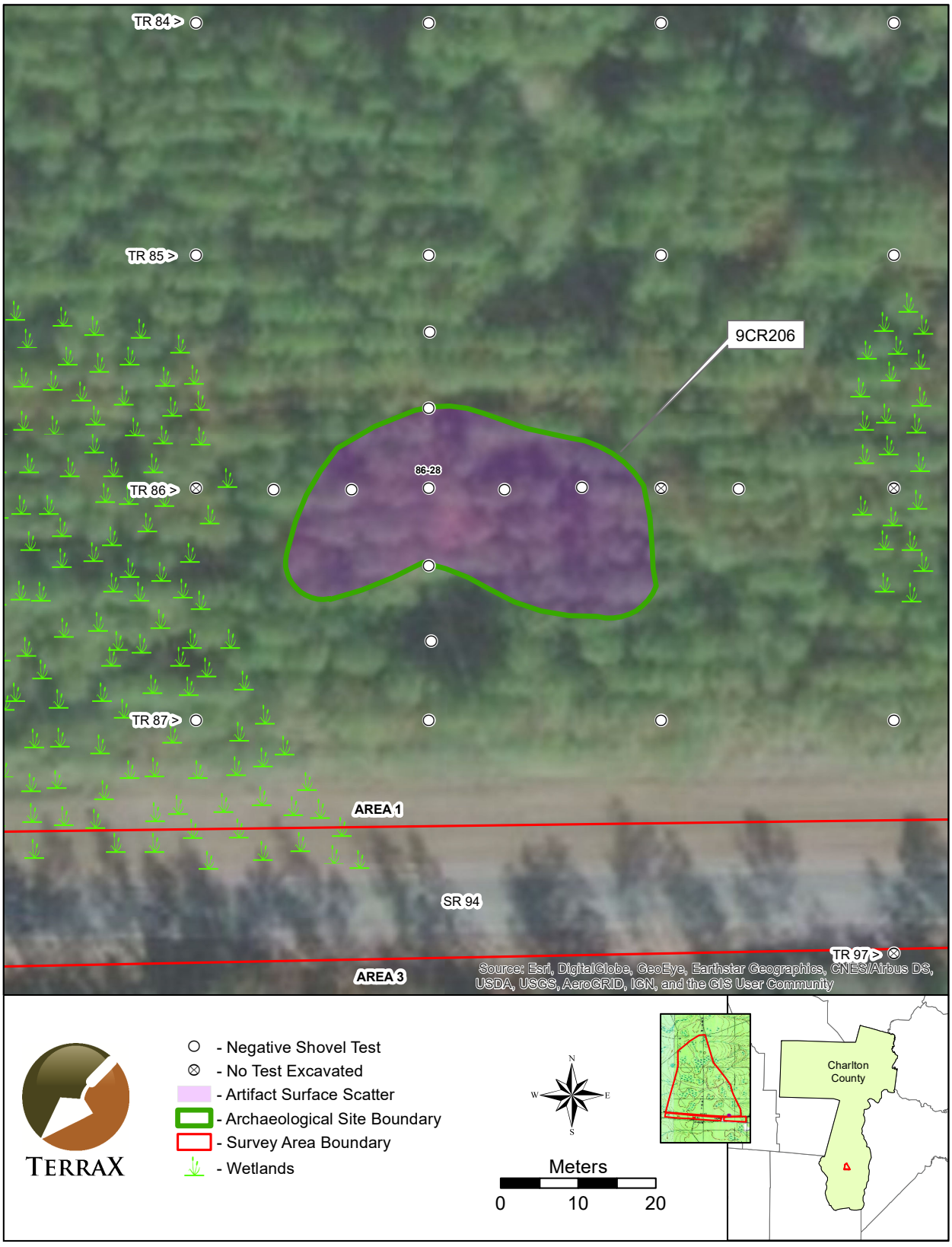


Figure 43. *Site 9CR206 detail map.*

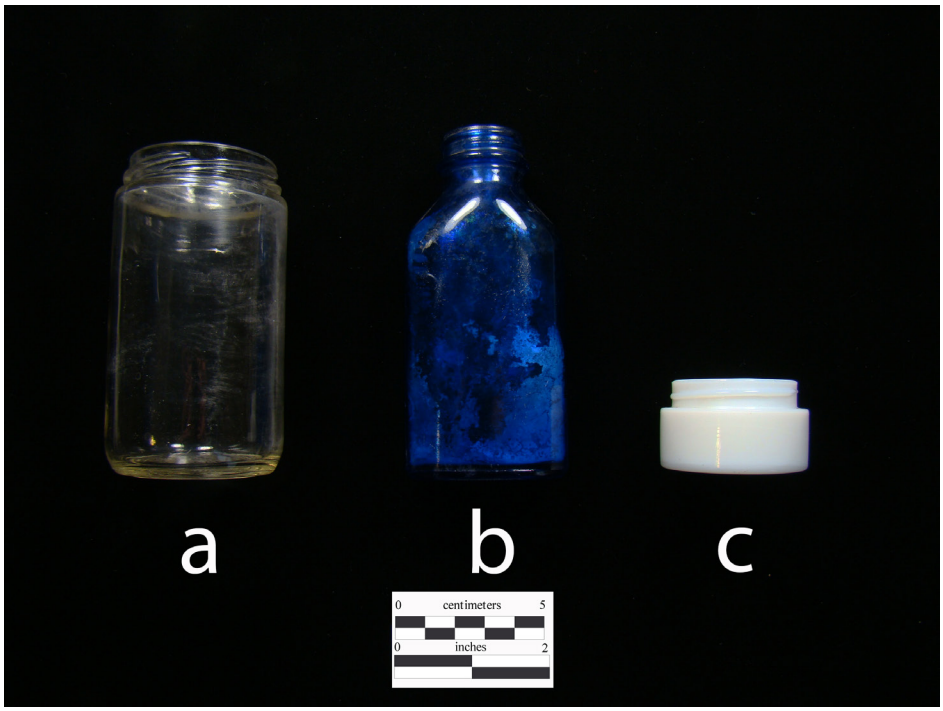


Figure 44. *Historic bottles and a jar recovered from Site 9CR206: a) colorless glass jar with large mouth external thread finish; b) cobalt blue glass Phillips Milk of Magnesia bottle with small mouth external thread finish; c) milk glass jar with large mouth external thread finish.*

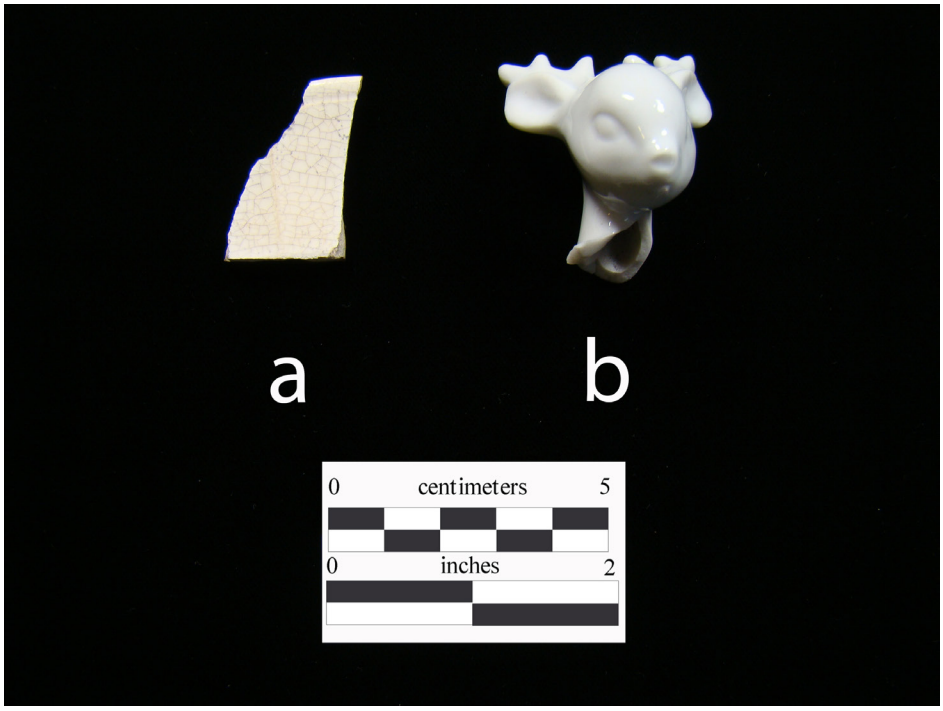


Figure 45. *Historic ceramic artifacts recovered from Site 9CR206: a) undecorated whiteware rim; b) porcelain deer figurine.*

Figure 46. *1918 Moniac topographic map showing a road immediately north of the recorded location of Site 9CR206.*

Figure 47. *1942 Moniac topographic map showing a road immediately north of the recorded location of Site 9CR206.*

Isolated Find K1

Isolated Find K1 represents an unknown aboriginal occurrence consisting of a single chert flake. The flake was found within transect shovel test TR 69 ST 70 located in the southeastern portion of Area 1 approximately 30 m west of Trail Ridge Road and 90 m east of a large wetland (see Figure 16). All shovel tests placed in this area encountered the water table between 30 to 40 cmbs. This location had recently been logged, plowed, and replanted in pine (Figure 48). In addition to pine saplings, vegetation in the area also included tall grass and palmetto. The positive shovel test exposed three strata comprised of 15 cm of very dark gray (10YR 3/1) sand followed by 10 cm of light gray (10YR 7/1) sand, which was underlain by a very dark grayish brown (10YR 3/2) sandy spodic layer that became inundated at 30 cmbs. The flake was recovered within Stratum II between 15 and 25 cmbs. Surface inspections were conducted and an additional eight shovel tests (Figure 49) were excavated during the delineation process; however, no other artifacts were encountered. By definition, isolated finds are not eligible for NRHP consideration.

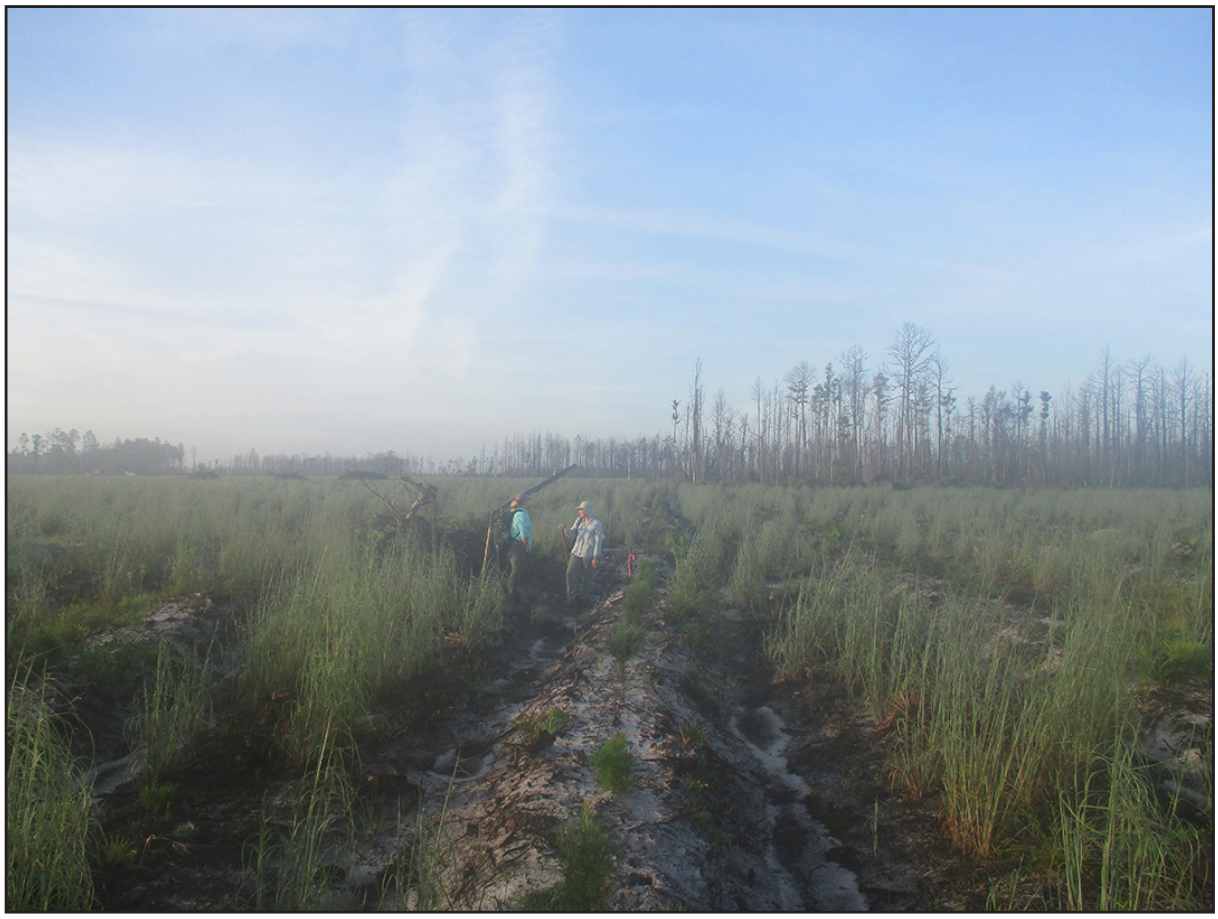


Figure 48. *View of Isolated Find K1 looking south from Transect 69 Shovel Test 70.*

Figure 49. *Isolated Find K1 detail map.*

Isolated Find K2

Isolated Find K2 consists of a single chert flake of unknown aboriginal origin. The flake was discovered on the surface of a plowed field in the southwestern portion of Area 1 approximately 10 m north of transect shovel test TR 62 ST 7 and 40 m west of a large wetland (see Figure 15). This area had recently been logged, plowed, and replanted in pine (Figure 50). Along with the pine saplings, new growth of grasses and palmetto was also present. Examinations of the surface and the placement of 11 delineation shovel tests (Figure 51) failed to recover additional artifacts. Tests excavated around the surface find typically exposed three strata comprised of 10 to 35 cm of gray (10YR 6/1) sand over 10 to 15 cm of light gray (10YR 7/1) sand, which was underlain by a very dark grayish brown (10YR 3/2) sandy spodic layer that quickly became inundated once exposed. Most tests encountered the water table within the first 30 cm of excavation. Isolated Find K2 is not eligible for NRHP inclusion.

