Exhibit EE. Beauregard Airport Industrial Site Phase I Cultural Resources Assessment Report

SWLA ECONOMIC DEVELOPMENT ALLIANCE

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Beauregard Airport Industrial Site Phase I Cultural Resources Assessment Report

PHASE I CULTURAL RESOURCES SURVEY OF 1,170 ACRES (473.5 HECTARES) NEAR DERIDDER, BEAUREGARD PARISH, LOUISIANA

DRAFT REPORT

For

SWLA Economic Development Alliance
4310 Ryan St.
Lake Charles, LA 70602

September 27, 2016

SURA, INC.
P.O. Box 14414
Baton Rouge, LA 70898-4414
Since 1986

PHASE I CULTURAL RESOURCES SURVEY OF 1,170 ACRES (473.5 HECTARES) NEAR DERIDDER, BEAUREGARD PARISH, LOUISIANA

Draft Report

By

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For

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ABSTRACT

From July 6, 2016, to August 28, 2016, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) conducted a Phase I cultural resource survey of 1,170 acres (ac) (473.5 hectares [ha]) west of Beauregard Regional Airport located in DeRidder, Beauregard Parish, Louisiana. A total of 6,335 shovel tests were excavated. Four archaeological sites were discovered—BPASA-1 (16BE104), BPASA-2 (16BE105), BPASA-3 (16BE106), and BPASA-4 (16BE107). The authors suggest that because of the disturbance due to modern hunting activities and pine cultivation, these sites do not possess the qualities of significance and are not eligible for listing on the National Register of Historic Places under Criterion D. Four isolated finds were also noted. None of these finds contain sufficient artifacts, or secure enough proveniences to be considered for the NRHP. As a result, no further work is recommended for the surveyed area.

ACKNOWLEDGMENTS

The field crew was led by Mr. Matthew Chouest, M.A., and consisted of Ms. Rivers Berryhill, Mr. Jason Foust, Ms. Brandy Kerr, Mr. Will McManus, Ms. Margeaux Murray, Ms. Denice Naquin, and Mr. Karl Shuman. Malcolm Shuman, Ph.D. was the principal investigator.

Mr. Joseph Yarbrough of CSRS and Ms. Avon Knowlton of the Southwest Louisiana Economic Development Alliance provided valuable coordination.

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CHAPTER ONE:
INTRODUCTION

From the dates of July 6, 2016, to August 28, 2016, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) conducted a Phase I cultural resource survey of 1,170 acres (ac) (473.5 hectares [ha]) west of Beauregard Regional Airport located in DeRidder, Beauregard Parish, Louisiana. The survey was carried out to fulfill the requirements of the Louisiana Department of Economic Development (LED) site certification program. The APE lies within Sections 1, 2, 3, 10, 11, and 12; T3S and R10W.

The following chapters in this report describe the environmental setting, prehistory and historical backgrounds, previous archaeological investigations, the methodology employed in the survey, the survey's results, and the study's conclusions and recommendations.

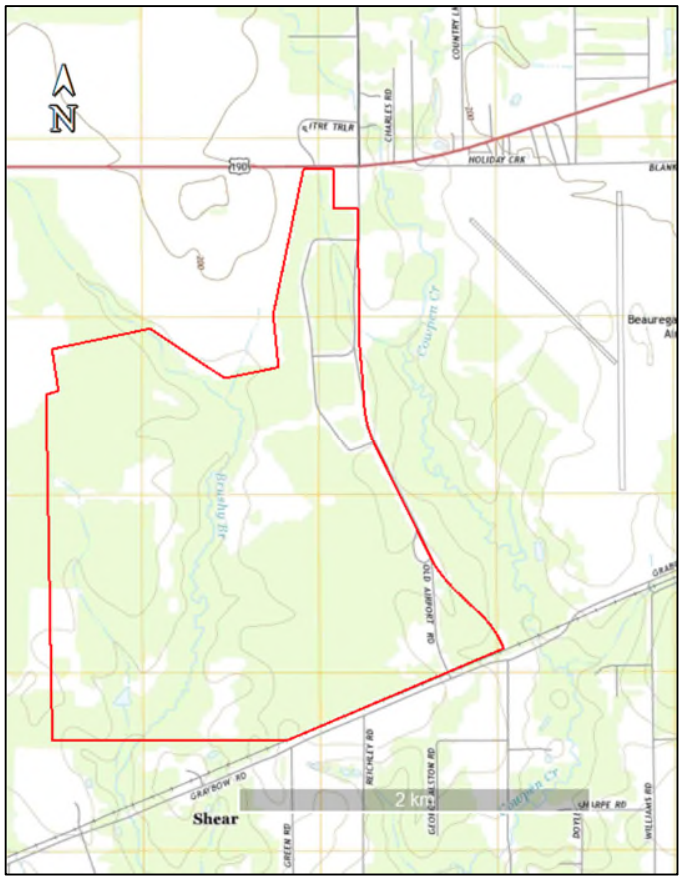

FIGURE 1 – PORTION OF 2015 DERIDDER, LA 7.5-MINUTE TOPOGRAPHIC MAP DEPICTING APE IN RED (USGS).

CHAPTER TWO:
ENVIRONMENTAL SETTING

ALLUVIAL GEOMORPHOLOGY

This portion of west central Louisiana consists of relatively dissected terrain composed of Pleistocene and older uplands. The drainages that dissect this area are associated with two major river systems, the Calcasieu River and the Sabine River. Streams such as the Whisky Chitto and Drakes Creek are tributary to the Calcasieu River, while Bayou Zourie, Bayou Castor and Liberty Creek flow into Anacoco Creek on the west; Anacoco Creek eventually flows into the Sabine River.

Many of the streams in this area are ephemeral and contain no water except when draining off recent precipitation. Larger streams, such as Whisky Chitto, are characterized by relatively high cut banks where undercutting has occasionally led to bank collapse. On the stream banks opposite the cut banks, stepped terraces have developed as a result of the variable rates of sediment deposition caused by fluctuations in the amount of water carried by the streams. The soils of the project area primarily belong to the Beauregard-Caddo Association (USDA 1971) (Figure 2).

GEOLOGY

Because prehistoric and historic occupations have generally been found on the summits or upper slopes of the uplands in this area, the nature of these formations deserves special consideration. The dissected topography for most of this area can be described as “ridge and ravine” (Largent et al. 1994). The ridge and ravine topography is especially likely to develop in areas with consistently heavy rainfall.

The sediments that form part of the ridge and ravine topography date from the Miocene (Tertiary), Pleistocene (Quaternary), and Holocene (Recent) ages. The Tertiary deposits consist of a series of sloping strata that parallel the Gulf Coast and range in age from the Paleocene into the Cenozoic eras. Massive sand beds, carbonaceous shales, and calcareous shales and silts are deposited on the uplands of this area and have been exposed by erosion and weathering. The lithology of the tertiary deposits includes ironstone, limestone, sandstone, lignite, gravels, and petrified wood. The Tertiary formations in this area have been classified as the Carnahan Bayou Member of the Fleming Formation.

The Pleistocene deposits of the ridge and ravine topography consist of deposits that have been classified as part of either the Citronelle Formation or the Upland Complex. The Citronelle Formations are composed of such loosely packed material that they allow high infiltration of water and prevent the creation of overland flow except in the heaviest of rains. As a result, the sands and gravels that compose the Citronelle Formation resist erosion (or at least do not erode as quickly) and thus influence the locations of ridge and ravine topography; that is, the larger Citronelle Formations are likely to be found on or just beneath ridge summits and the ravines are most likely to develop where these formations are less pronounced. Also, it should be noted that the chert gravels associated with the Citronelle deposits provide significant sources of raw material that can and have been used for lithic technologies.

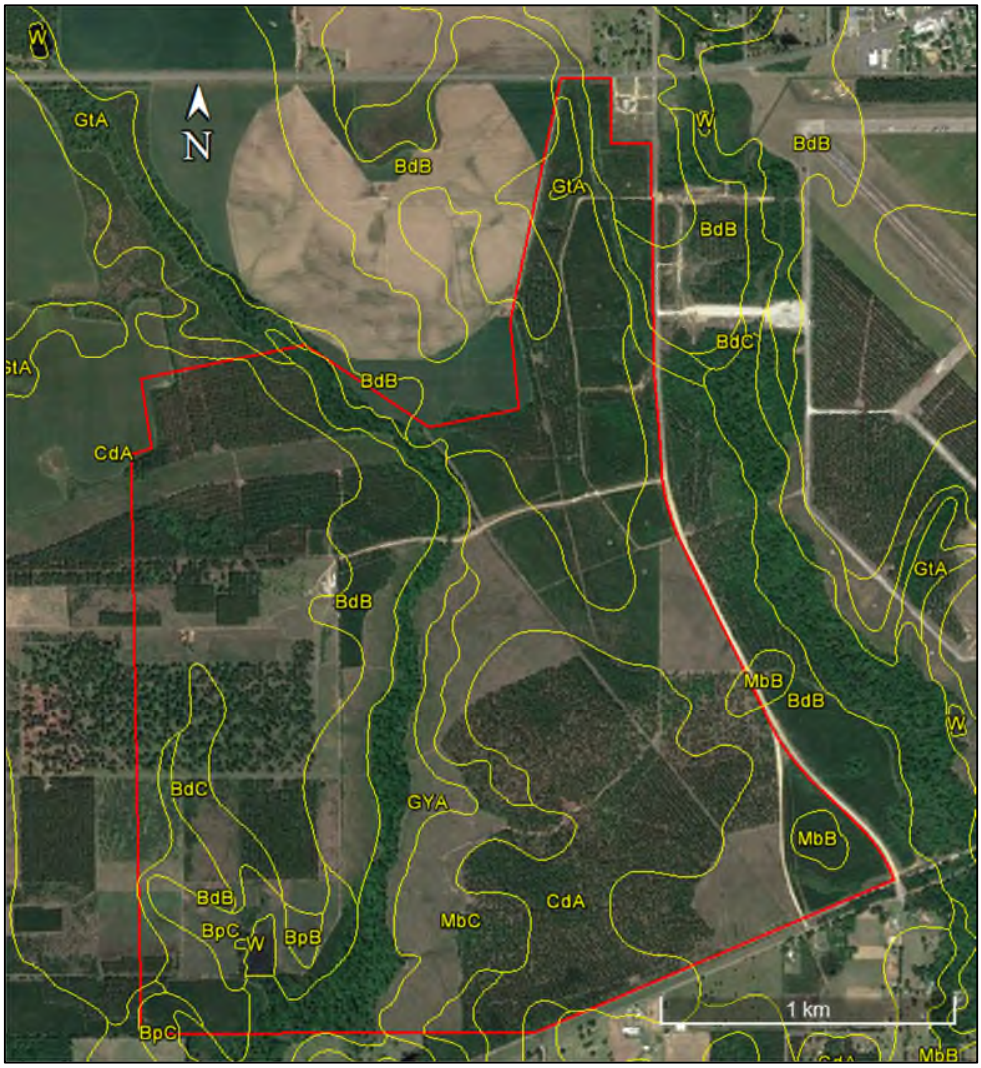

FIGURE 2 – SOIL MAP OF THE APE (UNIVERSITY OF CALIFORNIA, DAVIS/GOOGLE EARTH).

FLORA

The vegetation in much of this area is dominated by various species of pine trees. The loblolly (*Pinus taeda*), the longleaf (*Pinus palustris*), and the slash (*Pinus eliotti*) are the most common types. For the most part, the pines occur on the summits and upper slopes of the ridges in the dissected terrain. Hardwoods are frequently mixed among the pines and are more frequent, even dominant, in the floodplains and along the stream banks where soils are thicker and better developed. Common hardwood trees are various species of oak (*Quercus sp.*), hickory (*Carya sp.*), and gum (*Liquidambar sp*.), as well as trees such as sycamore (*Plantanus occidentalis*) and elm (*Ulmus sp.*).

FAUNA

The faunal assemblage is characterized by a wide variety of mammals, reptiles, amphibians, and birds, to say nothing of insects. The greatest concentration of fauna is generally found near streambeds and adjacent floodplains. Common mammals, some of which were observed in the field, were opossum *(Didelphis virginiana);* armadillo *(Dasypus novemcinctus)* eastern cottontail rabbit *(Sylviagus floridanus);* raccoon *(Procyon lotor),* gray squirrel *(Sciurus carolinensis)* and the white tailed deer *(Odocoileus virginianus)* (Lowery 1974).

Reptiles include a least four types of poisonous snakes: the rattlesnake *(Crota/us* sp.), the copperhead *(Agkistrodon contortrix),* the cottonmouth *(Agkistrodon piscivorus),* and the coral snake *(Micrurus fulvius).* Turtles such as the eastern box turtle *(Terrapene carolina),* pond slider *(Chrysemys scripta),* and varieties of snapping turtles *(Macroclemys temmicki)* are also abundant in the region.

Amphibians include several types of toads, frogs, and lizards (Dundee and Rossman 1989). The number and variety of avian species present is quite high. Commonly observed species include the crow *(Corvus brachyrhynchos)* hawks *(Buteo* sp.); and much less frequently the red-cockaded woodpecker *(Poicoides borealis).* Fish are no doubt plentiful in some of the larger streams, but less likely in the small and ephemeral streams of many of the upper tributaries.

CHAPTER THREE:
PREHISTORY OF THE PROJECT AREA

PALEOINDIAN PERIOD (?–6000 B.C.)

It is unknown when humans first entered the New World. Some researchers would date this event as early as 40,000 years ago, but more conservative investigators would place the first Americans at no earlier than 21,000 B.C. Whatever the case, by 10,000 years ago Paleoindians were living in caves at the Straits of Magellan, so that their entry into the New World must have occurred several thousand years prior to that (Neuman 1984:58). Figure 3 presents a prehistoric culture history chronology for the general Lower Mississippi Valley and southern Louisiana. The eastern area noted on the chart is most applicable for the current project.

In Louisiana, there is evidence of Paleoindians, both from a series of surface finds of fluted points and from excavations (Webb et al. 1971). Most of these data derive from the northern half of the state, while evidence from the Coastal Zone is somewhat more ambiguous. During the 1960s, Sherwood Gagliano carried out a series of investigations at Avery Island, a salt dome island in Iberia Parish that led him to conclude that Avery Island had been inhabited by a "pre-Clovis" culture associated with a bipolar tool industry (Gagliano 1964; 1967; 1970). As Neuman has written, however, Gagliano has been unable to point to a single Paleoindian artifact *in situ* and his bipolar industry could just as easily be Archaic in date, judging from similar assemblages found elsewhere in Archaic contexts. In fact, a radiocarbon date for split cane matting found *beneath* extinct animal bones is Archaic (2310 +/-590 B.C.), a fact that suggests that some of the important material found by Gagliano had been contextually disturbed (Neuman 1984:63–65). Finds of Dalton, Plainview and San Patrice points at the Blackwater Bayou (16EBR33) and Palmer (16EBR26) sites indicate that Paleoindian occupations were present in the general area of the Florida Parishes (Weinstein et al. 1977).

ARCHAIC PERIOD (6000 B.C.–1500 B.C.)

This period was a time of exploitation of wild plant foods and small game, representing adaptation to an expanding boreal environment (Weinstein and Kelley 1992:32–34). The initial part of this period, the Early Archaic (6000–5000 B.C.), is defined by a series of distinctive projectile points. It has been suggested that society was organized at the band level and focused on a seasonal round of hunting and gathering. The succeeding Middle Archaic period (5000–3000 B.C.) was marked by more widespread regional differentiation of cultures and the development of ground stone technology (Weinstein and Kelley 1992:30). This subperiod corresponds to the Hypsithermal Interval, a time of increased warmth and aridity in areas around the Great Plains. It is presently unclear what effect this may have had on the Southeast.

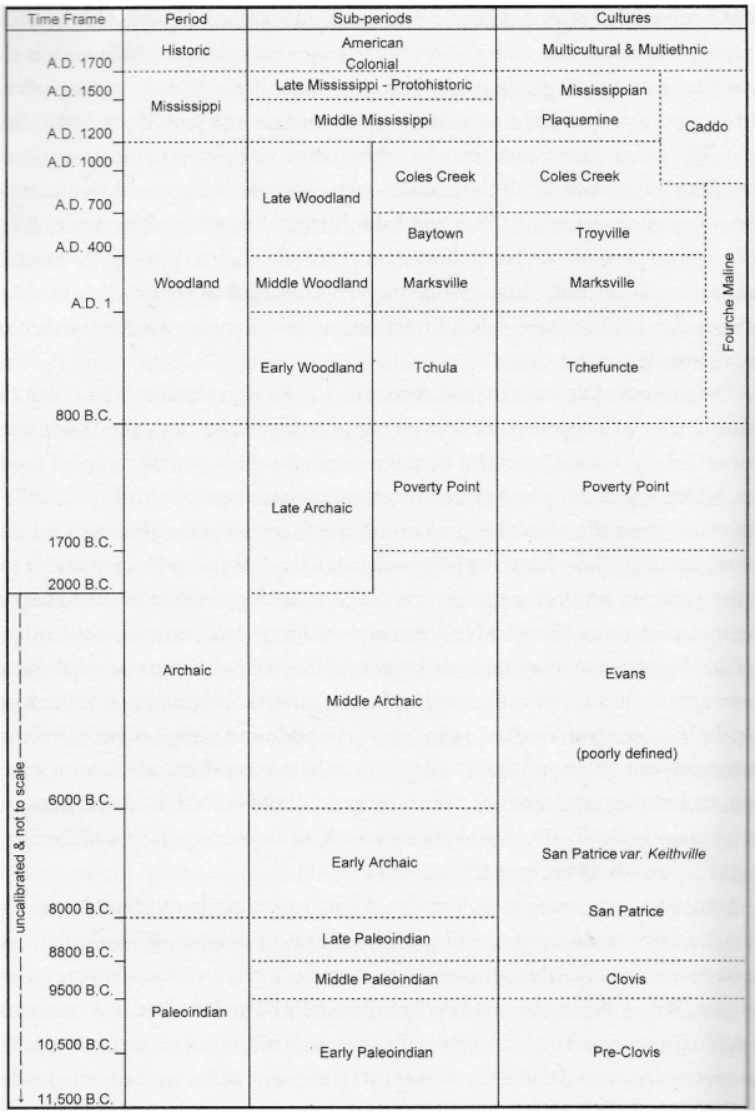

FIGURE 3: CULTURAL CHRONOLOGY FOR COASTAL LOUISIANA (FROM REES 2010).

The Middle Archaic is poorly represented in south Louisiana. Weinstein and Kelley (1992:30–31) suggest that components of the Banana Bayou phase, derived from the Banana Bayou site (16IB24) on Avery Island, will be identified in this area in the future. The mound at this site yielded Williams and Pontchartrain points, crude bifaces, lithic debitage and a fairly large number of baked clay objects (Brown and Lambert-Brown 1978). Another site of some importance is 16IB101, which is located on the edge of the Prairie Terrace, overlooking the Teche channel, just south of New Iberia. This site contains a Middle Archaic component and may represent an elevated habitation locale associated with the active Teche-Mississippi (Weinstein and Kelley 1992:33).

The Late Archaic subperiod (3000–1500 B.C.) was a time of pronounced population increase and the development of extensive trade networks. Increasing evidence shows that this was also a time of mound building throughout Louisiana and probably the Southeast as a whole (Russo 1994a, b; Piatek 1994; Saunders et al. 1994). Three geographically distinct phases have been identified for Coastal Louisiana, but only one of these, the Pearl River Phase, is well known (Gagliano and Webb 1970; Weinstein and Kelley 1992:33). The remaining two phases are the Copell phase, derived from a preceramic cemetery on Pecan Island (16VM102) (Collins 1941), while the Bayou Blue Phase comes from a site (16AL1) in Allen Parish (CEI 1977; Gagliano et al. 1982; Weinstein et al. 1977). Typical diagnostic artifacts include Evans, Palmillas, Ensor, Macon, Gary and Pontchartrain points, as well as such ground stone implements as winged atlatl weights and tubular pipes (Weinstein and Kelley 1992:33).

As noted, the only Late Archaic phase so far identified for Southeast Louisiana is the Pearl River phase, suggested by Gagliano on the basis of oyster shell middens associated with early coastal features. Artifacts associated with this phase are Kent, Macon, Hale and Palmillas projectile points, along with certain types of atlatl weights (Gagliano 1963). The Mizell mound Site (16ST126), just west of the West Pearl River, has been identified by Jones and Shuman (1988:136–137) as a possible Archaic location. Other mound sites with better claims are the Hornsby Mound Site (16SH21) in St. Helena Parish (Gibson and Shenkel 1989:10; Manuel 1979, 1987; Saunders 1994a:127); the now destroyed Monte Sano Bayou mounds (16EBR17) (Gibson and Shenkel 1989:8; Saunders 1994a:120); and the LSU Campus Mounds (16EBR6) (Neuman 1992:24), though see Jones (1993) for a criticism of the dates and Homburg (1993) for a rejoinder.

NEOINDIAN PERIOD (1500 B.C.-A.D. 1500)

The Neoindian period saw the introduction of ceramics, the widespread use of cultigens and the importation of the bow-and-arrow. The construction of earthen mounds, while apparently practiced to some extent during the Late Archaic (Gibson 1994; Russo 1994a, b; J. Saunders et al. 1994; R. Saunders 1994a), became more widespread during the Neoindian period and the focus of ceremonial, mortuary and political activity (Neuman 1984). A number of cultures flourished during this time span, as detailed below.

POVERTY POINT CULTURE (1500 B.C.–500 B.C.)

This culture, named for the gigantic semi-circular earthworks in West Carroll Parish (16WC5), was widespread throughout Louisiana, Arkansas and Mississippi. Various investigations have shown it was closely related to similar cultures in Missouri, Tennessee, Alabama and Florida (Neuman 1984:90). The origins of Poverty Point remain obscure, although Neuman suggests that both local adaptation and influences from Mesoamerica were involved (Neuman 1984:91). The material culture of Poverty Point featured baked clay balls (Poverty Point Objects), microlithic and lapidary industries and the construction of earthworks. The presence of pottery is debatable, although Clarence Webb (1982:40–42) discusses a number of cases in which ceramics have been found at Poverty Point sites. Hunting and gathering seem to have been important in Poverty Point times, but whether agriculture was a vital subsistence activity is debated (see Neuman 1984:110–111). Certainly, Webb (1968) sees agriculture as having had an important function at Poverty Point.

Other important Poverty Point sites are Jaketown and Teoc Creek, in Mississippi; the Terral Lewis (16MA16) and the J. W. Copes (16MA36) sites in Madison Parish, Louisiana; the Aaron site (16EC39) in East Carroll Parish; and the Cowpen Slough (16CT147) and Dragline (16CT36) sites in the Tensas Basin. Nearer the project area, a number of small shell middens on the shores of Lake Pontchartrain have shown evidence of Poverty Point traits and suggest seasonal adaptations to marsh environments (Goodwin et al. 1991:9). Writing about these locations, Goodwin et al. (1991:9) cite Gagliano and Saucier (1963) to the effect that:

> Sites located along the western shore exhibit Poverty Point traits exclusively; those along the eastern shore contain both bone tool and microlithic industries... These sites represent two phases of Poverty Point culture: the Bayou Jasmine phase and the Garcia phase. Bayou Jasmine Phase sites are located on the western shore of the lake as well as along natural levee ridges of the Mississjppi River distributaries. Garcia phase sites are located along the eastern shore of Lake Pontchartrain (Goodwin et al. 1991: 9)

The type location for the Garcia Phase is site 160R34. It contained a beach deposit of *Rangia* shells along with midden material. Radiocarbon dates from Bayou Jasmine components cluster in the vicinity of 1470 B.C., while Garcia phase components are about 1,000 years later (Gagliano 1963; Gagliano and Saucier 1963; Goodwin et al. 1991:9).

Another Poverty Point site in the vicinity of the project area is the Claiborne site (22HA501) near the mouth of the Pearl River in Mississippi. This location is only 164 ft (50 m) away from the Cedarland site (22HA506), which thus far has yielded only artifacts dating to a Late Archaic occupation and which has been destroyed (Shuman 2002). Radiocarbon dates and artifacts from Claiborne point to a single component occupation dating from the Poverty Point culture. Other intriguing features of the site were the elevated semicircular midden at the site and a small conical mound that has been leveled during modern times. The artifacts recovered from the site also reflect an extensive trade network that showed connections with the Poverty Point site itself (Bruseth 1991).

TCHEFUNCTE CULTURE (500 B.C.–A.D. 1)

By 500 B.C., Poverty Point culture had begun to decline and the extensive trade network that formed a pivotal part of the culture had withered. For several centuries thereafter, prehistoric society in Louisiana centered on small bands of hunters and gatherers. Kidder has suggested that a period of climatic change resulted in heavy flooding in the lower Mississippi Valley between 1000 B.C. and 500 B.C., rendering much of the area uninhabitable (Kidder 2006; Kidder et al. 2010:141). For Kidder, this flooding helped bring an end to Poverty Point culture, and the Tchufuncte/Tchula people re-inhabited the area after the flooding ended (Kidder 2006).