Figure 50. *View of Isolated Find K2 looking north from Transect 62 Shovel Test 7.*

Figure 51. *Isolated Find K2 detail map.*

Isolated Find K4

Isolated Find K4 represents a single chert flake of unknown aboriginal origin. The flake was discovered within transect shovel test TR 71 ST 12, which was located in the southwestern section of Area 1 within a pine flatwoods environment (see Figure 15). Vegetation consists of planted pine intermixed with palmetto and grass (Figure 52). Furrows evidenced disturbance from plowing associated with pine cultivation. The positive shovel test revealed two strata composed of 40 cm of light gray (10YR 7/1) sand underlain by a very dark grayish brown (10YR 3/2) sandy spodic layer. All tests placed within this area encountered the water table between 25 and 35 cmbs. The flake was recovered within the top stratum between 0 and 30 cmbs. Visual inspections and eight delineation shovel tests (Figure 53) failed to locate additional cultural material. Isolated Find K4 is not eligible for NRHP inclusion.

Figure 52. *View of Isolated Find K4 looking east from Transect 71 Shovel Test 12.*

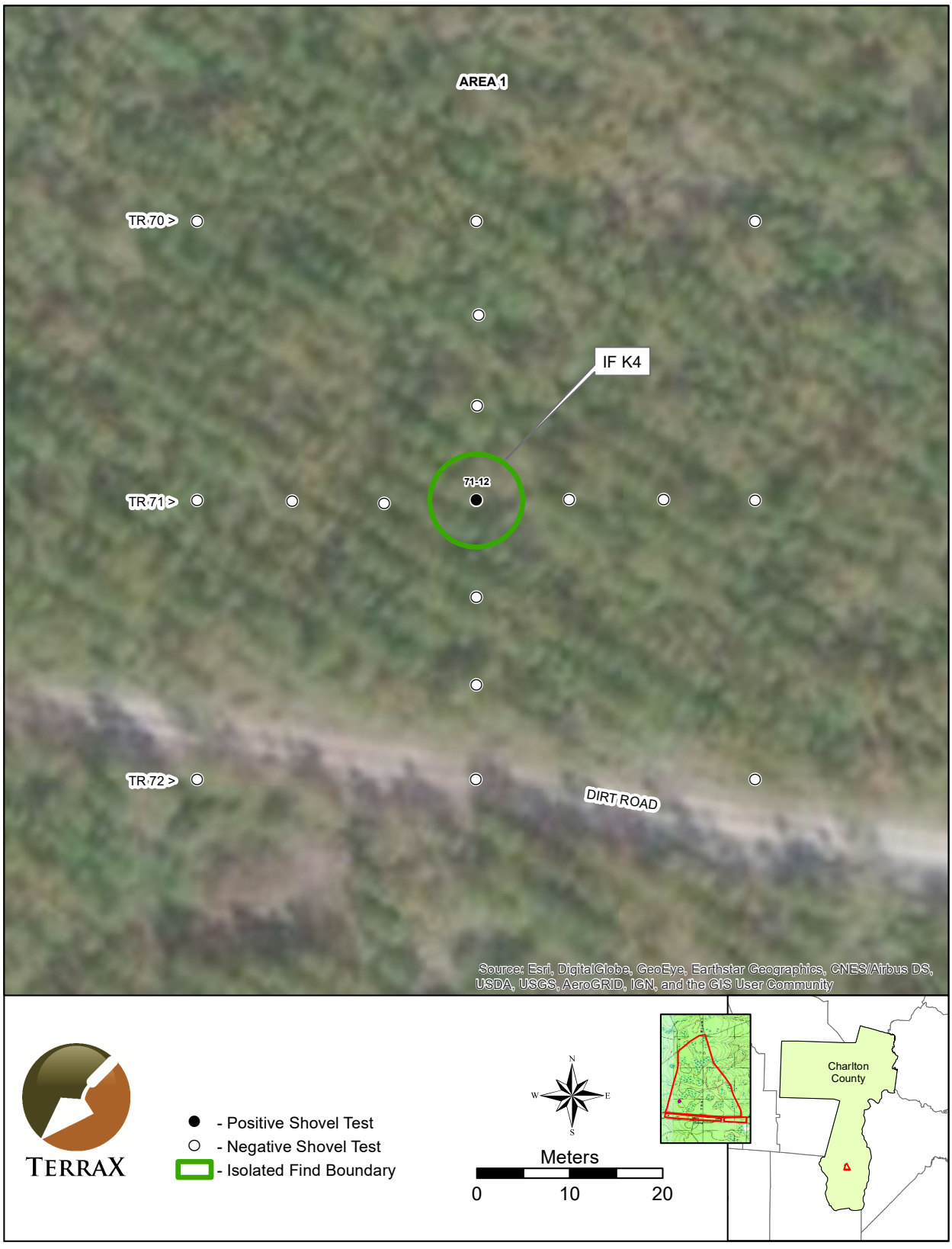


Figure 53. *Isolated Find K4 detail map.*

Isolated Find K8

Isolated Find K8 represents an unknown aboriginal occurrence consisting of a single chert flake. The flake was recovered within transect shovel test TR 80 ST 33 located in the south-central portion of Area 1 within a field approximately 170 m north of State Road 94 (see Figure 15). This location, which is bordered by wetlands to the east and west, had recently been logged, plowed, and replanted in pine (Figure 54). In addition to pine saplings, vegetation in the area also included patches of tall grass. The positive shovel test exposed two strata comprised of 35 cm of gray (10YR 5/1) sand underlain by a very dark grayish brown (10YR 3/2) sandy spodic layer. All tests placed within this area encountered the water table around 30 to 40 cmbs with the exposure of the spodic layer. The lone flake recovered was found within Stratum I between 0 and 35 cmbs. Surface inspections were conducted and an additional eight shovel tests (Figure 55) were excavated during the delineation process; however, no other artifacts were encountered. Isolated find K8 is not eligible for NRHP consideration.

Figure 54. *View of Isolated Find K8 looking south from Transect 80 Shovel Test 33.*

Figure 55. *Isolated Find K8 detail map.*

Architectural Survey Results

Due to the nature of the project (mining), the visual APE was set for the area immediately around the subject property. No NRHP-listed or eligible resources were located within the visual APE and the GNAHRGIS database (GNAHRGIS 2020) did not return any results. The area immediately around the project area is primarily cultivated timber land and no extant historic buildings are located in or adjacent to the project area. The Georgia Southern and Florida Railway lies adjacent to the southern border of the project area as does a radio tower. A modern cell tower is situated in the project area, immediately north of the radio tower on the south side of SR 94. The website historicaerials.com (Nationwide Environmental Title Research 2020) was reviewed to determine the age of the radio tower. Based on inspections of historic aerials and topographic maps, the radio tower appears to have been constructed sometime between 1963 and 1966.

The Georgia Southern and Florida Railway (GS&F) was organized as the Georgia Southern and Florida Railroad in 1885. The line was also marketed as the Suwanee River Route. The line ran between Macon and Valdosta and was extended to Palatka, Florida in 1890. By 1891 the railway was bankrupt and was reorganized as the Georgia Southern and Florida Railway in 1895. The railway continued to grow into the twentieth century, extending from Valdosta to Jacksonville, Florida. The Macon and Birmingham Railway and the Hawkinsville and Florida Southern Railway were also owned by the GS&F. By 1950, the GS&F operated 397 miles of railway and included trackage rights. The majority of the securities of the GS&F were controlled by the Southern Railway, which acquired the Norfolk Southern Railway in 1974. In 1982 Southern Railway merged with the Norfolk and Western Railway to create the modern-day Norfolk Southern, which still uses the track today (Classic Streamliners-Traincyclopedia 2020; Storey et al. 2018:63).

The railroad is eligible for NRHP inclusion under Criterion A, transportation. The property boundary for the railroad in the visual APE is the railroad ROW. No other rail-related features, such as buildings or structures associated with the railroad, are located in the visual APE. The railroad maintains its integrity as there is no indication that the track has been realigned or moved. As proposed, the current project should not have an adverse effect on the railroad.

Located adjacent to the railroad at the southern boundary of the APE is the radio tower. Based on inspections of historic aerials and topographic maps, it appears to have been constructed sometime between 1963 and 1966, first appearing on the 1966 Saint George topo. A search of the FCC database did not produce any information on the tower, only the cell tower located nearby (which was originally constructed in 1995). A call to the Charlton County Commission and the tax assessor did not produce any additional information on the radio tower. The radio tower is a lattice tower with microwave antennas attached. It is unknown if the tower is still in use, but it is in good condition and the area around it is clear of debris and vegetation.

The research did not reveal any association with events or a person or persons important to history, and therefore the tower is not eligible for NRHP inclusion under Criteria A or B. Under Criterion C, the tower is a common type found throughout Georgia, and is not an architecturally significant structure nor does it represent a major development or example of engineering. Therefore, it is the opinion of TerraX that the radio tower is not eligible for the NRHP, and the project will have no effect.

A location map showing the two identified historic resources can be found in Figure 56 while photographs of these resources are depicted in Figures 57 through 59.