The successors of Poverty Point culture were the Tchefuncte people, whose name was derived from the site of that name in St. Tammany Parish (16ST1) (Ford and Quimby 1945). This site is in Fontainbleau State Park. Smith et al. (1983:163) have defined this period as being characterized by a simpler way of life, similar to the Late Archaic, but with the introduction of ceramic vessels. The Tchefuncte people, though primarily hunter-gatherers, also apparently possessed horticulture to some degree. There is evidence that they cultivated squash and bottle gourds (Byrd 1974). Also, a wide variety of animals were hunted, including deer, raccoon, ducks, muskrat, otter, bear, gray fox, ocelot and alligator. It seems that crustaceans were not eaten.

The Tchefuncte culture is especially known to archaeologists for its shell middens, heaps of shells from the brackish water clam, *Rangia cuneata.* These clams were evidently eaten, although Byrd has shown that their nutritive value is minimal (Byrd 1977; Neuman 1984:118). The lithic artifact inventory of Tchefuncte people included adzes, drills, hammerstones, knives, scrapers and projectile points. Ground stone artifacts include abraders, atlatl weights, beads, cobble hammerstones, grooved plummets, mortars, and pitted stones. Baked clay objects continued to be made, but in less variety and in fewer numbers than at Poverty Point (Smith et al. 1983:163). Weinstein and Kelley (1992:34–35) suggest that the Tchefuncte people were mound builders, and Kidder et al. (2010) have shown this to be the case. Tchefuncte culture is especially evident in coastal areas, but it is widespread throughout the rest of the state (Kidder et al. 2010). It should be noted that while, for purposes of conciseness, the terminal date for Tchefuncte is presented here as the beginning of the Common Era, there was overlap with the ensuing Marksville period. Neuman (1984:135) writes that some Tchefuncte sites are as late as A.D. 300. There is a suggestion from Site 16ST48 in Mandeville (St. Tammany Parish) that a short-grass intrusion, indicative of a dry period, may have occurred during the waning days of Tchefuncte and the beginning of Marksville times (Brignac et al. 2010).

MARKSVILLE CULTURE (A.D. 1–400)

This culture, named for the type-site in Avoyelles Parish (16AV1), was closely allied to the Hopewell culture of the Ohio and Illinois River valleys. The Marksville people constructed domed earthen mounds in which they buried their dead leaders, usually with funerary offerings (Neuman 1984). Marksville ceramics are finely made, characteristically with broad incised lines and rocker stamping. The raptorial bird design is a frequent motif. Marksville ceramics are, in fact, often hard to distinguish from those made by Hopewellian peoples, leading to much speculation about the nature of the Marksville-Hopewell interaction. Toth (1988) felt that the main evidence for such an interaction derives from Marksville mortuary practices and the similarity of ceramic types. Other cultural practices, such as subsistence and settlement pattern, may not have been shared by the two groups. It has been speculated that Marksville subsistence was based on hunting and the intensive gathering of wild foods. The evidence for maize agriculture is still weak (Weinstein and Kelley 1992:35).

On the basis of his survey of sites along the Amite River, east of Baton Rouge, Weinstein has identified two phases of the Marksville for the eastern part of Louisiana: Smithfield and Gunboat Landing (Toth 1988; Weinstein 1974). The Kleinpeter site (16EBR5) in East Baton Rouge Parish, located on a terrace overlooking Bayou Fountain, also contains a significant late Marksville component (Jones et al. 1994). Other significant sites in South Louisiana appear to be the Gibson mounds (16TR5) and Mandalay Plantation (16TR1), both in Terrebonne Parish. Nearer to the current project area, Malcolm Webb (1982) reported a late Marksville component at the Indian Village site (16ST6). Also, recent excavations into a midden near one of the three mounds at the Broussard site (16AN1) in northern Ascension Parish revealed a distinctive Marksville component.

Ceramic types such as Marksville Incised, *var. Yokena,* Marksville Incised, *var. Spanish Fort,* and Marksville Stamped, *var. Mabin* showed a distinctive Gunboat Landing phase occupation that probably took place between A.D. 200 and A.D. 400 (Shuman et al. 1995). In 2002, a Louisiana State University graduate student, Benjamin Goodwin, conducted remote sensing at the site as part of his thesis research, but his results were ambiguous (Goodwin 2003).

While the Marksville culture and its Southeastern contemporaries have been associated with the Mississippi alluvial valley, there are also indications that it spread along the Gulf Coast. The Coral Snake Mound site (16SA48) in Sabine Parish was excavated in the early 1960s and presented definite artifactual evidence of some sort of cultural and material contact with the Marksville culture area proper (Woodall 1969). As for the eastern Florida parishes in the immediate vicinity of the project area, there is currently little evidence of a Marksville culture presence.

BAYTOWN PERIOD (A.D. 400-700)

Baytown is perhaps the most problematic period in Louisiana prehistoric culture history. Partly this owes to the manner of its original definition (Gibson 1982; Belmont 1982). But it is also true that the period has been dealt with differently by different authors. Neuman, for instance, places it with Coles Creek, calling the two "Troyville-Coles Creek." Many authors, on the other hand, separate it as a distinct period between Tchefuncte and Coles Creek (Weinstein and Kelley 1992:36–37). Weinstein and Kelley suggest that the development of Baytown in the Lower Mississippi Valley is associated with the appearance of Quafalorma and Woodville painted pottery, along with Mulberry Creek Cordmarked, Salomon Brushed and Alligator Incised ceramics. The attempt to devise phases for South Louisiana has been difficult; for example, the Whitehall Phase, named for a site on the Amite River (16LV19), is the only representative site of this phase (Weinstein and Kelley 1992:36).

Baytown components have been found at several locations in South Louisiana, however. These include 16EBR5, 16EBR51, 16EBR67, as well as the Gibson Mounds (16TR5), investigated by Weinstein et al. (1978). There is also Richeau Field (16TR82), a low mound on the Teche-Mississippi natural levee just southwest of Gibson (Weinstein et al. 1978). A Baytown (Troyville) component has been reported by Malcolm Webb (1982) from the Indian Village site (16ST6), which was corroborated by Jones and Shuman (1988:144–150). Excavations at the Shadows Mound (16ST125) by members of the Louisiana Archaeological Society suggested that the mound was Coles Creek in date and had been built in a single construction episode (Jones and Shuman 1988). R. Saunders (1994b) suggests that at least one of the mounds at the Hoover site (16TA5) may date from this time.

COLES CREEK CULTURE (A.D. 700–1200)

The Coles Creek culture represents a cultural florescence in the Lower Mississippi Valley. The settlement pattern involved hamlets and small villages, many centered around one or more pyramidal earthen mounds. These mounds served as platforms for temples and the houses of leaders, although some also contained burials (Ford 1951). Coles Creek culture was widespread in Louisiana and Mississippi and appears to have been related to the very similar Weeden Island culture of northwest Florida (Weinstein and Kelley 1992:37).

The economic basis of Coles Creek society is not clear. It has been widely assumed that maize was important to these people (e.g., Smith et al. 1983:182), but it has been impossible to demonstrate this due to a lack of *Zea mays* in securely dated Coles Creek contexts (Weinstein and Kelley 1992:37). Ceramic decoration in Coles Creek time centered around incised, stamped and punctated designs that usually were restricted to a band around the rim of the vessel (Neuman 1984:186). The frequency and amount of Coles Creek pottery types in the Lower Mississippi Valley suggest that this time was a period of cultural florescence and population growth.

South Louisiana contains an abundance of Coles Creek sites, several of which have been at least partially excavated: 16IV6, 16VM9, 16AS35, 16SMY1 and 16EBR5. From this, several temporally distinct phases have been developed for eastern Louisiana. These are the Bayou Cutler (ca. A.D. 700–900), Bayou Ramos (ca. A.D. 900–1000) and St. Gabriel (ca. A.D. 1000–1200) phases (Jones et al. 1994). Bayou Cutler derives from the work of Kniffen (1938) and was refined by Phillips (1970), who utilized data on 74 sites in the lower reaches of the Lower Mississippi Valley. The Bayou Ramos phase was developed by Weinstein in St. Mary Parish at Bayou Ramos I (16SMY133) (Weinstein and Kelley 1992). And the St. Gabriel Phase was defined at a site in Iberville Parish (16IV128) excavated by Woodiel (1993). A major site with a St. Gabriel component is the Kleinpeter site (16EBR5) in East Baton Rouge Parish (Jones et al. 1994).

Nearer the current project area, a significant Coles Creek component is present at the Hoover site (16TA5) in Tangipahoa Parish (Saunders 1994b). Also, near the north shore of Lake Pontchartrain, excavations at the Shadows Mound (16ST125) by members of the Louisiana Archaeological Society suggested that the mound was Coles Creek in date and had been built in a single construction episode (Jones and Shuman 1988).

MISSISSIPPI PERIOD (A.D. 1200–1700)

The Mississippi period in the Southeastern United States was a time when cultural influences from the Central Mississippi Valley increasingly influenced the indigenous cultures of the region. This is reflected in Louisiana by the Plaquemine culture, an outgrowth of the preceding Coles Creek, and the Mississippian culture proper. The latter is represented by large complexes of truncated earthen pyramids and the use of shell temper in ceramics, as well as distinctive ceramic forms such as effigy vessels. Mississippian culture sites were often fortified (Stoltman 1978:725). During this period, social and political organization appears to have centered on a chiefdom and subsistence was based on the cultigen triad of maize, beans and squash. Mississippian influence seems to have radiated from the Cahokia mounds group in Illinois, with its influence eventually extending both down the Mississippi River and along the Gulf Coast. In Louisiana, Plaquemine culture is represented at such sites as the Medora site (16WBR1), the Kleinpeter site (16EBR5), the Bayou Goula site (16IV11), Pritchards Landing (16CT14), the Fitzhugh site (16MA1) and many others (Smith et al. 1983:197; Jones et al. 1994).

The nature of the relationship between Plaquemine and Mississippian culture is as yet unclear. For example, Phillips (1970) considered Plaquemine culture to have been evolved by about A.D. 1000 and thereafter steadily influenced by the Mississippians until about A.D. 1400, when Mississippian groups actually displaced the indigenous Plaquemine peoples. Brain (1978), however, would place Coles Creek as lasting until approximately A.D. 1200, when it was influenced so heavily by Mississippian culture that it evolved into Plaquemine, which in his view is a hybrid.

On the basis of information developed largely from ceramic analyses, three regional phases have been suggested for early Plaquemine culture in southern Louisiana. The first was the Medora Phase (A.D. 1200 to A.D. 1500), based on the work of Quimby (1951) at the Medora site (16WBR1) in West Baton Rouge Parish. The second was the Barataria Phase, based largely on work at the Fleming site (16JE36) (Holley and DeMarcay 1977), and the third was Burk Hill, which derives from the work of Brown (1982) at the Burk Hill site (16IB100) on Cote Blanche Island. The Medora phase applies to the region of the current project. It was also during early Plaquemine times that material relating to the "Southern Cult" appeared. This term is used to denote a complex of traits that first appears around A. D. 1000 and reaches its zenith about A.D. 1500. This complex is associated especially with Mississippian culture proper, but it crossed cultural boundaries in the eastern United States (Neuman 1984:276). The complex focuses on an art style involving certain specific motifs, such as the cross, the sun, a bilobed arrow, the circle, the forked eye, the open eye, the barred oval, the hand and eye, and death motifs (Neuman 1984:277).

The extent of Plaquemine culture and the nature of the Mississippi period in the Florida Parishes are currently poorly understood, although there are several sites that show the definite presence of Plaquemine and Mississippian culture traits. Perhaps the closest major Plaquemine site to the study area is the Hoover site (16TA5) in Tangipahoa Parish. This location originally consisted of five mounds and probably reached its peak in Plaquemine times, although there may be a Marksville component as well (Jones and Shuman 1988).

PROTOHISTORIC ABORIGINAL CULTURES AND GROUPS

The arrival of Europeans set in motion a chain of major population upheavals among the Native Americans. Swanton shows several tribes for this area in the early historic and historic periods. These are the Atakapas, attested since 1700; the Choctaws, since 1763; and the Koasati and Pakana, both from 1850 (Swanton 1979). In 1787 the main Atakapa village was at Lacasine, "The Island of the Woods," but by 1797 the village was abandoned (Swanton 1979:93). The Choctaws, the second largest native ethnic group in the Southeast, was driven to Louisiana by encroaching Europeans in the Mississippi area (Swanton 1979: 121-122). The Choctaws are probably descendants of the Mississippian mound builders (Galloway 1995). The Koasati are another immigrant group displaced from lands to the northeast. They are the present day Coushatta. Finally, the Pakana are a small group from Alabama, once more pushed westward by population pressures (Swanton 1979:170). Only the Choctaws and the Koasati (Coushatta) have a contemporary presence (Kniffen et al. 1987).