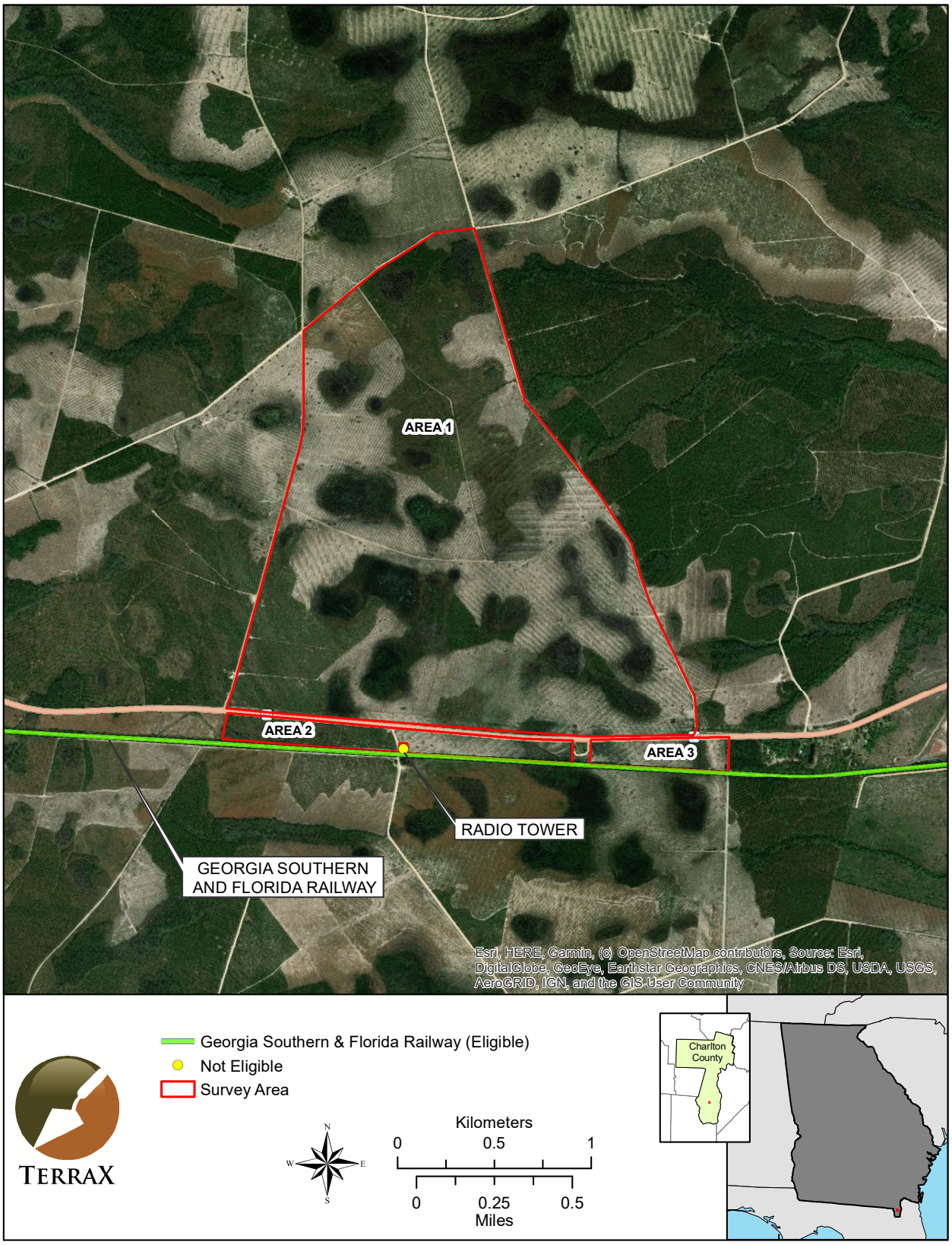


Figure 56. *Aerial map showing locations of identified historic resources.*

Figure 57. *View of Georgia Southern and Florida Railway, facing west.*

Figure 58. *Looking northwest towards the project area from the Georgia Southern and Florida Railway.*

Figure 59. *View of radio tower, facing southeast.*

Conclusions and Recommendations

TerraX, under contract with TTL, performed the Phase I cultural resource survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia in compliance with federal and state regulations. The Phase I survey was directed by Principal Investigator Shaun E. West and Field Director Matt Lyons between August 13 and September 10, 2018. Shanda Davidson served as Architectural Historian for this project.

The archaeological investigation led to the discovery of six sites (9CR201-9CR206) and four isolated finds (K1, K2, K4, and K8). Examinations of these loci identified multiple cultural components including possible Middle Archaic, post-Archaic, possible Middle Woodland (Swift Creek), unknown aboriginal, and late nineteenth to mid-twentieth century historic with unknown aboriginal and early to mid-twentieth century historic manifestations being most common. The six archaeological sites documented during the survey are listed in Table 2 along with their associated components. Based on the results of the field investigation, none of these resources are considered significant, having been heavily impacted by numerous years of repeated pine cultivation activities. All six archaeological sites are recommended ineligible for NRHP inclusion under Criterion D based on their lack of integrity.

Table 2. Site Component and Eligibility Status.

Site Number	Component	NRHP Eligibility
9CR201	Unknown Aboriginal	Ineligible
9CR202	Late Nineteenth or Early Twentieth Century	Ineligible
9CR203	Late Nineteenth or Early Twentieth Century to the Mid-Twentieth Century; Possible Middle Archaic; Post-Archaic; Possible Middle Woodland (Swift Creek)	Ineligible
9CR204	Mid-Twentieth Century	Ineligible
9CR205	Mid-Twentieth Century	Ineligible
9CR206	Early to Mid-Twentieth Century	Ineligible

The architectural survey identified two historic resources within the visual APE. These include the Georgia Southern and Florida Railway and a radio tower. Of these two resources, only the railroad is considered significant. The Georgia Southern and Florida Railway is eligible for NRHP inclusion under Criterion A, transportation. The property boundary for the railroad in the visual APE is the railroad ROW. No other rail-related features, such as buildings or structures associated with the railroad, are located in the visual APE. The railroad maintains its integrity as there is no indication that the track has been realigned or moved. As a fluid resource designed to provide transportation for both people and freight, it is expected that the setting and materials of the railroad would change over time. In general, areas that were at one time rural have become suburban with residential and commercial growth, and to maintain the safety and viability of the track the materials have been replaced over time. Because of the changing nature of the setting and materials of the railroad, it is the route that retains integrity and should not be altered. For these reasons, the project as proposed will not cause an adverse visual effect on the GS&F Railroad, but TerraX recommends avoidance of the railroad during the duration of the project. Avoidance of the railroad refers to any construction or

activity that would disturb, alter, or realign the track. General use of the track for bringing in or carrying out materials or equipment would be permissible.

Based on this study, it is TerraX's opinion that no significant cultural resources will be adversely effected by the proposed mining project. Accordingly, TerraX recommends clearance for this project in regards to cultural resource concerns.

In conclusion, there is always the possibility of undetected cultural resources such as graves or other cultural features not discovered through standard survey methods. In the unlikely event that burials or cultural features are revealed during the course of the proposed mining project, all work should be halted and archaeologists with the U.S. Army Corps of Engineers, Savannah District and the Georgia State Historic Preservation Office should be alerted of the discovery.

References

Alchian, Linda K.
2012 Spanish Explorers of the Elizabethan Age. Elizabethan Era website. Electronic document, http://www.elizabethan-era.org.uk/spanish-explorers.htm, accessed April 10, 2018.

Anderson, David G.
1990 Paleoindian Colonization of Eastern North America: A View from the Southeastern United States. In *Early Paleoindian Economies of Eastern North America*, edited by Kenneth Tankersley and Barry Isaac, pp. 163–216. JAI Press, Greenwich.

1996 Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *The Paleoindian and Early Archaic Southeast*, edited By David G. Anderson and Kenneth E. Sassaman, pp. 29–57. The University of Alabama Press, Tuscaloosa.

Anderson, David G., Michael Russo, and Kenneth E. Sassaman
2007 Mid-Holocene Cultural Dynamics in Southeastern North America. In *Climate Change and Cultural Dynamics: A Global Perspective on Mid-Holocene Transitions*, edited by David G. Anderson, Kirk A. Maasch, and Daniel H. Sandweiss pp. 457-489.

Caldwell, Joseph R.
1958 *Trend and Tradition in the Prehistory of the Eastern United States*. Memoir 88. American Anthropological Association, Menasha.

1964 Interaction Spheres in Prehistory. In *Hopewellian Studies*, edited by Joseph R. Caldwell and Robert L. Hall, pp. 133-143. Illinois State Museum, Scientific Paper 12(6), Springfield.

Chapman, Jefferson
1985 Archaeology and the Archaic Period in the Southern Ridge-and-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens, Jr. and H. Trawick Ward, pp. 137-153. The University of Alabama Press, Tuscaloosa, Alabama.

Clark, William Z. Jr. and Arnold C. Zisa
1976 Physiographic Map of Georgia. Georgia Department of Natural Resources.

Classic Streamliners-Traincyclopedia
2020 *Georgia Southern and Florida Railways*. Electronic document, https://www.classicstreamliners.com/rr-gs-f.html.

2020 The Norfolk Southern Railway (1881-1974). Electronic document, https://www.classicstreamliners.com/rr-ns-.html.

Cobb, James C., and John C. Inscoe
2017 Georgia History: Overview, New Georgia Encyclopedia. Electronic document, http://www.georgiaencyclopedia.org/articles/history-archaeology/georgia-history-overview, accessed April 19, 2018.

Cohen, A.D., M.J. Andrejko, William Spackman, and Dorothy Corvinis
1984 Peat Deposits of the Okefenokee Swamp. In, *The Okefenokee Swamp: Its Natural History, Geology, and Geochemistry*, edited by A.D. Cohen, D.J. Casagrande, M.J. Andrejko, and G.R. Best, pp. 493-553. Wetland Surveys, Los Alamos.

Delcourt, Paul A.
1980 Goshen Springs: Late Quaternary Vegetation Record for South Alabama. *Quaternary Research* 19:265-271.

Elliott, Daniel T., and Kenneth E. Sassaman
1995 *Archaic Period Archaeology on the Georgia Coastal Plain and Coastal Zone*. University of Georgia, Laboratory of Archaeology Series Report Number 35. Athens, Georgia.

Elliott, Daniel T., Jeffrey L. Holland, Phil Thomason, Michael Emrick, and Richard W. Stoops, Jr.
1995 *Historic Preservation Plan for the Cultural Resources on U.S. Army Installations at Fort Benning Military Reservation, Chattahoochee and Muscogee Counties, Georgia and Russell County, Alabama*. Garrow and Associates, Inc., Atlanta. Submitted to the National Park Service, Atlanta.

Faught, Michael K.
2008 Archaeological Roots of Human Diversity in the New World: A Compilation of Accurate and Precise Radiocarbon Ages from Earliest Sites. *American Antiquity* 73(4):670–698.

Georgia Council of Professional Archaeologists
2014 Georgia Standards and Guidelines for Archaeological Surveys. Electronic document, http://georgia-archaeology.org/GCPA/standards_for_survey/, accessed August 3, 2018.

Georgia's Natural, Archaeological, and Historic Resources GIS
2020 GNAHRGIS database. Database information compiled by Georgia's Historic Preservation Division in cooperation with the Georgia Archaeological Site File. Available online at https://www.gnahrgis.org/gnahrgis/index.do, accessed August 3, 2018.

Hally, David J., and James L. Rudolph
1986 *Mississippi Period Archaeology of the Georgia Piedmont*. Laboratory of Archaeology Series, Report No. 24. University of Georgia, Athens.

Hodler, Thomas W. and Howard A. Schretter
1986 *The Atlas of Georgia*. University of Georgia Press, Athens, Georgia.

Jackson, Edwin L.
2016 James Oglethorpe (1696–1785), *New Georgia Encyclopedia*. Electronic document, http://www.georgiaencyclopedia.org/articles/government-politics/james-oglethorpe-1696-1785, accessed May 19, 2017.

Kirkland, S. Dwight and Fred C. Cook
2007 *Cultural Resource Assessment of Okefenokee National Wildlife Refuge Following the 2007 Wildfires*. Report prepared by Southeastern Horizons, Inc. Report submitted to the U.S. Fish and Wildlife Service- Southeast Region, Savannah, Georgia.

Ledbetter, R. Jerald, Scott Jones, and Lisa D. O'Steen
2009 *The Late Archaic to Early Woodland Transition in Northwest Georgia: Evidence for Terminal Archaic (ca. 1100-600 B.C.) Period Occupation in the Region*. Georgia Department of Transportation Occasional Papers in Cultural Resource Management 14. Report prepared by Southeastern Archaeological Services, Athens, Georgia.

McQueen, Alex S.
1932 Trader's Hill (Fort Alert). In, *History of Charlton County*. Electronic document, http://www.charltoncountyarchives.org/trader'shill.html, accessed June 24, 2018.

National Park Service
2020 National Register of Historic Places. Department of the Interior, Washington, D.C. Electronic document available online at http://www.nps.gov/nr/research/, accessed August 3, 2018.

Nationwide Environmental Title Research
2020 Historic and Modern Aerial Photography and Topographic Maps. Electronic document, https//historicaerials.com/.

Pitblado, Bonnie L.
2011 A Tale of Two Migrations: Reconciling Recent Biological and Archaeological Evidence for the Pleistocene Peopling of the Americas. *Journal of Archaeological Research* 19(4):327–375.

RailGa.com
2018 Atlantic, Valdosta & Western Railway. Electronic document, https://railga.com/atval.html, accessed August 6, 2018.

Sassaman, Kenneth E., and David G. Anderson
2004 Late Holocene Period, 3750 to 650 B.C. In *Handbook of North American Indians*, Volume 14, Southeast. Edited by Raymond D. Fogelson, pp. 101-114. Smithsonian Institution, Washington, D.C.

Seabrook, Charles
2017 *Lower Coastal Plain and Coastal Islands*. New Georgia Encyclopedia. Available online at https://www.georgiaencyclopedia.org/articles/geography-environment/lower-coastal-plain-and-coastal-islands, accessed August 2, 2018.

Schnell, Frank T., and Newell O. Wright, Jr.
1993 *A Cultural Resources Background Survey and Archaeological Reconnaissance at Eufaula National Wildlife Refuge, Georgia and Alabama. 2 Volumes*. Columbus Museum of Arts and Sciences, Columbus, Georgia. Submitted to Heritage Conservation and Recreation Service, Interagency Archaeological Services, Atlanta.