CHAPTER FOUR:
HISTORY OF THE PROJECT AREA

EARLY EUROPEAN EXPLORATION AND SETTLEMENT

European explorers, lured by prospects of gold, began exploring the southeast United States within decades after Columbus' arrival in the New World. Early exploration efforts, however, ignored much of Louisiana. The Spaniard Cabeza de Vaca, a member of the ill-fated Panfilo de Narvaez expedition, sailed along the coast of southwest Louisiana in 1527 on his way to Texas, but did not travel into the interior. In 1541, Hernando Desoto became the first European interloper into Louisiana, following the Mississippi River and traversing into the northern part of what is now the state of Louisiana, although his exact route is in dispute (Louisiana Work Projects Administration 1941:3743).

During the 17th century, the French began scouting the major waterways. Robert Cavelier, Sieur de la Salle explored the Red and Mississippi Rivers in the l680s and named Louisiana for the French King, but did not travel into northwestern Louisiana. Sean Baptiste Le Moyne, Sieur d' Bienville and Louis Juchereau St. Denis explored the Ouachita River and northern Louisiana in 1700, including the area near what is now Natchitoches. France quickly recognized the potential of Louisiana, and established settlements along the Mississippi and Red Rivers during the early 18th century to maintain their claim to the territory. The most important French settlement in northwest Louisiana would be the post at Natchitoches (Williamson and Goodman 1939:9-28; Louisiana Work Projects Administration 1941:37-43; Hardin 1937:23).

St. Denis returned to the area inhabited by the Natchitoches Indians in 1713 and established a fort at Natchitoches, the first permanent settlement in the Louisiana Purchase. St. Denis did not stay long at the fort, but returned periodically to Natchitoches. In 1714, he traveled into Spanish territory, was captured and imprisoned. Following his release, he helped the Spanish negotiate with Indians in Texas. While in Spanish territory. St. Denis married a Spaniard, Doña Emmanuelle Ramon, but he remained loyal to the French crown. In return for his service and loyalty. St. Denis was made commandant of the Red River territory, and moved his family permanently to Natchitoches in 1722. He died in 1744 (Hardin 1937:23-50).

The French continued to settle northwestern Louisiana, even though travel was not easy. The Red River served as a highway for trade and settlement, but it was not without obstacles for travelers. Above what became Natchitoches was the Great Raft, a natural mass of lumber and debris that blocked the river. Down river from the raft, at what is now Alexandria, were the grand rapids for which Rapides Parish was named. In 1724 the French established a small post at the great rapids to protect settlers (Louisiana Work Projects Administration 1941:37-43; Flores 1984:111).

The Spanish were alarmed by the French exploration and settlement in Louisiana, and took action to maintain their claim to the area. In general, the Spanish claimed the land west of the Red River, while the French claimed the land east of the Brazos River. The area in between, including what became northwestern Louisiana, was important to both sides, hence the need to settle and maintain a claim. Toward that end, the mission San Miguel de Cuellar de Los Adaes was established by Father Antonio Margil de Jesus in 1717, near the site of the Adaes (Caddoan) Indian village. The Marques de San Miguel de Aguayo built the fort, Nuestra Señora del Pilar de los Adaes, in 1720. This was the easternmost claim of Spain's western North American empire. For 50 years it served as the capital of the Spanish province of Texas, in addition to being an important trade center (Hardin 1937:52-53; Weber 1992: 167-168, 195, 172-174).

The location at Los Adaes was not accidental. It was within eight leagues of the French post at Natchitoches. Arroyo Hondo, a creek that would later become important as a boundary, ran between Los Adaes and Natchitoches. Although there initially was some friction between the French and the Spanish, in general the inhabitants at Los Adaes and Natchitoches enjoyed friendly relations. There was intermarriage between the two groups of people, and residents of Natchitoches often took advantage of the nearby Catholic priests at Los Adaes for sacraments. By the late 1760s, the mission and fort were deteriorated. By this time, Spain had taken over French Louisiana, including nearby Natchitoches. This event caused the evacuation of the fort at Los Adaes within a decade because it was no longer necessary for defense or for maintaining Spain's claim (Hardin 1937:53-85; Weber 1992:211).

By 1740, scattered French settlers were living along the Red River, but political events in Europe changed the course of settlement in northwestern Louisiana and limited the French influence. In 1762, France ceded Louisiana to Spain under the Treaty of Fountainbleau. By 1765, Spain took control of Louisiana and subsequently encouraged colonization by granting land and provisions to settlers (Louisiana Work Projects Administration 1941:3743; Williamson and Goodman 1939:9-59).

There were two large Spanish land grants in what became Sabine and Desoto parishes. Spain granted 201,360 ac (six square leagues) to Jacinto Mora in 1795, but he sold it in 1805 to the firm of Murphy, Smith, Barr, Davenport, and Company. This parcel became known as the Las Ormegas land grant, and is still noted as such on maps and deeds. In 1798, the Spanish commandant at Nagodoches, Don José Maria Guadiana granted approximately 144 sections of land to Edward Murphy on the Naeogdoches-Natchitoches road, called the La Nana grant. Later that year, Murphy conveyed the land to the partnership Murphy, Smith, Barr and Davenport. The partnership, organized by Luther Smith, Edward Murphy, William Barr, and Peter Samuel Davenport in 1798 served as a trading company between Louisiana and Texas, serving settlers, Indians, and the military. Smith and Murphy died a decade later; Barr died in 1810, and Davenport in 1824. The land grant was divided among the heirs of each partner (Haggard 1945:1049-1052, 1089-1093).

Settlement of the western Louisiana frontier was disrupted again when, after four decades of rule, Spain ceded Louisiana back to France under the Treaty of San Ildefonso. In 1803, the United States acquired Louisiana from France (Williamson and Goodman 1939:5-6, 29-59).

EL CAMINO REAL

The El Camino Real, or the King's Highway, provided a land route between the Red and Sabine Rivers. It generally followed what is now Highway 6 from Natchitoches to the Louisiana Line and on to Nacogdoches, Texas, passing by Los Adaes, near the present day community of Robeline, and by Fort Jesup, between Robeline and Many. The road was originally established along an existing path, one used by Indians and by migrating bison. St. Denis used the path in exploring Louisiana and Texas, traveling westward in an attempt to establish trading ties between the French and Spanish colonies (Hardin 1937:92-95).

The El Camino Real served as an important link between Louisiana and the West under French, Spanish, and United States control. The road facilitated trade between the French and the Spanish. Filibusterers and settlers such as Moses Austin, Stephen F. Austin, David Crockett and James Bowie used the El Camino Real to enter Texas. Troops from all three countries used the road at various times. Zachary Taylor used the road during the Mexican War (Hardin 1937:92-97, 136-137).

THE NEUTRAL TERRITORY

The boundary between Louisiana and Texas was in dispute after the United States acquired Louisiana from France. Spain and the United States quarreled over the ownership of a strip of land east of the Sabine River and more or less west of the Red and Calcasieu Rivers (Figure 4). As a result of the diplomatic disputes, this strip of ground became a neutral ground sometimes referred to as "no man's land." Spain hoped that this neutral ground would serve as a barrier to further American filibustering in Spanish territory in Texas (Haggard 1945:1001-1004).

The issue of the exact boundary of Louisiana was as important to Spain as to the United States. The United States asserted that Louisiana extended all the way to the Rio Grande, but Spain disputed this claim. The United States based its claim on the Louisiana Purchase and the French explorer LaSalle's original claim of land for the French king. Spain based its claim on a dividing line based on Arroyo Hondo, just west of Natchitoches and east of Los Adaes, although they also claimed the line was the Calcasieu River with a line running through the post at Natchitoches to the Red River. These latter two boundaries were relatively close to one another.

In 1803, the Spanish government commissioned Franciscan Father José Maria de Jesus Puelles to investigate historical documents relating to the boundary. He completed his report in 1807, and submitted maps further substantiating that the historical boundary between French and Spanish territories was Arroyo Hondo and the Calcasieu River (Haggard 1945:1018-1024; Leutenegger 1978:136-138).

There were proposals for establishing a temporary neutral territory, but the United States and Spain continued to disagree on the boundaries. Meanwhile, there was some military posturing on the pan of each country to help reaffirm territorial claims. In a compromise effort, Spain and the United States finally agreed to establish a neutral territory pending a permanent agreement. The strip of land between the Sabine River and Arroyo Hondo became neutral territory in 1806. Within this area, the status quo was to be maintained, with no further settlement (Haggard 1945:1024-1035).

The status quo was not maintained in the neutral territory, however, as both American and Spanish settlers moved into the area. Later land claims made to the United States indicated that many settlers moved into the area while it was a neutral territory. The area further served as a base for filibustering in Texas, confirming Spain's original fears. In addition, because of the lack of legal control, the neutral territory became a hiding ground for criminals and fugitive slaves. Both Spanish and American authorities recognized the problem and jointly addressed it by sending out expeditions to eradicate outlaws. In an effort to curtail the problem, in 1810 authorities burned or otherwise destroyed many buildings in the area that might have provided shelter to the bandits. The resulting peace was short lived, however, because the marauding criminal element in the neutral territory continued to threaten travel and trade between Natchitoches and Nacogdoches. To address the problem, the United States dispatched Lieutenant Colonel Zebulon Pike to Natchitoches in 1812. Again, houses, tents, and camps were destroyed by both American and Spanish troops. Others found the neutral territory's lack of legal control beneficial. Fugitive slaves hid in the neutral territory not only because of its lack of legal control, but because they hoped for Spanish emancipation. Spain and the United States never agreed on a policy concerning fugitive slaves, but Americans began returning them, ignoring Spain's wishes.

Spain and the United States finally came to an agreement on the boundary in 1821 when the Adams-Onis Treaty was negotiated. As a result, the United States acquired the territory east of the Sabine River. In 1840, the boundary was marked with a granite post, with one side labeled "RT" for the Republic of Texas and "US' for the United States labeled on the opposite side (Haggard 1945:1001. 1049-1073; Desoto Historical Society, Inc. 1980:1, 30; Nardini 1961:80-88).

STATEHOOD

Louisiana was admitted to the Union in 1812, although the Florida Parishes (those that were the part of West Florida west of the Pearl River and east of the Mississippi River) were not added to the state for several months—even though they were technically in dispute until 1819 (Wall 1990:102–108). Louisiana's capital was originally in New Orleans, but voters preferred a different location. In 1825, Donaldsonville, the seat of Ascension Parish, was made the capital, although it wasn't until 1830 that the legislature actually moved to Donaldsonville, and they quickly moved back to the more exciting New Orleans. Baton Rouge became the state capital in 1846. The seat of state government moved around during the Civil War and Reconstruction but was returned to Baton Rouge in 1879 (Wall 1990:125–126).

BEAUREGARD PARISH AND DERIDDER

Beauregard Parish was one of the last parishes established in Louisiana. Partitioned from Calcasieu Parish in 1913, the parish was named for P.G.T. Beauregard, a Confederate general and one of the designers of the Confederate battle flag. The town of DeRidder was voted to be the parish seat on October 15, 1912. According to the 2010 United States census, DeRidder has a total population of 10,578 people (United States Census Bureau 2010).

CHAPTER FIVE:
PREVIOUS INVESTIGATIONS

The area surrounding the project area has been the scene of very little research-oriented archaeology. Early investigators of prehistoric sites in Louisiana, such as George E. Beyer or C.B. Moore, did not visit this part of Louisiana. Nor was Beauregard Parish the setting for any major projects during the Work Projects Administration (WPA) era when so much benchmark work was conducted in the United States. This portion of Louisiana has been relatively uninvestigated, and virtually the only research that has taken place has been the result of various cultural resources projects.

As such, archaeological investigations within 1 mi (1.62 km) of the APE are limited to two surveys (Table 1).

TABLE 1 – PROJECTS WITHIN 1 MI (1.62 KM) OF APE (SOURCE: LDOA).

LDOA No.	Type	Author(s)	Year
22-2245	Sewage	Gibson	1975
22-4260	Seismic survey	Galan	2013

The earliest was a reconnaissance survey by Jon L. Gibson in 1975 conducted to determine the effect of a proposed sewage line on any archaeological sites. Two sites were discovered and Gibson suggested the sewage line be modified as to not impact those sites. The following survey was a 2013 assessment by Victor Galan in which the author created a probability model for the impact of seismic testing in western Beauregard Parish.