Storey, Steve, David Ray, Matt McDaniel, Regina Schuster, Tish Stultz, Erin Murphy, George Rounds, Chris Mroczka, Patricia Stallings, and Mike Reynolds
2018 *Georgia's Railroads, 1833-2015: Historic Context and Statewide Survey*. Prepared by CALYX Engineers and Consultants, VHB, Brockington & Associates, and the Georgia Department of Transportation.

Trowell, Chris T.
1998a *Indians in the Okefenokee: Their History and Prehistory*. Special Publication No. 2, Okefenokee Wildlife League, Inc., Route 2, Box 3330, Folkston, Georgia 31537.

1998b *Life on the Okefenokee Frontier*. Special Publication No. 2, Okefenokee Wildlife League, Inc., Route 2, Box 3330, Folkston, Georgia 31537.

Walthall, John A.
1980 *Prehistoric Indians of the Southeast, Archaeology of Alabama and the Middle South*. University of Alabama Press, Tuscaloosa, Alabama.

Watts, W. A.
1969 A Pollen Diagram from Mud Lake, Marion County, North-Central Florida. *Geological Society of America Bulletin* 80:631-642.

1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52(4):676-690.

1980 The Late-Quaternary Vegetation History of the Southeastern United States. *Annual Review of Ecology and Systematics* 11:387-409.

1983 Vegetational History of the Eastern United States 25,000 to 10,000 Years Ago. In *Late-Quaternary Environments of the United States. The Late Pleistocene*, vol. 1, edited by H.E. Wright and S.C. Porter, pp. 294-310. University of Minnesota Press.

1992 Camel Lake: A 40,000 Year Record of Vegetational and Forest History from Northwest Florida. *Ecology* 73(3):1056-1066.

Watts, W.A., Eric C. Grimm, and T.C. Hussey
1996 Mid-Holocene Forest History of Florida and the Coastal Plain of Georgia and South Carolina. In *Archaeology of the Mid-Holocene Southeast*, edited by Kenneth E. Sassaman and David G. Anderson, pp. 28-38. University Presses of Florida, Gainesville.

Web Soil Survey
2018 Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Available online at http://websoilsurvey.nrcs.usda.gov/, accessed August 2, 2018.

Weisman, Russell M., S. Dwight Kirkland, and John E. Worth
1998 *An Archaeological Reconnaissance of Trail Ridge Charlton County, Georgia*. Prepared by Southern Research, Ellerslie, Georgia. Submitted to Golder and Associates, Inc., Atlanta, Georgia.

Willey, Gordon R., and Philip Phillips
1958 *Method and Theory in American Archaeology*. University of Chicago Press, Chicago, Illinois.

Williams, Mark and Gary Shapiro
1990 *Lamar Archaeology: Mississippian Chiefdoms in the Deep South*. University of Alabama Press, Tuscaloosa, Alabama.

Williams, Mark, and Victor Thompson
1999 A Guide to Georgia Indian Pottery Types. *Early Georgia*. Volume 27, Number 1, Society for Georgia Archaeology, Athens, Georgia.

Appendix A
Curation Letter

TROY UNIVERSITY

Archaeological
Research Center

Date: December 9,2019

Paul Jackson
TerraXplorations
3523 18th Ave NE
Tuscaloosa, Alabama 35406

Dear Paul,

As per your request, this letter is to confirm our standing agreement with you to provide curation services to TerraXplorations on an as-needed basis. As you know, we are recognized by a variety of Federal agencies as a repository meeting the standards in 36 CFR Part 79 and have formal agreements to provide curation under these guidelines to multiple federal agencies such as the Army National Guard and Natural Resources Conservation Service.

Please be advised that once a year we must be notified of all reports in which we were named as the repository. Project collections must be submitted within one calendar year of completion. Small projects may be complied for periodic submission. The AHC survey policy specifies which materials must be curated (Administrative Code of Alabama, Chapter 460-X-9). Renewal of this agreement is contingent upon compliance.

We appreciate this opportunity to be of assistance and look forward to working with you in the future.

Sincerely,

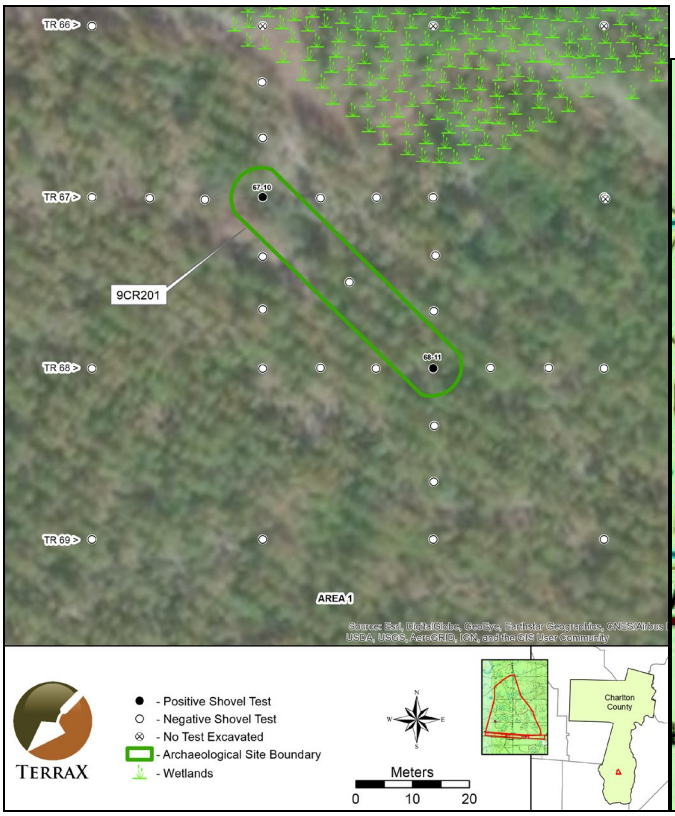
Jason Mann
Director
Archeological Research Center
Troy University

Appendix B
Georgia State Site Forms

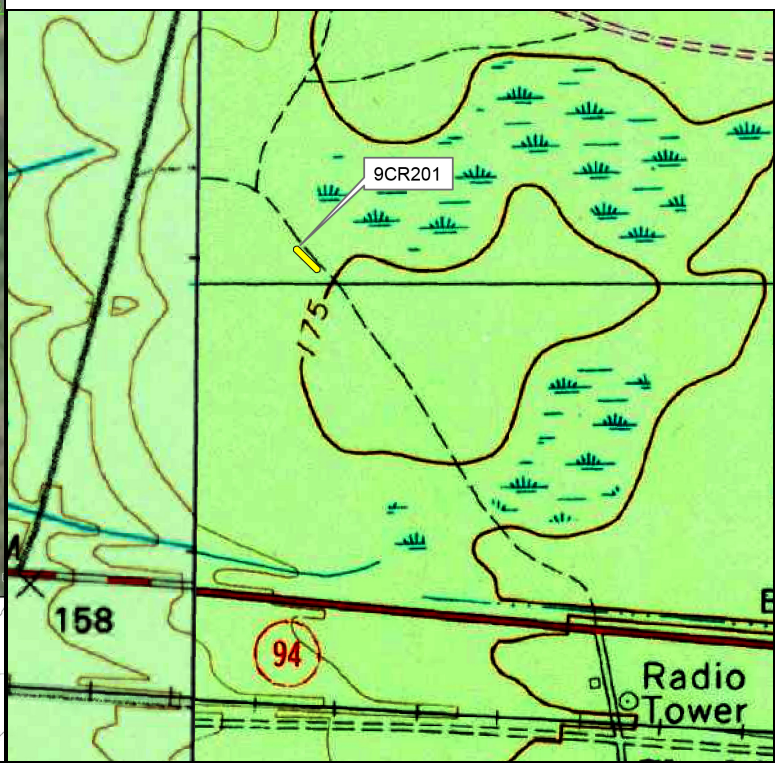
GEORGIA ARCHAEOLOGICAL SITE FORM
1999
Official Site Number: 9CR201

Institutional Site Number: K3 **Site Name:**
County: Charlton **Map Name:** St. George, GA-FL USGS
UTM Zone: 17 N **UTM East:** 392230 **UTM North:** 3377040
Owner: **Address:**
Site Length: 53 meters **Width:** 10 meters **Elevation:** + - 51.8 meters
Orientation: 1.N-S 2.E-W 3.NE-SW 4.NW-SE 5.Round 6.Unknown
Kind of Investigation: 1.Survey 2.Testing 3.Excavation 4.Documentary 5.Hearsay 6.Unknown 7.Amateur
Standing Architecture: 1.Present 2.Absent
Site Nature: 1.Plowzone 2.Subsurface 3.Both 4.Only Surface Known 5.Unknown 6.Underwater
Midden: 1.Present 2.Absent 3.Unknown **Features:** 1.Present 2.Absent 3.Unknown
Percent Disturbance: 1.None 2. Greater than 50 3.Less than 50 4.Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.): Sparse Lithic Scatter
Topography (Ridge, Terrace, etc.): Pine flatwoods
Current Vegetation (Woods, Pasture, etc.): Planted pines interspersed with understory of palmetto, brush, and grass.

Additional Information: The site consists of a sparse lithic scatter discovered within two positive shovel tests next to a wetland. Subsequent delineation tests and surface inspections failed to locate additional cultural material.



SKETCH MAP
(Include sites, roads, streams, landmarks)



OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9CR201 **Institutional Site No.:** K3

Public Status: 1.National Historic Landmark 2.National Natural Landmark 3.Georgia Register 4.Georgia Historic Trust 5.HABS 6.HAER

National Register Standing: 1.Determined Eligible 2.Recommended Ineligible 3.Recommended Eligible 4.Nominated 5.Listed 6.Unknown 7.Removed

National Register Level of Significance: 1.Local 2.State 3.National

Preservation State(Select up to Two): 1.Undisturbed 2.Cultivated 3.Eroded 4.Submerged 5.Lake Flooded 6.Vandalized 7.Destroyed 8.Redeposited 9.Graded 10.Razed

Preservation Prospects: 1.Safe 2.Endangered by: Proposed Mining 3.Unknown

RECORD OF INVESTIGATIONS

Supervisor: Matt Lyons **Affiliation:** TerraXplorations, Inc.

Date: 9/7/18

Report Title: A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia

Artifacts Collected: 3 chert flakes

Location of Collections: Archaeological Research Center, Troy University, Troy, AL

Location of Field Notes: Archaeological Research Center, Troy University, Troy, AL

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods:

Unknown Aboriginal

Phases:

FORM PREPARATION AND REVISION

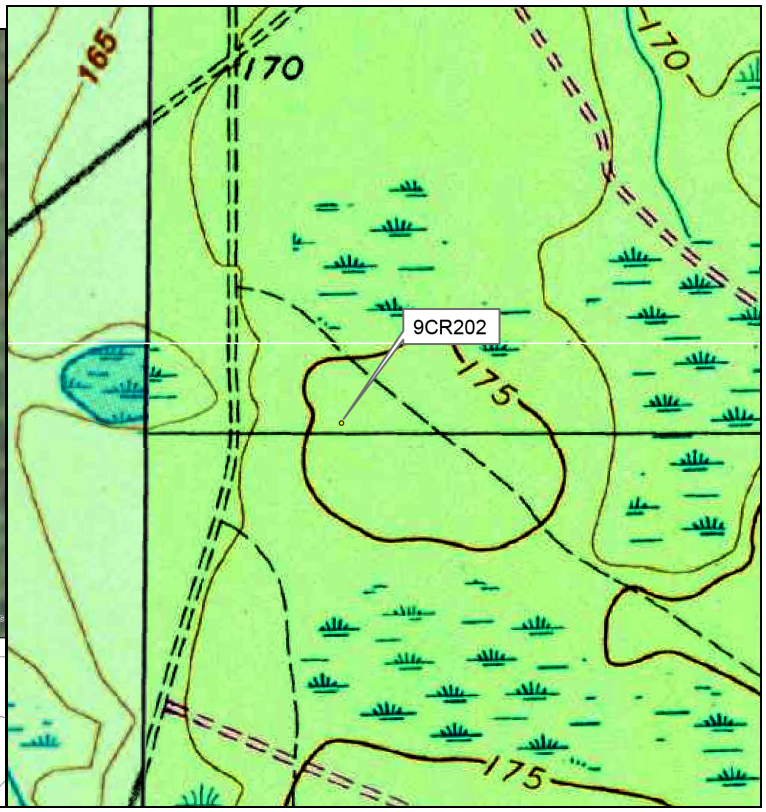
Date	Name	Institutional Affiliation
10/12/18	Kenny Pearce	TerraXplorations, Inc.

GEORGIA ARCHAEOLOGICAL SITE FORM
1999
Official Site Number: 9CR202

Institutional Site Number: K5 **Site Name:**
County: Charlton **Map Name:** St. George, GA-FL USGS
UTM Zone: 17 N **UTM East:** 392346 **UTM North:** 3378010
Owner: **Address:**
Site Length: 5 meters **Width:** 5 meters **Elevation:** + - 53.3 meters
Orientation: 1.N-S 2.E-W 3.NE-SW 4.NW-SE 5.Round 6.Unknown
Kind of Investigation: 1.Survey 2.Testing 3.Excavation 4.Documentary 5.Hearsay 6.Unknown 7.Amateur
Standing Architecture: 1.Present 2.Absent
Site Nature: 1.Plowzone 2.Subsurface 3.Both 4.Only Surface Known 5.Unknown 6.Underwater
Midden: 1.Present 2.Absent 3.Unknown **Features:** 1.Present 2.Absent 3.Unknown
Percent Disturbance: 1.None 2. Greater than 50 3.Less than 50 4.Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.): Historic ceramic scatter
Topography (Ridge, Terrace, etc.): Pine flatwoods
Current Vegetation (Woods, Pasture, etc.): Recently planted pines and tall grass

Additional Information: This site consists of a light surface scatter of Albany slipped stoneware sherds (n=7), possibly from the same vessel. Delineation shovel testing and visual inspections in this area failed to locate additional artifacts. The area has been significantly disturbed by numerous years of repeated pine cultivation activities.

SKETCH MAP
(Include sites, roads, streams, landmarks)



OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9CR202 **Institutional Site No.:** K5

Public Status: 1.National Historic Landmark 2.National Natural Landmark 3.Georgia Register 4.Georgia Historic Trust 5.HABS 6.HAER

National Register Standing: 1.Determined Eligible 2.Recommended Ineligible 3.Recommended Eligible 4.Nominated 5.Listed 6.Unknown 7.Removed

National Register Level of Significance: 1.Local 2.State 3.National

Preservation State(Select up to Two): 1.Undisturbed 2.Cultivated 3.Eroded 4.Submerged 5.Lake Flooded 6.Vandalized 7.Destroyed 8.Redeposited 9.Graded 10.Razed

Preservation Prospects: 1.Safe 2.Endangered by: Proposed Mining 3.Unknown

RECORD OF INVESTIGATIONS

Supervisor: Matt Lyons **Affiliation:** TerraXplorations, Inc.

Date: 9/8/18

Report Title: A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia

Artifacts Collected: Albany slipped stoneware sherds (n=7)

Location of Collections: Archaeological Research Center, Troy University, Troy, AL

Location of Field Notes: Archaeological Research Center, Troy University, Troy, AL

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods:

Late 19th/Early 20th Century Historic

Phases:

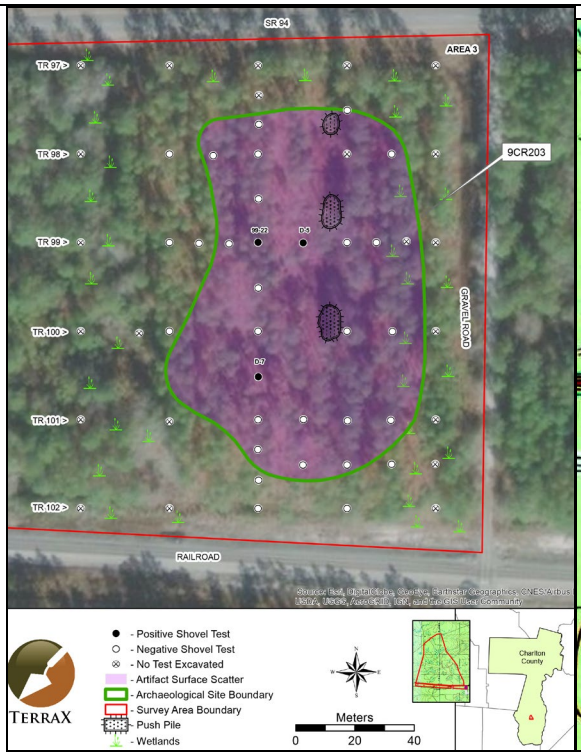
FORM PREPARATION AND REVISION

Date	Name	Institutional Affiliation
10/12/18	Kenny Pearce	TerraXplorations, Inc.

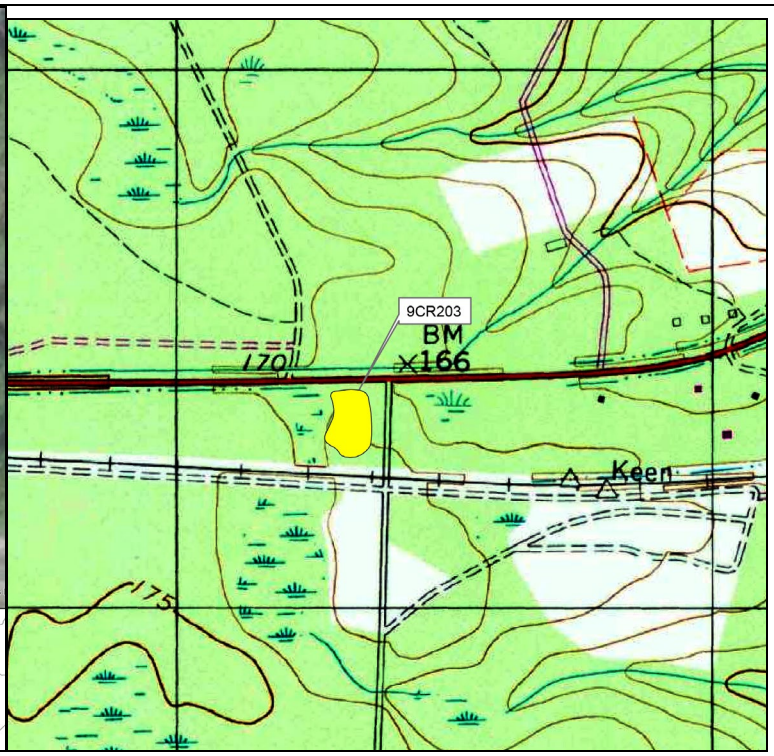
GEORGIA ARCHAEOLOGICAL SITE FORM
1999
Official Site Number: 9CR203

Institutional Site Number: K6 **Site Name:**
County: Charlton **Map Name:** St. George, GA-FL USGS
UTM Zone: 17 N **UTM East:** 394332 **UTM North:** 3376340
Owner: **Address:**
Site Length: 125 meters **Width:** 85 meters **Elevation:** + - 51.8 meters
Orientation: 1.N-S 2.E-W 3.NE-SW 4.NW-SE 5.Round 6.Unknown
Kind of Investigation: 1.Survey 2.Testing 3.Excavation 4.Documentary 5.Hearsay 6.Unknown 7.Amateur
Standing Architecture: 1.Present 2.Absent
Site Nature: 1.Plowzone 2.Subsurface 3.Both 4.Only Surface Known 5.Unknown 6.Underwater
Midden: 1.Present 2.Absent 3.Unknown **Features:** 1.Present 2.Absent 3.Unknown
Percent Disturbance: 1.None 2. Greater than 50 3.Less than 50 4.Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.): House site and aboriginal artifact scatter
Topography (Ridge, Terrace, etc.): Pine flatwoods
Current Vegetation (Woods, Pasture, etc.): Area had recently been logged, plowed, and planted in pine. New growth included grass and low brush.

Additional Information: This is a multicomponent site consisting of a late 19th/early 20th century to mid-20th century house site and light density aboriginal artifact scatter with possible Middle Archaic and Middle Woodland components. It lies immediately south of State Road 94, west of a gravel road, and north of the Georgia Southern and Florida Railway. It has been significantly disturbed by past silviculture activities. Both the 1918 and 1942 Moniac, GA-FL 15' topo maps show a single structure at this location. This structure appears to have been razed prior to 1966 as it is not depicted on the 1966 St. George, GA-FL 7.5' topo map.



SKETCH MAP
(Include sites, roads, streams, landmarks)



OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9CR203 **Institutional Site No.:** K6

Public Status: 1.National Historic Landmark 2.National Natural Landmark 3.Georgia Register 4.Georgia Historic Trust 5.HABS 6.HAER

National Register Standing: 1.Determined Eligible 2.Recommended Ineligible 3.Recommended Eligible 4.Nominated 5.Listed 6.Unknown 7.Removed

National Register Level of Significance: 1.Local 2.State 3.National

Preservation State(Select up to Two): 1.Undisturbed 2.Cultivated 3.Eroded 4.Submerged 5.Lake Flooded 6.Vandalized 7.Destroyed 8.Redeposited 9.Graded 10.Razed

Preservation Prospects: 1.Safe 2.Endangered by: Proposed Mining 3.Unknown

RECORD OF INVESTIGATIONS

Supervisor: Matt Lyons **Affiliation:** TerraXplorations, Inc.

Date: 9/6/18

Report Title: A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia

Artifacts Collected: Container glass (amber, amethyst, aqua, cobalt blue, clear, green, and milk), yellow glass plate fragment, whiteware (annular banded, pink glazed, and undecorated), undecorated porcelain, white annular banded yellowware, terracotta herty cup fragment, brick fragment, possible Bakers Creek point, possible Stanly Stemmed point, and plain sand-tempered sherds.

Location of Collections: Archaeological Research Center, Troy University, Troy, AL

Location of Field Notes: Archaeological Research Center, Troy University, Troy, AL

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods:

Possible Middle Archaic, Possible Middle Woodland, and Late 19th/Early 20th Century to Mid-20th Century

Phases:

Possible Swift Creek

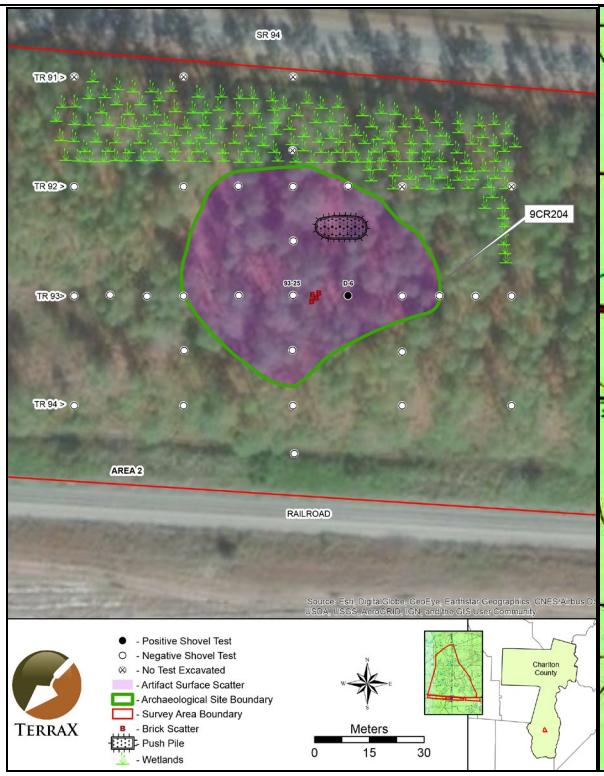
FORM PREPARATION AND REVISION

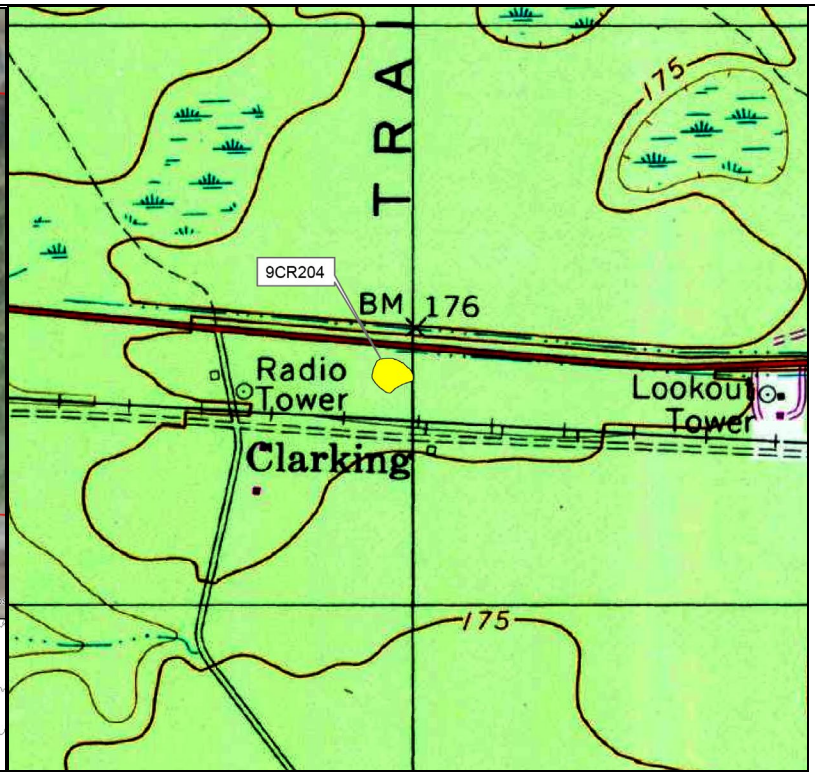
Date	Name	Institutional Affiliation
10/12/18	Kenny Pearce	TerraXplorations, Inc.