CHAPTER SIX:
METHODOLOGY

PROCEDURES

Methodology for the survey included archival research and fieldwork. Initially, historic maps and aerial photographs at the United States Geological Survey (USGS) were consulted in order to determine any structures or roads that might have existed on the property in the early and mid-twentieth century. In addition, the site files and report library of the Louisiana Division of Archaeology were examined to determine archaeological sites reported for this area by previous investigators.

The survey methodology consisted of systematic shovel testing. Per the Louisiana Division of Archaeology (LDOA) and the Louisiana State Historic Preservation Officer (SHPO), the APE was divided into high probability and low probability areas (Figure 4). The high probability areas of the APE were defined by their proximity to creeks and streams which would suggest a greater likelihood of the presence of prehistoric sites.

For low probability (LP) areas, which made up 52.8% of the APE, transects were spaced 164.04 ft (50 m) apart with a shovel test dug every 164.04 ft (50 m). For high probability (HP) areas, which made up 47.2% of the APE, transects were spaced 98.42 ft (30 m) apart with a shovel test dug every 98.42 ft (30 m). All shovel tests were excavated to 50 cm or clay, whichever came first. Material recovered from the shovel tests was screened using .25 inch hardware cloth. When archaeological sites are discovered, they are defined using the protocol described in the Louisiana Division of Archaeology Guidelines.

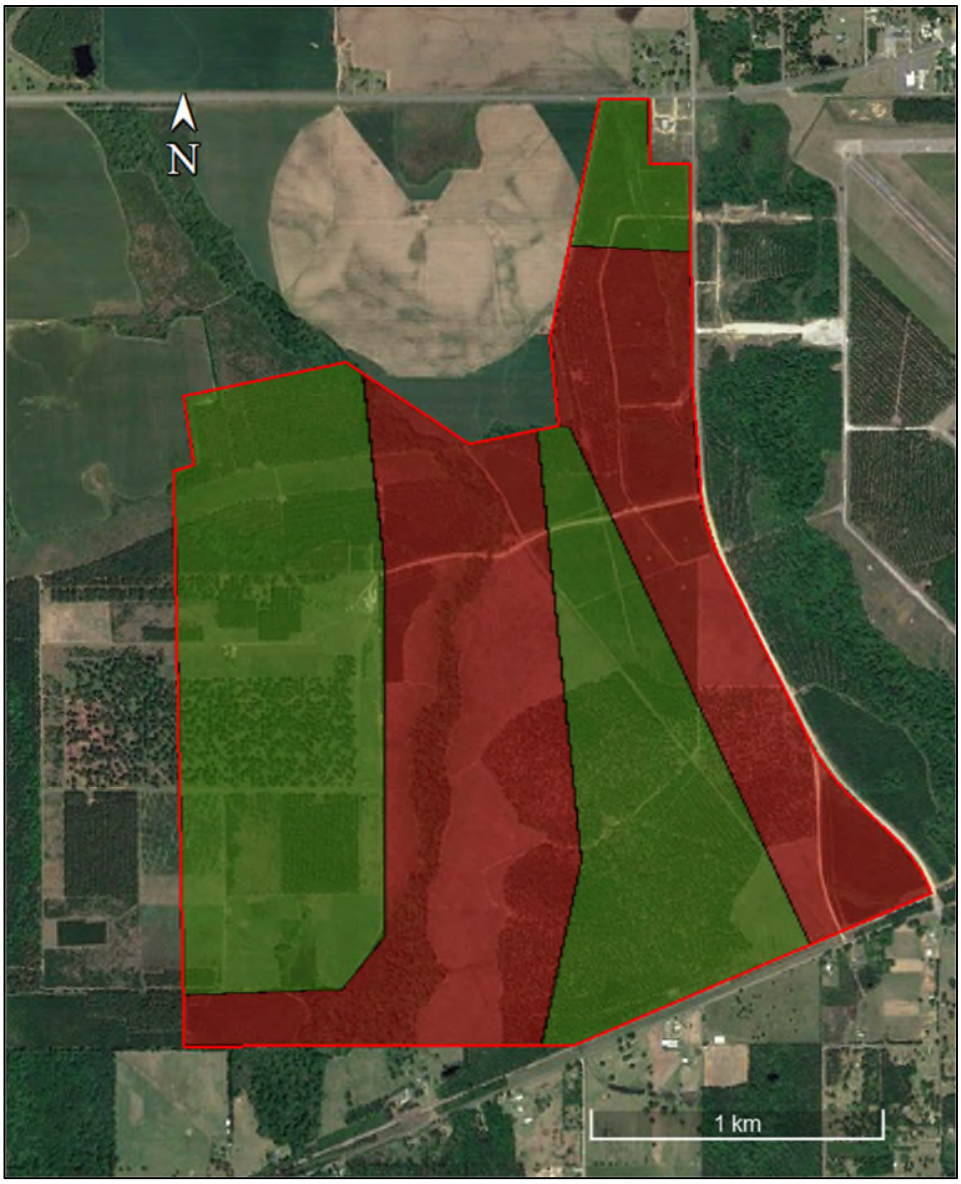

FIGURE 4 – AERIAL PHOTOGRAPH OF THE APE WITH LOW PROBABILITY AREAS IN GREEN AND HIGH PROBABILITY AREAS IN DARK RED (GOOGLE EARTH)

Each cultural resource site found is assessed according to current National Register of Historic Places (NRHP) criteria, as given below.

ELIGIBILITY FOR THE NATIONAL REGISTER OF HISTORIC PLACES

According to the *National Register of Historic Places Bulletin* 15 (1995:2), "The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association are potentially eligible for the *National Register of Historic Places.*" In order to evaluate this significance, four criteria have been developed. Eligible properties…

> "A. …are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. … are associated with the lives of persons significant in our past; or
>
> C. … embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or…
>
> D. … have yielded, or may be likely to yield, information important in history or prehistory" (NRHP 1995:2).

CURATION STATEMENT

Artifacts are returned to the SURA laboratory, washed, analyzed and catalogued and will be deposited with the Louisiana Division of Archaeology, along with associated documents, at:

LDOA Curation/CRT
Central Plant North Building, 2nd Floor
1835 N. Third Street
Baton Rouge, Louisiana 70802

CHAPTER SEVEN:
RESULTS OF THE SURVEY

BACKGROUND AND ARCHIVAL RESEARCH

A review of historic topographic maps from USGS shows that there has been relatively little change to the APE proper over the last 69 years as shown in Figures 5-7. The 1949 DeRidder La. 7.5-minute map shows an unnamed creek going through the center of the APE. There are four structures depicted on the southeastern boundary of the APE. These structures are no longer extant, and attempts during survey were made to look for them (Figure 4).

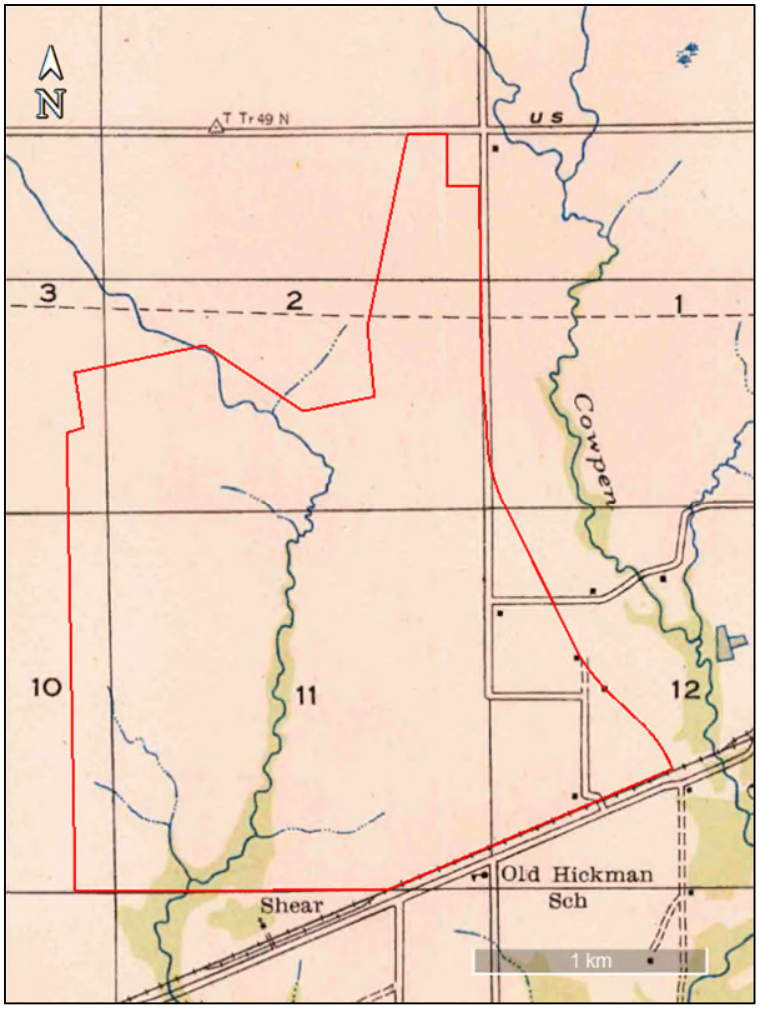

FIGURE 5 - PORTION OF 1947 DERIDDER, LA. 7.5-MINUTE MAP DEPICTING APE IN RED (USGS)

The 1956 DeRidder, La. 7.5-minute map is nearly identical to the previous edition (Figure 5).

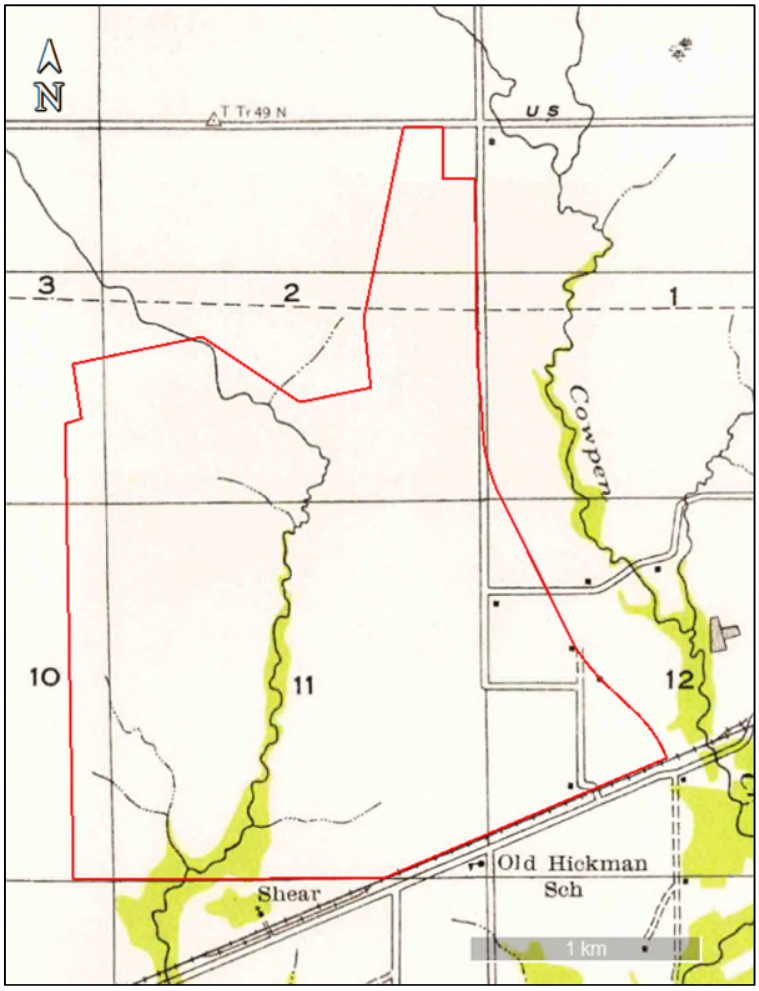

FIGURE 6 - PORTION OF 1956 DERIDDER, LA. 7.5-MINUTE MAP DEPICTING APE IN RED (USGS)

By the 1986 7.5 minute map, the four structures on the southeast corner of the APE have been demolished along with the unnamed road. A pipeline is now depicted from the center of the APE to the southeast corner. A small lake is shown in the southwest corner (Figure 7).