GEORGIA ARCHAEOLOGICAL SITE FORM
1999
Official Site Number: 9CR204

Institutional Site Number: K7 **Site Name:**
County: Charlton **Map Name:** St. George, GA-FL USGS
UTM Zone: 17 N **UTM East:** 392968 **UTM North:** 3376400
Owner: **Address:**
Site Length: 70 meters **Width:** 60 meters **Elevation:** + - 53.3 meters
Orientation: 1.N-S 2.E-W 3.NE-SW 4.NW-SE 5.Round 6.Unknown
Kind of Investigation: 1.Survey 2.Testing 3.Excavation 4.Documentary 5.Hearsay 6.Unknown 7.Amateur
Standing Architecture: 1.Present 2.Absent
Site Nature: 1.Plowzone 2.Subsurface 3.Both 4.Only Surface Known 5.Unknown 6.Underwater
Midden: 1.Present 2.Absent 3.Unknown **Features:** 1.Present 2.Absent 3.Unknown
Percent Disturbance: 1.None 2. Greater than 50 3.Less than 50 4.Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.): Historic House Site
Topography (Ridge, Terrace, etc.): Pine flatwoods
Current Vegetation (Woods, Pasture, etc.): The site area had recently been logged, plowed, and replanted in pine.

Additional Information: It consists of a historic house site located just south of SR 94 and north of the Georgia Southern and Florida Railway. The site has been heavily disturbed by repeated pine cultivation activities. Evidence of the site consisted of an artifact scatter mostly confined to the surface with only one positive shovel test being recorded. No intact structural remains were observed. Historic aerials indicate that the former house was built sometime between 1952 and 1963. A 1963 aerial depicts the house and a small outbuilding off its southwest corner. The 1966 St. George, GA-FL 7.5' topo map also depicts the house but does not show the small outbuilding. A subsequent aerial from 1970 no longer shows the house or outbuilding and by 1993 the site area was forested.





SKETCH MAP
(Include sites, roads, streams, landmarks)

OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9CR204 **Institutional Site No.:** K7

Public Status: 1.National Historic Landmark 2.National Natural Landmark 3.Georgia Register 4.Georgia Historic Trust 5.HABS 6.HAER

National Register Standing: 1.Determined Eligible 2.Recommended Ineligible 3.Recommended Eligible 4.Nominated 5.Listed 6.Unknown 7.Removed

National Register Level of Significance: 1.Local 2.State 3.National

Preservation State(Select up to Two): 1.Undisturbed 2.Cultivated 3.Eroded 4.Submerged 5.Lake Flooded 6.Vandalized 7.Destroyed 8.Redeposited 9.Graded 10.Razed

Preservation Prospects: 1.Safe 2.Endangered by: Proposed Mining 3.Unknown

RECORD OF INVESTIGATIONS

Supervisor: Matt Lyons **Affiliation:** TerraXplorations, Inc.

Date: 9/7/18

Report Title: A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia

Artifacts Collected: Container glass (amber, amethyst, aqua, cobalt blue, clear, green, olive green, and red), soda bottles (Coke, Grapette, Pepsi, and Royale Crown), a Phillips Milk of Magnesia bottle, whiteware, a terracotta herty cup fragment, a brick fragment, lug wrench, brass cigarette lighter base.

Location of Collections: Archaeological Research Center, Troy University, Troy, AL

Location of Field Notes: Archaeological Research Center, Troy University, Troy, AL

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods:

Mid-20th Century

Phases:

FORM PREPARATION AND REVISION

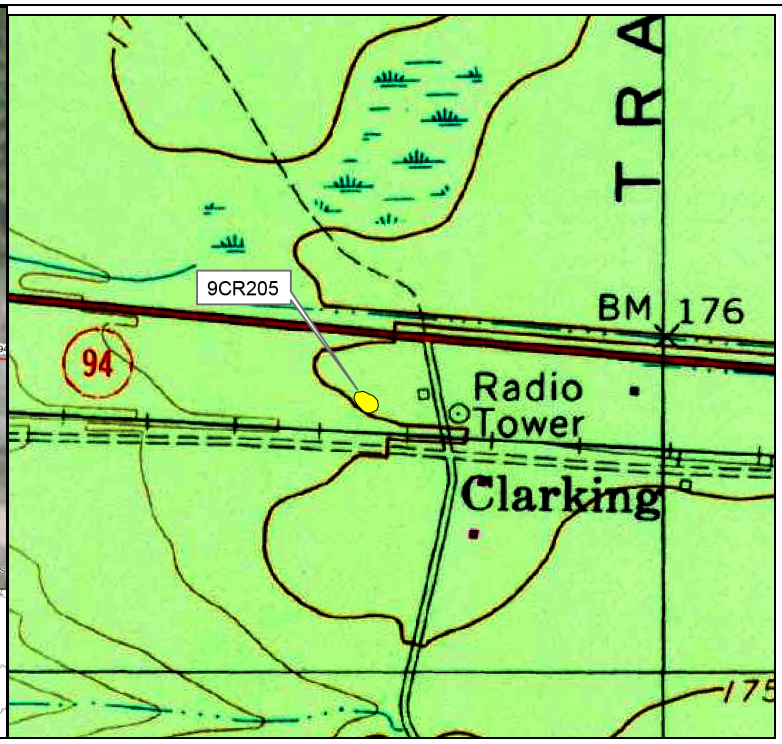
Date	Name	Institutional Affiliation
10/12/18	Kenny Pearce	TerraXplorations, Inc.

GEORGIA ARCHAEOLOGICAL SITE FORM
1999
Official Site Number: 9CR205

Institutional Site Number: K9 **Site Name:**
County: Charlton **Map Name:** St. George, GA-FL USGS
UTM Zone: 17 N **UTM East:** 392583 **UTM North:** 3376390
Owner: **Address:**
Site Length: 40 meters **Width:** 25 meters **Elevation:** + - 53.3 meters
Orientation: 1.N-S 2.E-W 3.NE-SW 4.NW-SE 5.Round 6.Unknown
Kind of Investigation: 1.Survey 2.Testing 3.Excavation 4.Documentary 5.Hearsay 6.Unknown 7.Amateur
Standing Architecture: 1.Present 2.Absent
Site Nature: 1.Plowzone 2.Subsurface 3.Both 4.Only Surface Known 5.Unknown 6.Underwater
Midden: 1.Present 2.Absent 3.Unknown **Features:** 1.Present 2.Absent 3.Unknown
Percent Disturbance: 1.None 2. Greater than 50 3.Less than 50 4.Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.): Probable Historic House Site
Topography (Ridge, Terrace, etc.): Pine flatwoods
Current Vegetation (Woods, Pasture, etc.): Planted pine interspersed with brush, palmetto, vines, and briars.

Additional Information: The site consists of a light density historic artifact surface scatter. It lies south of State Road 94 and immediately north of the Georgia Southern and Florida Railway. Silviculture activities represent the main disturbance within the site area as evidenced by eroded pine furrows created through past plowing. The earliest evidence of a structure at this location is a 1952 aerial. The 1952 aerial shows one structure in the site area and another approximately 60 m to the east-northeast. Though the quality of the image is poor, a subsequent aerial from 1963 indicates that the structure in the site area was no longer extant at that time; however, the structure to the east-northeast was still present. The remaining structure appears to have been razed sometime between 1963 and 1970 as it is not present on the 1970 aerial. This structure is also shown on the 1966 St. George, GA-FL 7.5' topo map and is depicted as a hollow square box suggesting that it may represent an outbuilding.

SKETCH MAP
(Include sites, roads, streams, landmarks)



OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9CR205 **Institutional Site No.:** K9

Public Status: 1.National Historic Landmark 2.National Natural Landmark 3.Georgia Register 4.Georgia Historic Trust 5.HABS 6.HAER

National Register Standing: 1.Determined Eligible 2.Recommended Ineligible 3.Recommended Eligible 4.Nominated 5.Listed 6.Unknown 7.Removed

National Register Level of Significance: 1.Local 2.State 3.National

Preservation State(Select up to Two): 1.Undisturbed 2.Cultivated 3.Eroded 4.Submerged 5.Lake Flooded 6.Vandalized 7.Destroyed 8.Redeposited 9.Graded 10.Razed

Preservation Prospects: 1.Safe 2.Endangered by: Proposed Mining 3.Unknown

RECORD OF INVESTIGATIONS

Supervisor: Matt Lyons **Affiliation:** TerraXplorations, Inc.

Date: 9/10/18

Report Title: A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia

Artifacts Collected: Container glass (cobalt blue, clear, and green milk), an amber glass base with Owens-Illinois Glass Co. maker's mark (1929-ca. 1960), a colorless glass medicine bottle with small mouth external thread finish, a hand painted green whiteware rim sherd, light blue glazed whiteware, a lime green glazed whiteware rim, and two undecorated whiteware base fragments (one with partial Homer Laughlin maker's mark [1877-present]).

Location of Collections: Archaeological Research Center, Troy University, Troy, AL

Location of Field Notes: Archaeological Research Center, Troy University, Troy, AL

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods:

Mid-20th Century

Phases:

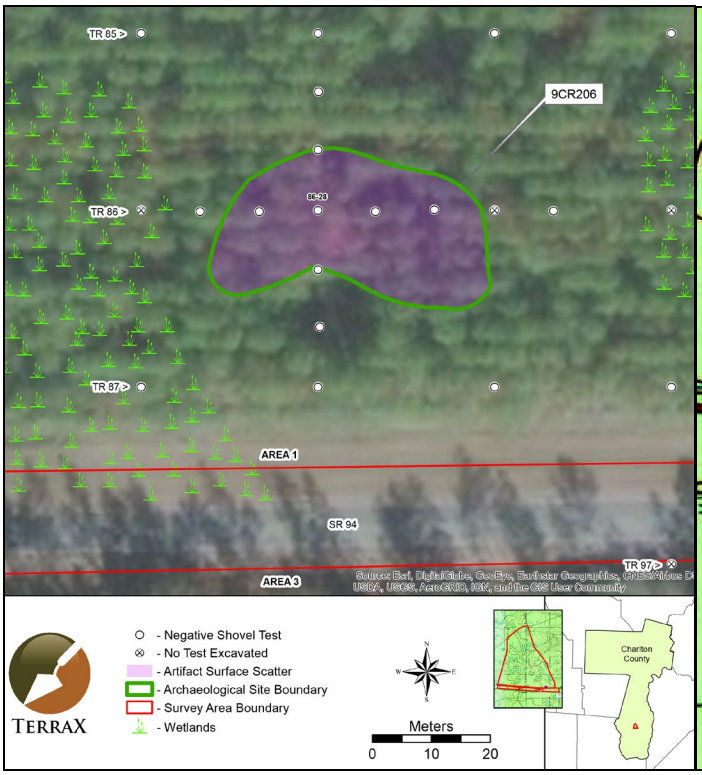
FORM PREPARATION AND REVISION

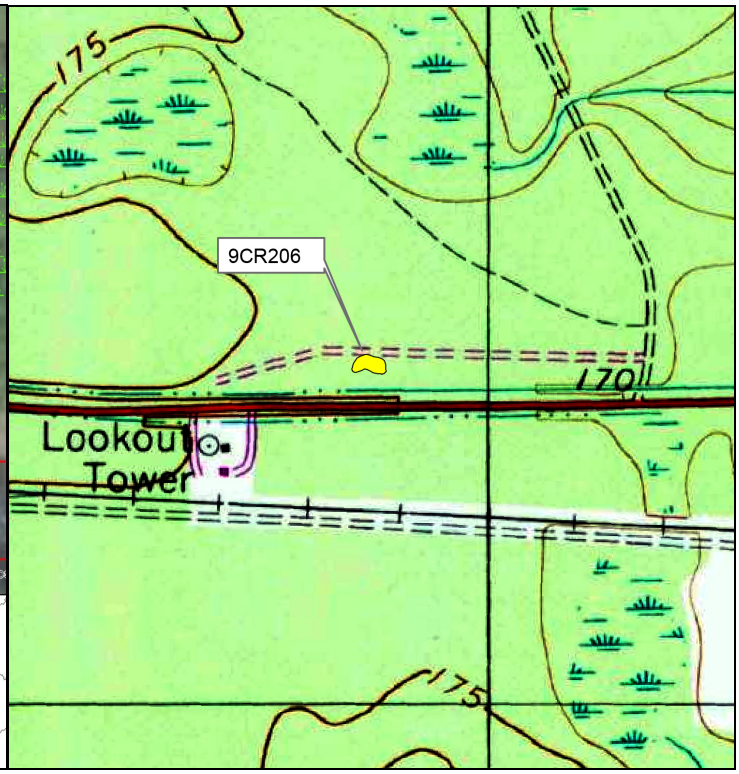
Date	Name	Institutional Affiliation
10/12/18	Kenny Pearce	TerraXplorations, Inc.