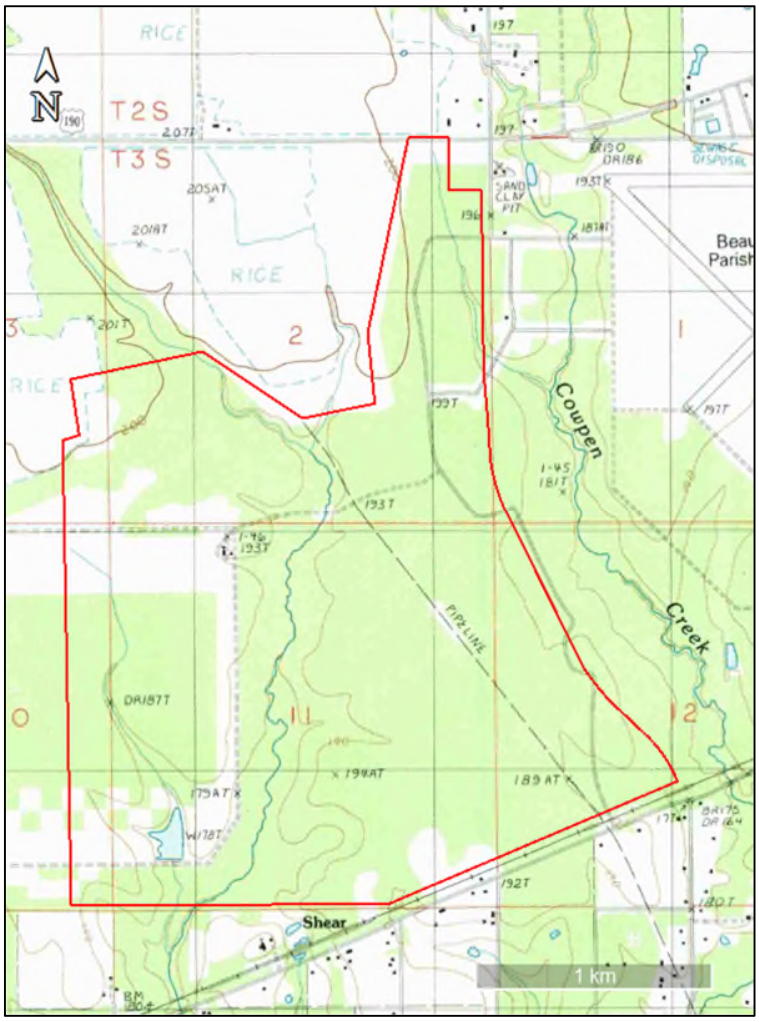

FIGURE 7 - PORTION OF 1986 DERIDDER, LA. 7.5-MINUTE MAP DEPICTING APE IN RED (USGS).

ARCHAEOLOGICAL SITES WITHIN 1 MI (1.62 KM) OF APE

There are no archaeological sites within 1 mi (1.62 km) of the APE. The closest is 2.7 mi (4.4 km) away. Designated 16BE97, the Bailey site is a prehistoric site recorded in 2002 made up primarily of lithic artifacts.

FIELDWORK

Field survey was conducted from July 6, 2016, to August 28, 2016. As previously stated in the section on field methodology, the APE was divided into areas of high probability and low probability. The APE as such was divided into three low probability areas and two high probability areas (Figure 8). Figures 9-14 show a representation of the topography encountered during the course of the survey.

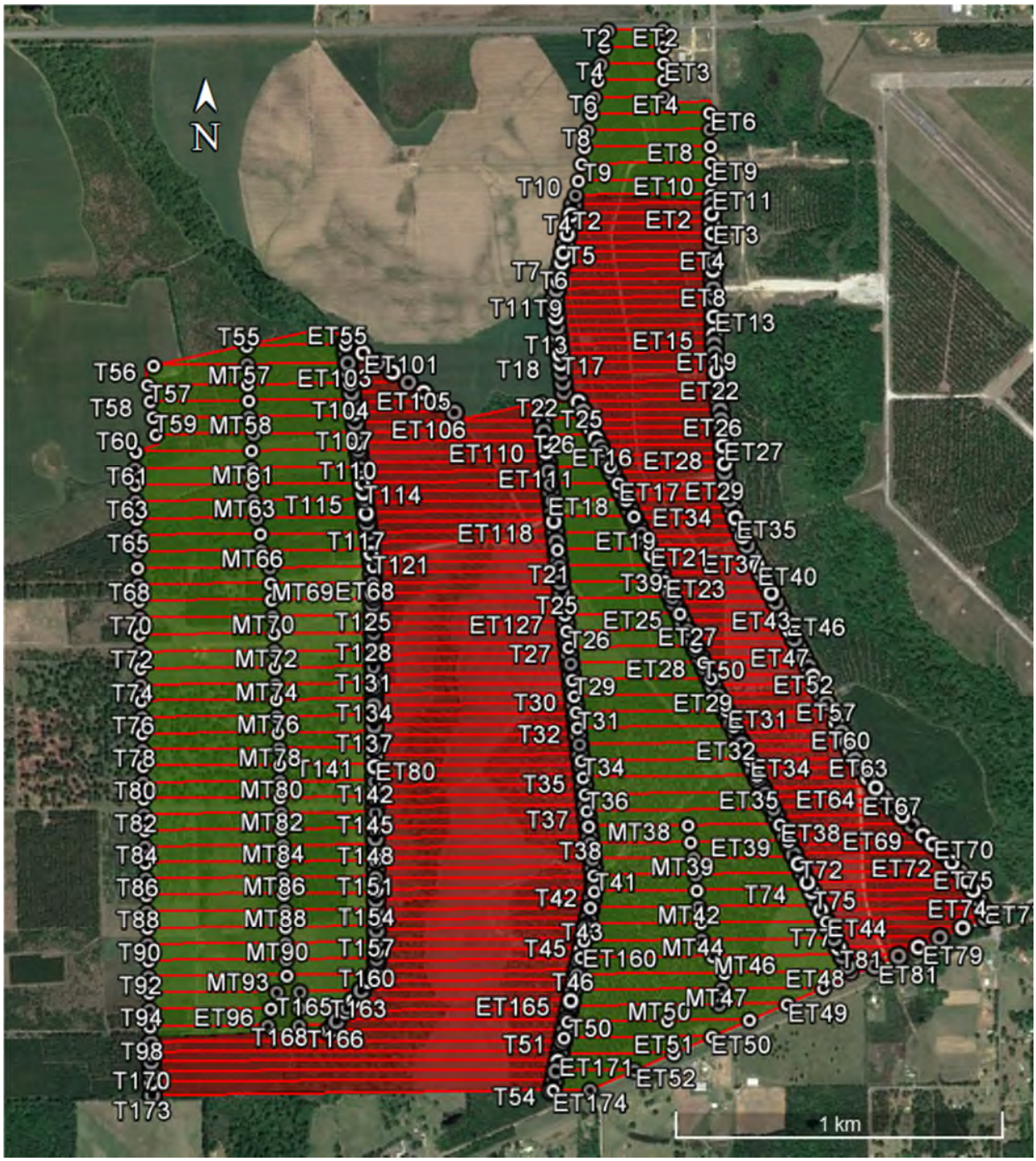

FIGURE 8 - AERIAL PHOTOGRAPH DEPICTING SHOVEL TESTING TRANSECTS OF THE APE (GOOGLE EARTH).

FIGURE 9 – BEGINNING OF TRANSECT 1, FACING NORTH.

FIGURE 10 – END OF TRANSECT 16, FACING EAST.

FIGURE 11 – END OF TRANSECT 32, FACING SOUTH.

FIGURE 12 – TRANSECT 99, FACING NORTH.

FIGURE 13 – TRANSECT 119, FACING EAST.

FIGURE 14 – END OF TRANSECT 161, FACING WEST.

ARCHAEOLOGICAL SITES

Four archaeological sites were discovered during the course of the survey. They were designated as BPASA-1 (16BE104), BPASA-2 (16BE105), BPASA-3 (16BE106), and BPASA-4 (16BE107) (Figure 15).

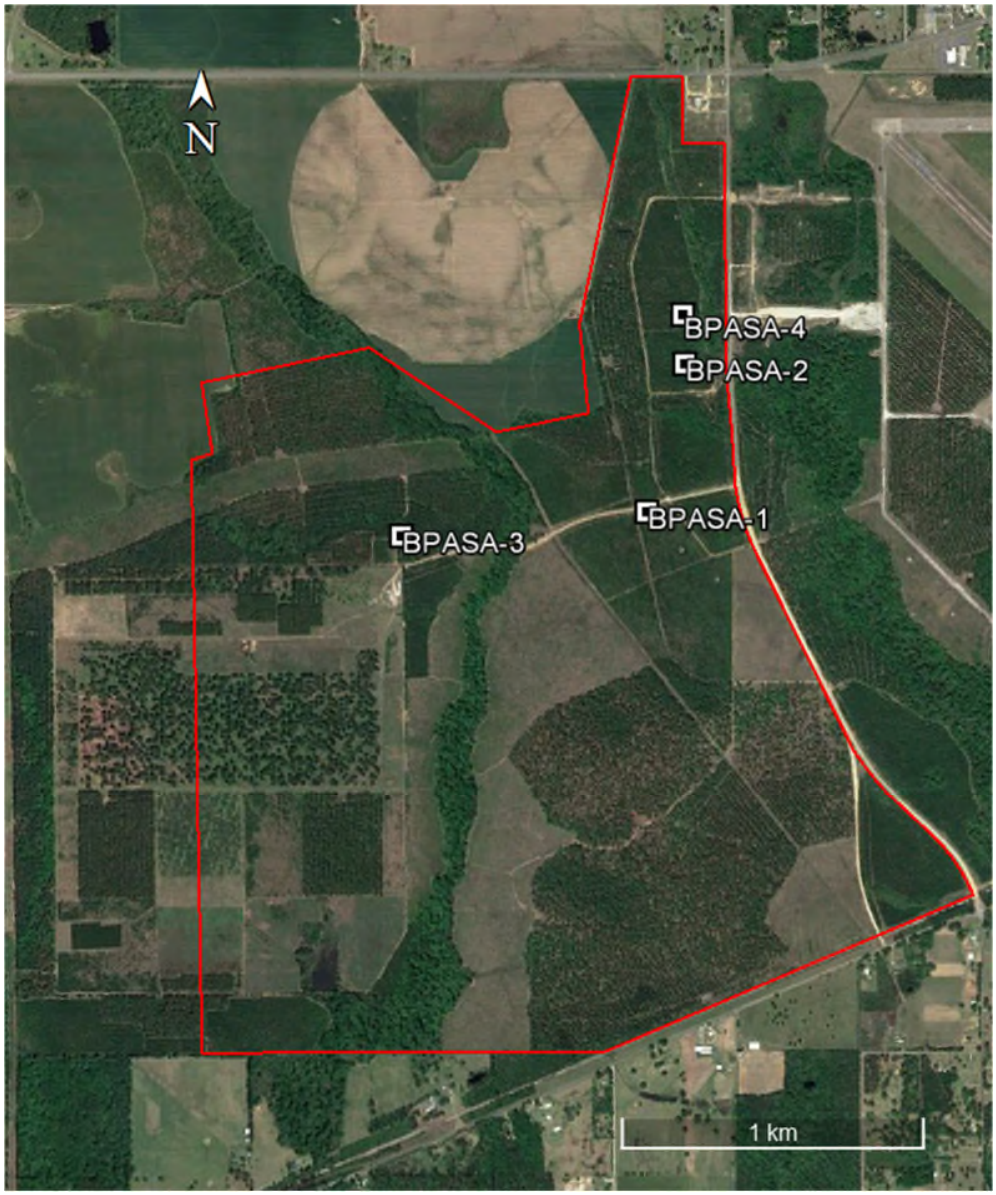

FIGURE 15 - AERIAL PHOTOGRAPH DEPICTING THE APE IN RED AND THE FOUR SITES ENCOUNTERED DURING FIELDWORK (GOOGLE EARTH).

BPASA-1 (16BE104)

This site, coving 538.19 feet^2 (ft^2) (50 meters^2 [m^2]), was a prehistoric and historic scatter. The datum of the site is located at 465962.00 m E, 3410404.00 m N. Figure 16 depicts the location of the site. Figure 17 presents a map, and Figure 18 shows a view from datum. Table 2 describes the soil profile, and Table 3 is a list of the recovered artifacts preceding a brief explanation.

FIGURE 16 – DETAIL OF AERIAL PHOTOGRAPH SHOWING BPASA-1 (16BE104) (GOOGLE EARTH).