GEORGIA ARCHAEOLOGICAL SITE FORM
1999
Official Site Number: 9CR206

Institutional Site Number: K10 **Site Name:**
County: Charlton **Map Name:** St. George, GA-FL USGS
UTM Zone: 17 N **UTM East:** 393842 **UTM North:** 3376480
Owner: **Address:**
Site Length: 48 meters **Width:** 23 meters **Elevation:** + - 51.8 meters
Orientation: 1.N-S 2.E-W 3.NE-SW 4.NW-SE 5.Round 6.Unknown
Kind of Investigation: 1.Survey 2.Testing 3.Excavation 4.Documentary 5.Hearsay 6.Unknown 7.Amateur
Standing Architecture: 1.Present 2.Absent
Site Nature: 1.Plowzone 2.Subsurface 3.Both 4.Only Surface Known 5.Unknown 6.Underwater
Midden: 1.Present 2.Absent 3.Unknown **Features:** 1.Present 2.Absent 3.Unknown
Percent Disturbance: 1.None 2. Greater than 50 3.Less than 50 4.Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.): Historic Artifact Scatter
Topography (Ridge, Terrace, etc.): Pine flatwoods
Current Vegetation (Woods, Pasture, etc.): The site area, which was formally forested in pine, had recently been logged, plowed, and replanted in pine.

Additional Information: The site represents a light density historic artifact scatter discovered on the surface. It lies 45 m north of SR 94 between two intermittent wetlands. The area has been heavily impacted by repeated pine cultivation activities. A review of historic topo maps and aerial imagery failed to identify any previous structures at this location; however, a road is shown passing immediately north of the site on the 1918 and 1942 Moniac, GA-FL 15' topo. The presence of this road suggests that the artifact scatter may represent historic trash dumping.





SKETCH MAP
(Include sites, roads, streams, landmarks)

OFFICIAL MAP
(Xerox of proper map)

State Site Number: 9CR206 **Institutional Site No.:** K10

Public Status: 1.National Historic Landmark 2.National Natural Landmark 3.Georgia Register 4.Georgia Historic Trust 5.HABS 6.HAER

National Register Standing: 1.Determined Eligible 2.Recommended Ineligible 3.Recommended Eligible 4.Nominated 5.Listed 6.Unknown 7.Removed

National Register Level of Significance: 1.Local 2.State 3.National

Preservation State(Select up to Two): 1.Undisturbed 2.Cultivated 3.Eroded 4.Submerged 5.Lake Flooded 6.Vandalized 7.Destroyed 8.Redeposited 9.Graded 10.Razed

Preservation Prospects: 1.Safe 2.Endangered by: Proposed Mining 3.Unknown

RECORD OF INVESTIGATIONS

Supervisor: Matt Lyons **Affiliation:** TerraXplorations, Inc.

Date: 9/11/18

Report Title: A Phase I Cultural Resources Survey of the Twin Pines Minerals Keystone Property in Charlton County, Georgia

Artifacts Collected: a cobalt blue Phillips Milk of Magnesia bottle, a Coke bottle fragment, a clear glass container base with Anchor Hocking Glass Co. maker's mark (1938-ca. 1980), a clear glass jar with large mouth external thread finish and Anchor Hocking Glass Co. maker's mark (1938-ca. 1980), a milk glass jar with large mouth external thread finish, a clear glass embossed container base, an undecorated whiteware rim sherd, and a fragment of a porcelain deer figurine.

Location of Collections: Archaeological Research Center, Troy University, Troy, AL

Location of Field Notes: Archaeological Research Center, Troy University, Troy, AL

Private Collections:

Name: **Address:**

CULTURAL AFFINITY

Cultural Periods:

Early to Mid-20th Century

Phases:

FORM PREPARATION AND REVISION

Date	Name	Institutional Affiliation
10/12/18	Kenny Pearce	TerraXplorations, Inc.

Appendix C
Artifact Inventory

Artifact Inventory List

Site	Location	Type	Count	Weight (g)	Accession #
9CR201					
	TR 67 ST 10/I/65 CMBS				***Bag: 3***
		debitage (1/4-inch Costal Plain chert flake without cortex)	2	1.1	2018.190003
		Location Totals	*2*	*1.1*	
	TR 68 ST 11/I/10-20 CMBS				***Bag: 4***
		debitage (1/4-inch Costal Plain chert flake without cortex)	1	0.5	2018.190004
		Location Totals	*1*	*0.5*	
Site Totals			*3*	*1.6*	
9CR202					
	Found on surface 10 meter east of TR 35 ST 5				***Bag: 12***
		Albany slipped stoneware	5	49.9	2018.190102
		Albany slipped stoneware base	1	57.6	2018.190103
		Albany slipped stoneware rim [2=1]	1	125.6	2018.190104
		Location Totals	*7*	*233.1*	
Site Totals			*7*	*233.1*	
9CR203					
	TR 99 ST 22/I/50-60 CMBS				***Bag: 6***
		glass (colorless container with Owen's suction scar)	1	2.7	2018.190006
		Location Totals	*1*	*2.7*	
	Surface Collection from southern end of site				***Bag: 7***
		Costal Plain chert possible Bakers Creek projectile point	1	10.1	2018.19009
		debitage (1/4-inch heat treated Costal Plain chert flake without cortex)	1	0.1	2018.190010
		debitage (1/4-inch heat treated Costal Plain chert flake without cortex)	1	0.2	2018.190007
		Costal Plain chert possible Stanly Stemmed projectile point	1	8.1	2018.190105
		sand-tempered plain rim sherd [2=1]	1	3.9	2018.190011
		sand-tempered plain sherd [2=1]	1	4.0	2018.190008
		sherdlet	1	0.6	2018.190012
		Location Totals	*7*	*27.0*	
	Surface Collection				***Bag: 10***
		relief molded whiteware rim	2	21.5	2018.190037
		glass (amber container)	1	37.7	2018.190023
		glass (amber embossed bottleneck with machine-made small mouth external thread finish [stippling])	1	54.6	2018.190024
		glass (amber embossed soda bottle [decoration with "Orange Crush T.M. Reg. U.S. Pat. Off. Company Bottle. White decal label])	1	64.7	2018.190025
		glass (amethyst bottleneck with machine-made straight brandy finish)	1	34.7	2018.190022
		glass (amethyst container)	5	40.2	2018.190019
		glass (amethyst lip [decorative])	1	96.9	2018.190020
		glass (amethyst neck [decorative])	1	24.3	2018.190021
		glass (aqua base)	1	57.5	2018.190030
		glass (cobalt blue container)	1	3.6	2018.190027
		glass (cobalt blue embossed base ["VI.. Vaporu.." and Vicks Vaporub maker's mark])	1	11.8	2018.190028
		glass (colorless embossed base ["22 WINE 440" "4/5 Quart" with unknown maker's mark])	1	84.1	2018.190017
		glass (colorless embossed base ["4-1 2" with Owens-Illinois Glass Co. maker's mark [1929-ca. 1960])	1	170.8	2018.190015

Site	Location	Type	Count	Weight (g)	Accession #
		glass (colorless embossed base [design])	1	204.9	2018.190016
		glass (colorless lip [decorative])	1	21.6	2018.190018
		glass (colorless melted container)	1	7.1	2018.190014
		glass (green container)	1	13.9	2018.190029
		glass (thick milk container)	1	93.2	2018.190043
		glass (yellow decorative plate fragment)	1	52.1	2018.190031
		green annular banded ironstone rim	1	10.6	2018.190041
		pink glazed whiteware plate fragment	1	34.4	2018.190039
		pressed brick fragment "..NDARD"	1	1179.3	2018.190044
		undecorated burned whiteware	4	13.2	2018.190032
		undecorated burned whiteware base	3	43.9	2018.190033
		undecorated burned whiteware base with unknown maker's mark	1	6.6	2018.190035
		undecorated porcelain	1	184.4	2018.190042
		undecorated whiteware base	2	19.9	2018.190034
		undecorated whiteware handle fragment	1	5.0	2018.190038
		undecorated whiteware rim	1	23.7	2018.190036
		white annular banded yellowware	1	4.3	2018.190040
		Location Totals	*41*	*2620.5*	
	D 5/I/0-15 CMBS				***Bag: 16***
		terracotta herty cup rim	1	53.2	2018.190127
		Location Totals	*1*	*53.2*	
	D 7/I/0-30 CMBS				***Bag: 17***
		glass (colorless container)	1	2.0	2018.190128
		Location Totals	*1*	*2.0*	
Site Totals			*51*	*2705.4*	
9CR204					
	Surface Collection				***Bag: 11***
		relief molded whiteware base	1	14.1	2018.190048
		ferrous metal lug wrench	1	1360.8	2018.190101
		glass (amber embossed base ["33 3-6 Pitts.. Hood Chemical Co.."])	1	69.5	2018.190071
		glass (amber embossed base ["54 Roman Cleanser Registered 1213-6" Glenshaw Glass Co. maker's mark [1904-present])	1	103.6	2018.190075
		glass (amber embossed base ["613-7 6 4 52 Duraglas" with Owens-Illinois Glass Co. maker's mark [1954- present])	1	39.6	2018.190072
		glass (amber embossed base ["7379A7 12"])	1	30.4	2018.190073
		glass (amber embossed base ["Hood Chemical Co. Des. Pat. Pending 10595" with Owens-Illinois Glass Co. maker's mark [1954- present])	1	73.0	2018.190074
		glass (amber embossed bottle with machine-made small mouth external thread finish [ribbed bottleneck with ferrous metal screw top with with Owens-Illinois Glass Co. maker's mark [1954- present])	1	7.6	2018.190094
		glass (amber embossed bottleneck with handle with small mouth external thread finish [lines and letters])	1	172.2	2018.190086
		glass (amber embossed container ["Chattanooga Medicin.."])	1	32.5	2018.190055
		glass (amethyst container)	1	8.9	2018.190056
		glass (aqua embossed base [design])	1	125.3	2018.190061
		glass (cobalt blue container)	1	11.0	2018.190057
		glass (cobalt blue embossed base ["..EIN..M..SA.."])	1	31.3	2018.190077
		glass (cobalt blue embossed Phillips Milk of Magnesia bottle with ferrous metal screw top with machine-made small mouth external thread finish ["Made in USA" "Genuine Phillips" "G" "9"])	1	134.3	2018.190093
		glass (colorless base ["864 7"])	1	15.7	2018.190065