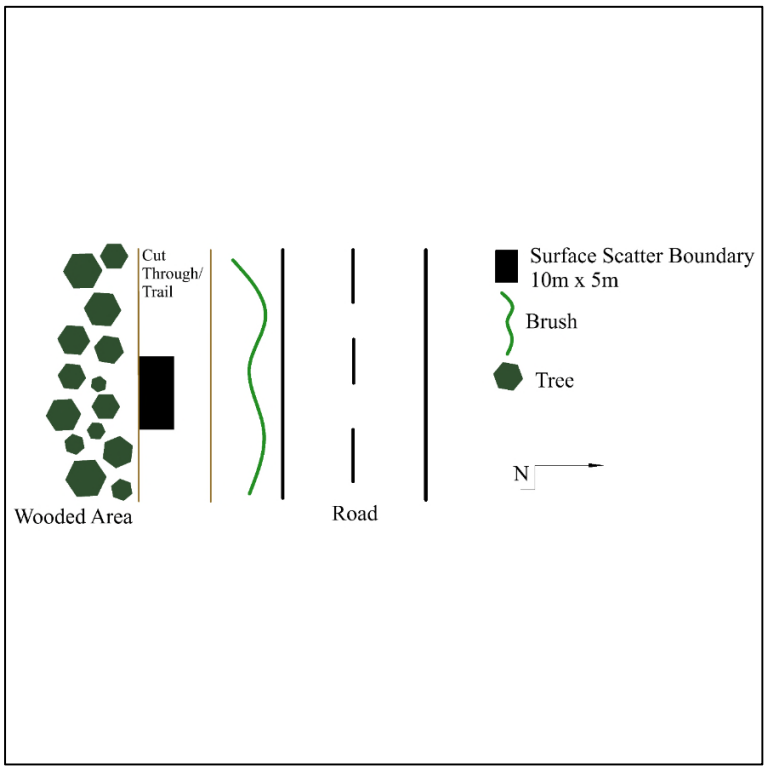

FIGURE 17 – SITE MAP OF BPASA-1 (16BE104).

FIGURE 18 – FACING WEST FROM DATUM.

TABLE 2 – REPRESENTATIVE SOIL PROFILE FROM BPASA-1 (16BE104).

Location	Depth	Munsell	Description
Datum	0-25 cmbs	10YR 4/4	Silty sand
	26-40 cmbs	10 YR 5/2	Silty sand
	41-50 cmbs	10 YR 5/3	Sandy sand
	51-60 cmbs	10 YR 4/6	Sandy clay

TABLE 3 – ARTIFACTS FROM BPASA-1 (16BE104)

	LOCATION	
	Surface	TOTAL
Ceramics		
Ironstone		
Plain	3	3
Glass		
Vessel (Curved)	8	8
Window (Flat)	1	1
Lithics		
Debitage		
Flakes		
Secondary	1	1
TOTAL	10	10

This site consisted of a surface artifact scatter on a hunting ATV trail. The artifacts were three ironstone ceramic sherds, eight shards of vessel glass, and one shard of flat glass. A single prehistoric lithic secondary flake was also present.

BPASA-2 (16BE105)

This site, coving 1,614.59 feet^2 (ft^2) (150 meters^2 [m^2]), was an historic scatter and cement slab. The datum of the site is located at 466089.00 m E, 3410891.00 m N. Figure 19 depicts the location of the site. Figure 20 presents a map, and Figure 21 shows a view from datum. Table 5 describes the soil profile, and Table 6 is a list of the recovered artifacts preceding a brief explanation.

FIGURE 19 - DETAIL OF AERIAL PHOTOGRAPH SHOWING BPASA-2 (16BE105) (GOOGLE EARTH).

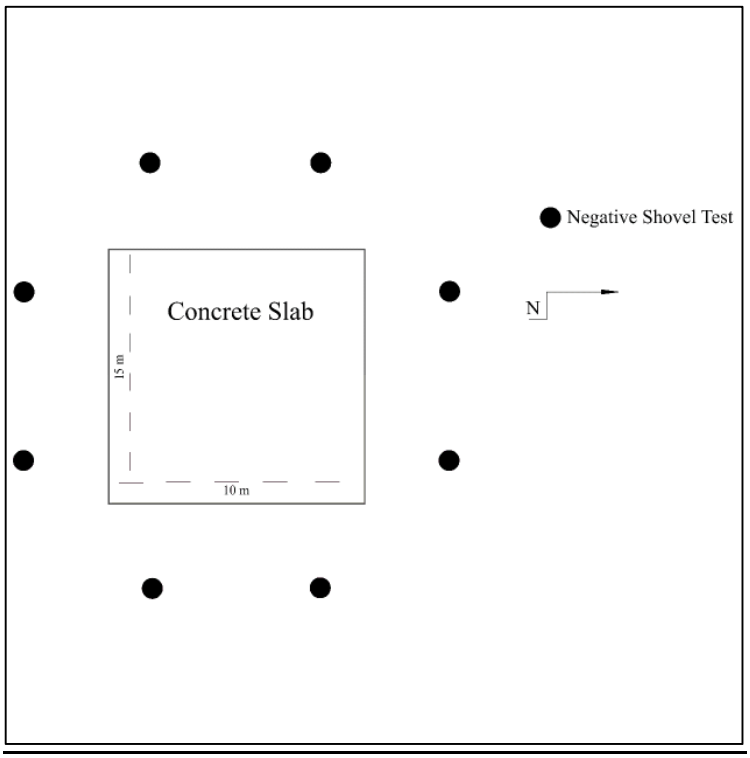

FIGURE 20 – SITE MAP OF BPASA-2 (16BE105).

FIGURE 21 – FACING WEST FROM DATUM.

TABLE 4 – REPRESENTATIVE SOIL PROFILE OF BPASA-2 (16BE105).

Location	Depth	Munsell	Description
Datum	0-30 cmbs	10YR 5/3	Sand
	31-50 cmbs	10 YR 6/4	Sand
	51-80 cmbs	10 YR 5/6	Sandy clay

TABLE 5 – ARTIFACTS FROM BPASA-2 (16BE105).

	LOCATION	
	Surface	TOTAL
Ceramics		
Ironstone		
Plain	8	8
Decorated		
Hand-Painted	2	2
Glass		
Bottle (Curved)	7	7
Window (Flat)	2	2
Milk	3	3
Metal		
Aluminum		
License Plate	1	1
TOTAL	23	23

The site consisted of a concrete slab and domestic items that were scattered around the slab along with contemporary trash. Such artifacts included ten ironstone sherds—eight undecorated and two hand-painted. Glass was present with seven vessel shards, two pieces of flat glass, and three sherds of milk glass. A Michigan license plate celebrating the United States bicentennial was also among the surface scatter.

BPASA-3 (16BE106)

This site, covering 197 ft^2 (18.3 m^2), was a prehistoric scatter of exclusively lithic debitage flakes. The datum of the site is located at 465150.49 m E, 3410327.39 m N. Figure 21 depicts the location of the site. Figure 22 presents a map, and Figure 23 shows a view from datum. Table 7 describes the soil profile, and Table 8 is a list of the recovered artifacts preceding a brief explanation.

FIGURE 22 – DETAIL OF AERIAL PHOTOGRAPH SHOWING BPASA-3 (16BE106) (GOOGLE EARTH).

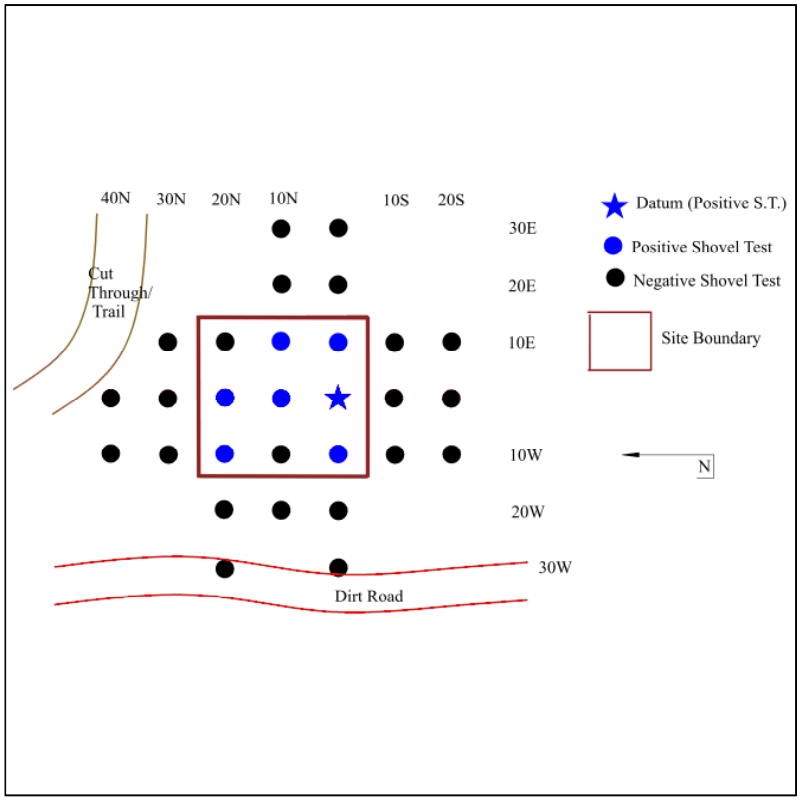

FIGURE 23 – SITE MAP OF BPASA-3 (16BE106).

FIGURE 24 – FACING NORTH FROM DATUM.

TABLE 6 – REPRESENTATIVE SOIL PROFILE OF BPASA-3 (16BE106).

Location	Depth	Munsell	Description
Datum	0-10 cmbs	10YR 3/1	Sandy silt
	11-35 cmbs	10 YR 5/2	Silty sand
	36-60 cmbs	10 YR 7/8	Sandy clay

TABLE 7 – ARTIFACTS FROM BPASA-3 (16BE106).

	LOCATION							
	Datum	**10 N**	**20 N**	**20 N, 10 W**	**10 E**	**10 E, 10 N**	**10 W**	TOTAL
Lithics								
Debitage								
Flakes								
Primary								
Worked				1				1
Secondary	3	4	2		1		1	11
Tertiary	4	2	1		1	2	2	12
TOTAL	7	6	3	1	2	2	3	24

This site was the only purely prehistoric site of the four. Seven shovel tests were positive for cultural materials including one worked primary flake, eleven secondary flakes, and twelve tertiary flakes. The area was flanked by a dirt trail and a cut ATV path. This, coupled with recent pine cultivation, has compromised the integrity of the site.

BPASA-4 (16BE107)

This site, covering 258.44 ft^2 (24.01 m^2), was the ruin of an animal dip. The datum of the site is located at 466083.00 m E, 3411053.00 m N. Figure 25 depicts the location of the site, Figure 26 presents a map, and Figure 27 shows a view from datum. Table 7 describes the soil profile.

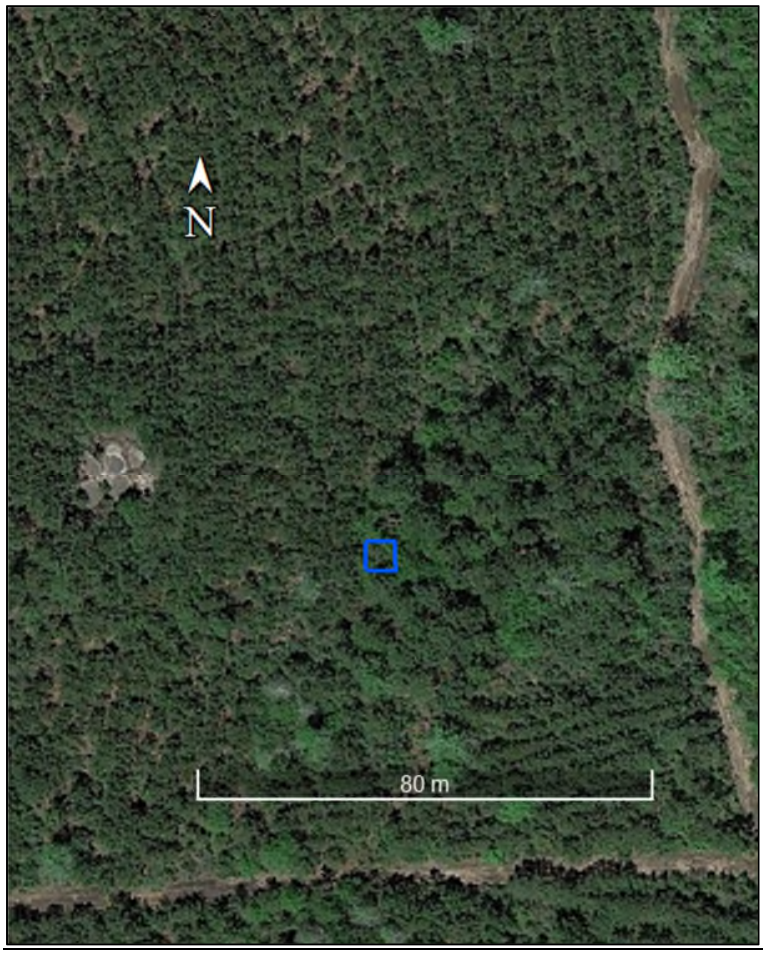

FIGURE 25 – DETAIL OF AERIAL PHOTOGRAPH SHOWING BPASA-4 (16BE107) (GOOGLE EARTH).