Site	Location	Type	Count	Weight (g)	Accession #
		glass (colorless base ["99 28" with Anchor Hocking Glass Co. maker's mark [1938-ca.1980] [2=1])	1	45.5	2018.190063
		glass (colorless container)	1	11.7	2018.190053
		glass (colorless embossed base ["10.. G28.." "DUR"])	1	35.1	2018.190066
		glass (colorless embossed base ["10-8 H 13 E Ball" Ball Brothers maker's mark [1895- present])	1	34.1	2018.190069
		glass (colorless embossed base ["16A56.. 1096.. 5"Chattanooga Glass Co. maker's mark [1927-1987])	1	76.4	2018.190070
		glass (colorless embossed base ["20 277 ..52 .. Aglas .. 8" Owens-Illinios Glass Co. maker's mark [1929-ca. 1960])	1	45.0	2018.190067
		glass (colorless embossed base ["36" Diamond Glass Co. maker's mark [1924- ca.1940])	1	7.5	2018.190064
		glass (colorless embossed base ["5.. 104 WINE" Tropical Glass and Box Co. maker's mark [1950-1956])	1	33.5	2018.190068
		glass (colorless embossed base ["5a"])	1	6.9	2018.190062
		glass (colorless embossed base [design])	1	4000.0	2018.190060
		glass (colorless embossed container [design with faded label decal [2=1])	1	58.4	2018.190051
		glass (colorless embossed container [design with white decal label])	2	9.6	2018.190052
		glass (colorless embossed Dixie Beverage soda bottle with machine-made crown finish ["Drink Dixie Beverages" "Property of Dixie Bottling Work" "Jacksonville FLA" "10 fl ozs" Laurens Glass Works maker's mark [1910-1996])	1	450.0	2018.190096
		glass (colorless embossed Grapette soda bottle from 1950s, ribbed and twisted, with machine-made crown finish [faded white decal label with Owens-Illinois Glass Co. maker's mark [1929-ca. 1960])	1	395.0	2018.190095
		glass (colorless embossed jar with machine-made large mouth external thread finish ["10 57" Diamond Glass Company maker's mark [1924- ca 1940])	1	80.2	2018.190088
		glass (colorless embossed jar with machine-made large mouth external thread finish [stippling "1554 5" Tygart Valley Glass Co. maker's mark [1926-1959])	1	148.5	2018.190087
		glass (colorless embossed jar with reinforced extract finish ["11 47" "3/8 fl ozs NET" Brockway Glass Co. maker's mark [1933- ca. 1980])	1	103.3	2018.190089
		glass (colorless embossed medicine bottle with machine-made small mouth external thread finish ["MILES ABORATOIES INC. 5"])	1	91.9	2018.190090
		glass (colorless embossed medicine bottle with machine-made small mouth external thread finish [ribbed sides with unknown maker's mark])	1	94.7	2018.190091
		glass (colorless embossed Pepsi soda bottle with machine-made crown finish [repeated "Pepsi- Cola" and designs with Pepsi white decal label "DES Pat 120277" Anchor Hocking Glass Co. maker's mark [1934-ca.1980])	1	385.4	2018.190097
		glass (colorless embossed sauce bottle with machine-made small mouth external thread finish ["Collins Corp Vidalia, Ga" "1/4 fl ozs" Knox Glass Bottle Co. (Jackson) maker's mark [1932- 1952])	1	67.6	2018.190092
		glass (colorless jar lip with large mouth external thread finish)	1	54.1	2018.190083
		glass (green embossed base ["694.. 3.. 33" with Owens-Illinois Glass Co. maker's mark [1929-ca. 1960])	1	22.2	2018.190079
		glass (green embossed base ["Duraglas"])	1	13.5	2018.190080
		glass (green embossed bottle fragment [" R.. Cro.. Cola.." and faded white label decal])	1	32.2	2018.190059
		glass (green embossed bottleneck with machine-made crown finish ["be refilled" "no return"])	1	60.9	2018.190085
		glass (green Royal Crown soda bottle with machine-made crown finish [faded R C and crown symbol white decal label])	1	425.0	2018.190098
		glass (light green bottleneck with machine-made crown finish)	1	33.5	2018.190084
		glass (light green embossed Coca-Cola bottle fragment ["..egistered.. Atent office."])	1	53.6	2018.190058
		glass (light green embossed Coca-Cola bottle with machine-made crown finish ["Coca-Cola Trade-mark Registered"x2 "min. contents 6 fl ozs" "in U.S. Patent Office." "Jacksonville Fla." with Owens-Illinois Glass Co. maker's mark [1929-ca. 1960])	1	397.3	2018.190099

Site	Location	Type	Count	Weight (g)	Accession #
		glass (light green embossed Coca-Cola bottle with machine-made crown finish ["Coca-Cola Trade-mark Registered"x2 "min. contents 6 fl ozs" "in U.S. Patent Office." "Jacksonville Fla." with Owens-Illinois Glass Co. maker's mark [1954- present])	1	393.3	2018.190100
		glass (milk plate base)	1	18.3	2018.190076
		glass (milk plate fragment with decorated rim)	1	41.0	2018.190081
		glass (milk plate rim fragment)	1	22.1	2018.190082
		glass (olive green embossed base ["..wart ltd"])	1	35.5	2018.190078
		glass (red flat embossed container with lip ["L.L. Co. 273"])	1	14.8	2018.190054
		polychrome decal whiteware	1	28.2	2018.190050
		silver gilded brass metal base of cigarette pocket lighter ("Love- Liter")	1	17.2	2018.190045
		undecorated burned whiteware	2	14.1	2018.190047
		undecorated earthenware rim	1	247.5	2018.190046
		yellow glazed relief molded whiteware rim [2=1]	1	7.8	2018.190049
		Location Totals	*59*	*10342.2*	
	D 6/I/0-20 CMBS				***Bag: 18***
		terracotta herty cup fragment	1	37.2	2018.190130
		undecorated whiteware rim	1	3.7	2018.190129
		undifferentiated brick fragment	1	21.5	2018.190131
		Location Totals	*3*	*62.4*	
Site Totals			*62*	*10404.6*	
9CR205					
	Surface Collection				***Bag: 14***
		glass (amber embossed base [stippling and "7" with Owens-Illinois Glass Co. maker's mark [1929-ca. 1960])	1	72.0	2018.190114
		glass (cobalt blue container)	1	6.4	2018.190115
		glass (colorless embossed base ["F.C. 11" with stippling])	1	88.6	2018.190112
		glass (colorless embossed base [design])	1	57.6	2018.190111
		glass (colorless embossed bottle with machine-made small mouth external thread finish ["Redi-aid Products Indianapolis, Ind." "1 1/4 ozs" "G-us[?]-c" with Fairmount Glass Works maker's mark [1933-1968] (2=1])	1	87.7	2018.190117
		glass (colorless embossed flat [design and "NATION A"])	1	48.2	2018.190113
		glass (colorless embossed medicine bottle with machine-made small mouth external thread finish ["3iii" "Sani-Glass, "Brockway" and numbers])	1	86.1	2018.190118
		glass (green milk embossed container [design])	1	19.8	2018.190116
		hand painted green whiteware rim	1	3.1	2018.190108
		light blue glazed whiteware base	1	17.4	2018.190110
		lime green glazed whiteware rim	1	9.0	2018.190109
		undecorated whiteware base	1	8.0	2018.190106
		undecorated whiteware base with partial maker's mark, Homer Laughlin (1877-present)	1	10.7	2018.190107
		Location Totals	*13*	*514.6*	
Site Totals			*13*	*514.6*	
9CR206					
	Surface Collection				***Bag: 15***
		porcelain deer figurine fragment	1	20.2	2018.190121
		glass (cobalt blue embossed Phillips Milk of Magnesia bottle with machine-made small mouth external thread finish ["Made in U.S.A." "G4" "Genuine Phillips"])	1	136.9	2018.190122
		glass (colorless embossed base ["10-40..2" Anchor Hocking Glass Co. maker's mark [1938- ca 1980])	1	14.1	2018.190126
		glass (colorless embossed base [decorated])	1	11.4	2018.190125

Site	Location	Type	Count	Weight (g)	Accession #
		glass (colorless embossed jar with machine-made large mouth external thread finish ["3013..7..28" Anchor Hocking Glass Co. maker's mark [1938- ca 1980])	1	163.1	2018.190121
		glass (light green embossed Coca-Cola bottle fragment ["Coca-Cola" "..,ark registered..ent 6 1/2 fl ozs"])	1	121.2	2018.190124
		glass (milk shallow jar with machine-made large mouth external thread finish)	1	85.4	2018.190123
		undecorated burned whiteware rim	1	5.7	2018.190119
		Location Totals	*8*	*558.0*	
Site Totals			*8*	*558.0*	
Isolated Find K1					
	TR 69 ST 70/II/15-25 CMBS				***Bag: 1***
		debitage (1/4-inch Costal Plain chert flake without cortex)	1	0.1	2018.190001
		Location Totals	*1*	*0.1*	
Site Totals			*1*	*0.1*	
Isolated Find K2					
	Found on surface 10 meters north of TR 62 ST 7				***Bag: 2***
		debitage (1/4-inch Costal Plain chert flake without cortex)	1	0.2	2018.190002
		Location Totals	*1*	*0.2*	
Site Totals			*1*	*0.2*	
Isolated Find K4					
	TR 71 ST 12/I/0-30 CMBS				***Bag: 5***
		debitage (1/4-inch Costal Plain chert flake without cortex)	1	0.3	2018.190005
		Location Totals	*1*	*0.3*	
Site Totals			*1*	*0.3*	
Isolated Find K8					
	TR 80 ST 33/I/0-35 CMBS				***Bag: 9***
		debitage (1/2-inch heat treated Costal Plain chert flake without cortex)	1	1.2	2018.190013
		Location Totals	*1*	*1.2*	
Site Totals			*1*	*1.2*	
Project Totals			*148*	*14419.1*	

Appendix D
Curriculum Vitae

TERRAXPLORATIONS
Leading the Future in Recording America's Past

www.TerraXplorations.com

Shaun E. West

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Principal Investigator
TerraXplorations, Inc.

EDUCATION

University of South Florida

Master of Arts in Applied Anthropology (Archaeology Track)

University of Florida

Bachelor of Arts in Anthropology, minor in Philosophy (cum laude)

BACKGROUND SYNOPSIS

Mr. West has served as principal investigator on several projects in Florida and Georgia and has oversaw the completion of field work and technical reports for numerous projects in states including Alabama, Arkansas, Florida, Georgia, Louisiana, North Carolina, Tennessee and Texas. He has extensive experience performing standard field and laboratory techniques, conducting geophysical surveys using fluxgate gradiometers and ground-penetrating radar machines, and is proficient in ArcGIS. Special areas of interest include settlement patterns of the Woodland period in the Florida/Georgia Coastal Plain. Mr. West is a is a registered professional archaeologist (RPA 47012535).

EXPERIENCE

January 2017 to Present
Principal Investigator/Field Director/Technical Writer, TerraXplorations, Inc.

December 2016
Field Technician, Prentice Thomas & Associates, Inc.

April 2012 to August 2016
Crew Chief/Laboratory Technician/Field Technician, Janus Research

June to August 2015
Field Technician, SEARCH, Inc.

August 2014 to May 2016
Field Director/Research Assistant, Southeastern Archaeology Laboratory, University of South Florida

June 2014
Field Technician, University of Florida

June 2013
Field Technician, Laboratory of Southeastern Archaeology, University of Florida

EXPERIENCE (CONT.)

February to March 2012
Field Technician, Archaeological Consultants, Inc.

September 2011 to January 2012
Laboratory Technician, Laboratory of Southeastern Archaeology, University of Florida

PUBLICATION LIST (SELECTED)

2018

Pluckhahn, Thomas J., Martin Menz, Shaun E. West, and Neill J. Wallis
A New History of Community Formation and Change at Kolomoki (9ER1). *American Antiquity* 83(2):320–344.

West, Shaun E., Amy Carruth, and Paul D. Jackson
A Phase I Archaeological Survey of SR 26 at the Ohoopee River, Emanuel and Johnson Counties, Georgia PI #0013748. Prepared for Atkins North America, Inc., Atlanta, Georgia, and the Georgia Department of Transportation, Atlanta, Georgia. Prepared by TerraXplorations, Inc., Tuscaloosa, Alabama.

West, Shaun E., and Paul D. Jackson
A Phase I Cultural Resources Survey for the Proposed Enable CGU Pipeline Project, Panola County, Texas. Prepared for Providence Engineering and Environmental Group, LLC, Baton Rouge, Louisiana. Prepared by TerraXplorations, Inc., Tuscaloosa, Alabama.

A Phase I Cultural Resources Survey for the Proposed Enable SRT Pipeline Project, Panola County, Texas. Prepared for Providence Engineering and Environmental Group, LLC, Baton Rouge, Louisiana. Prepared by TerraXplorations, Inc., Tuscaloosa, Alabama.

West, Shaun E., and Paul D. Jackson (cont.)
A Phase I Archaeological Survey of SR 29 at Pughes Creek, Lauren County, Georgia PI #0013749. Prepared for Atkins North America, Inc., Atlanta, Georgia, and the Georgia Department of Transportation, Atlanta, Georgia. Prepared by TerraXplorations, Inc., Tuscaloosa, Alabama.

West, Shaun E., Kelsey Johnson, and Paul D. Jackson
A Phase I Cultural Resources Survey for the Proposed Texola Pipeline Project, Panola and Harrison Counties, Texas. Prepared for Providence Engineering and Environmental Group, LLC, Baton Rouge, Louisiana. Prepared by TerraXplorations, Inc., Tuscaloosa, Alabama.

West, Shaun E., Kenny Pearce, and Amy Carruth
A Phase I Cultural Resources Survey for the Proposed Plant 14 Amite West Project, Tangipahoa Parish, Louisiana. Prepared for Matrix New World Engineering, Baton Rouge, Louisiana. Prepared by TerraXplorations, Inc., Tuscaloosa, Alabama.

West, Shaun E., Thomas J. Pluckhahn, and Martin Menz
Size Matters: Kolomoki and the Power of the Hypertrophic Village. In *The Archaeology of Villages in Eastern North America,* edited by Jennifer Birch and Victor D. Thompson. University Press of Florida, Gainesville.