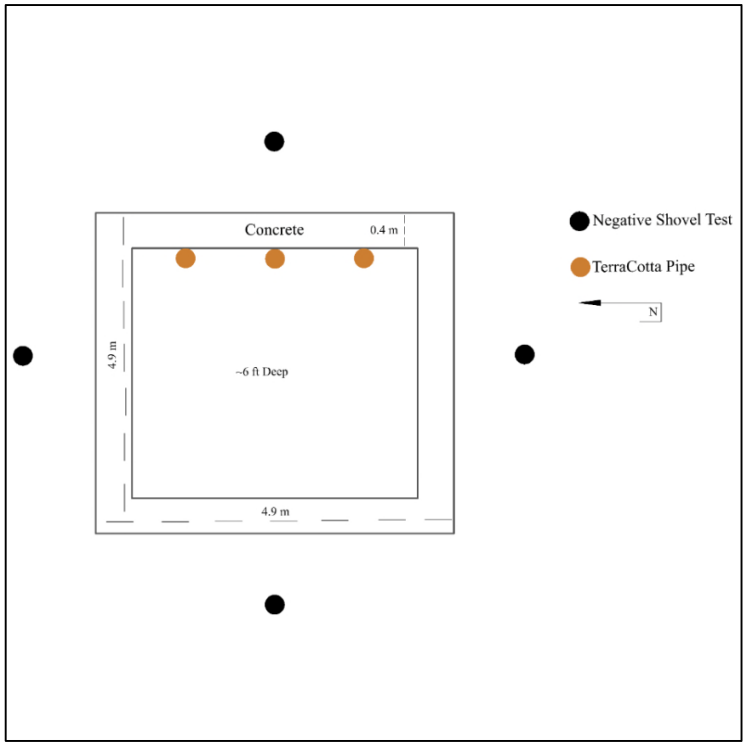

FIGURE 26 – SITE MAP OF BPASA-4 (16BE107).

FIGURE 27 – OVERVIEW OF SITE, FACING SOUTHWEST.

TABLE 8 – REPRESENTATIVE SOIL PROFILE FROM BPASA-4 (16BE107).

Location	**Depth**	**Munsell**	**Description**
Datum	0-25 cmbs	10YR 4/4	Silty sand
	26-40 cmbs	10 YR 5/2	Silty sand
	41-50 cmbs	10 YR 5/3	Silty sand
	51-60 cmbs	10 YR 4/6	Sandy clay

No artifacts were recovered from BPASA-4. The site is made up of four concrete walls 16.07 ft (4.9 m) long and 1.31 ft (0.4 m) wide and thick. The interior of the structure is 6 ft (1.83 m) deep. Three terracotta pipes are built into the structure and drain out into a nearby area. The authors interpret this structure to be a mid-twentieth century animal/cattle dip to treat livestock with liquid pesticide.

ISOLATED FINDS

A total of four isolated finds were encountered during the course of the survey (Figure 28). All were defined by placing two additional shovel tests along the cardinal axes and all the additional shovel tests were negative.

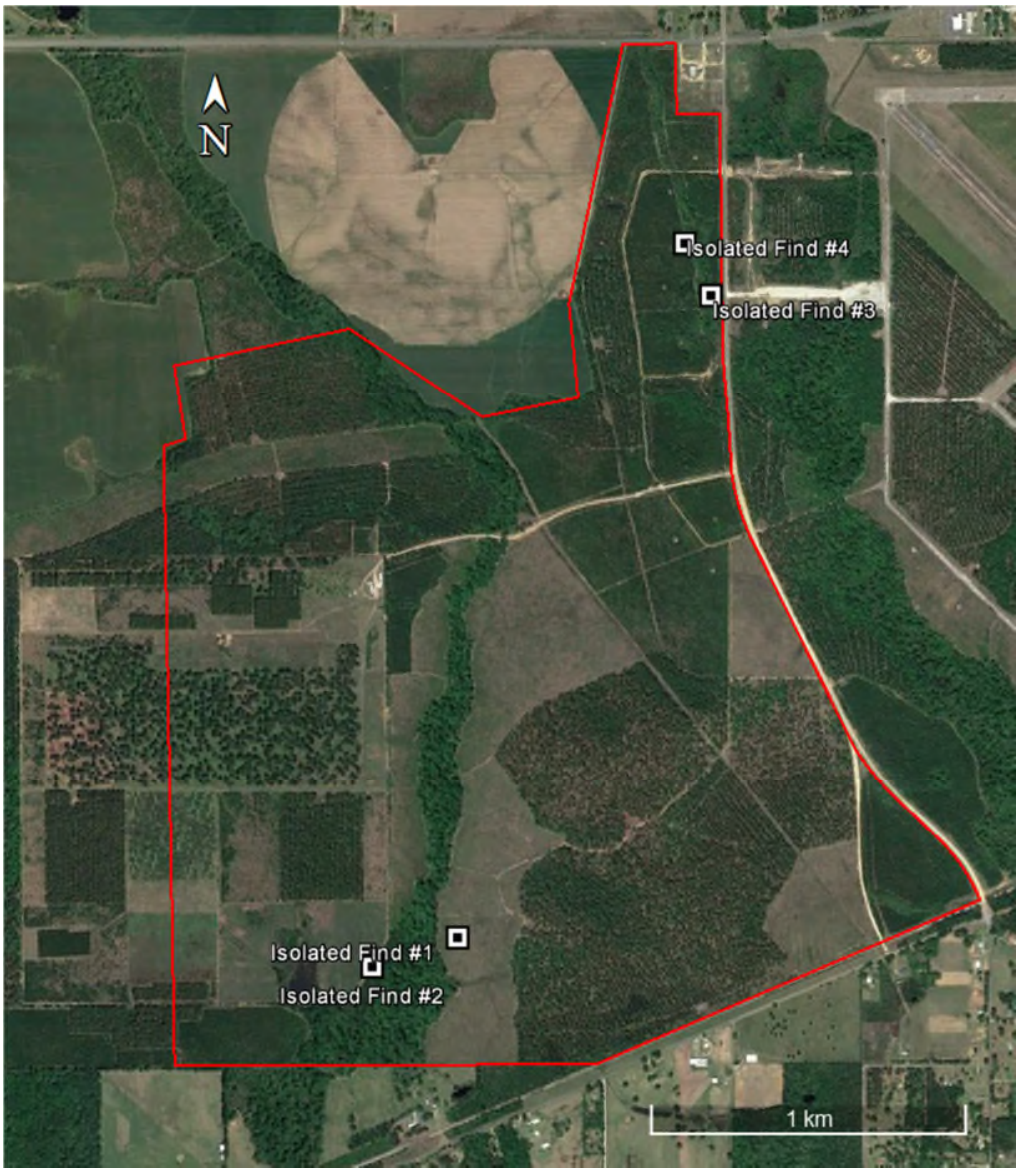

FIGURE 28 – AERIAL PHOTOGRAPH DEPICTING THE APE IN RED AND THE FOUR ISOLATED FINDS ENCOUNTERED DURING FIELDWORK (GOOGLE EARTH).

ISOLATED FIND #1

The first isolated find was located at 465382.20 m E, 3409028.14 m N. It was a positive shovel test located on Transect 161, Shovel Test 12. The artifacts consisted of three tertiary flakes. The stratigraphy of the shovel test using the Munsell system was (0-10 cmbs) 10YR 4/2 silty loam, (11-35 cmbs) 10YR 5/3 sandy silt, (36-50 cmbs) 10YR 6/6 silty sand, (51-75 cmbs) 10YR 5/8 sandy clay, and (76-90 cmbs) 10YR 5/6 clay.

ISOLATED FIND #2

The second isolated find was located at 465111 m E, 3408937 m N. It was a positive shovel test located near the end of Transect 95 and consisted of one secondary flake. The stratigraphy of the shovel test using the Munsell system was (0-25 cmbs) 10YR 4/4 silty sand, (26-40 cmbs) 10YR 5/2 silty sand, and (41-60 cmbs) 10YR 4/6 sandy clay.

ISOLATED FIND #3

The third isolated find was located at 466190 m E, 3411048 m N. It was a positive shovel tested located between Transects 10 and 11. The artifacts consisted of one secondary flake and one tertiary flake. The stratigraphy of the shovel test using the Munsell system was (0-30 cmbs) 10YR 5/3 sand, (31-50 cmbs) 10YR 6/4 sand, and (51-80 cmbs) 10YR 5/6 sandy clay and iron oxide amalgams.

ISOLATED FIND #4

The fourth isolated find was located at 466108 m E, 3411212 m N. It was a positive shovel test located on Transect 4, Shovel Test 11. The artifacts present were one piece of blocky debitage, two secondary flakes, and a bead. The stratigraphy of the shovel test using the Munsell system was (0-10 cmbs) 10YR 5/4 sand, (11-50 cmbs) 10YR 6/6 sand, and (51-70 cmbs) 10YR 5/7 sandy clay with iron oxide amalgams.

SUMMARY

One prehistoric site, two historic sites, and one combination site were discovered during the course of the survey. The prehistoric site yielded no diagnostic artifacts or midden deposits. The first historic site was made up of an unremarkable mid-20th century domestic scatter. The second historic site was a common form of animal pesticide treatment of the area. The prehistoric/historic combination site was an artifact scatter on a disturbed ATV trail. As a result, none of these sites were considered NRPH-eligible. Four isolated finds consisting of flakes, blocky debitage, and a bead were excavated.

CHAPTER EIGHT:
CONCLUSIONS AND RECOMMENDATIONS

Between the dates of July 6, 2016, to August 28, 2016, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) conducted a Phase I cultural resource survey of 1,170 ac (473.5 ha) west of Beauregard Regional Airport located in DeRidder, Beauregard Parish, Louisiana. A total of 6,335 shovel tests were excavated.

Four archaeological sites were discovered—BPASA-1 (16BE104), BPASA-2 (16BE105), BPASA-3 (16BE106), and BPASA-4 (16BE107). The authors suggest that because of the disturbance due to modern hunting activities and pine cultivation, these sites do not possess the qualities of significance and are not eligible for listing on the National Register of Historic Places under Criterion D. Four isolated finds were also noted. None of these finds contain sufficient artifacts, or secure enough proveniences to be considered for the NRHP. As a result, no further work is recommended for the surveyed area.

REFERENCES CITED

Belmont, John S.

1982 The Troyville Concept and the Gold Mine Site. *Louisiana Archaeology* 9:63–96.

Brain, Jeffrey P.

1978 Late Prehistoric Settlement Patterning in the Yazoo Basin and Natchez Bluffs Regions of the Lower Mississippi Valley. In *Mississippian Settlement Patterns,* edited by Bruce D. Smith, pp. 331-368. Academic Press, New York.

Brignac, Harry G., Taylor Gabour, Carl Kuttruff, Malcolm K. Shuman and Phillip K. Taylor

2010 *Phase II National Register Testing of a Portion of Site 16ST48 in Mandeville, St. Tammany Parish, Louisiana*. Report submitted to the City of Mandeville.

Brown, Ian W.

1982 *The Southeastern Check Stamped Pottery Tradition: A View from Louisiana.* Mid-Continental Journal of Archaeology Special Paper No. 4. Kent, OH.

Brown, Ian and Nancy Lambert-Brown

1978 Lower Mississippi Survey, Petite-Anse Project, *Research Notes. No. 5.* Avery Island, Louisiana.

Bruseth, James B.

1991 Poverty Point Development as Seen at the Cedarland and Claiborne Sites, Southern Mississippi. *The Poverty Point Culture: Local Manifestations, Subsistence Practices, and Trade Networks.* Edited by Kathleen M. Byrd. Geoscience and Man. 29:7–25.

Byrd, Kathleen M.

1974 *Tchefuncte Subsistence Patterns, Morton Shell Mound, Iberia Parish, Louisiana.* Unpublished M.A. thesis submitted to the Department of Geography & Anthropology, Louisiana State University.

1977 *The Brackish Water Clam* (Rangia cuneata): *A Prehistoric 'Staff of Life' or a Minor Food Resource.* Louisiana Archaeology 3:23–32.

CEI (Coastal Environments, Inc.)

1977 *Cultural Resources Evaluation of the Northern Gulf of Mexico Continental Shelf, Vol. 1: Prehistoric Cultural Resource Potential.* Report submitted to Interagency Archaeological Services, Office of Archaeology and Historic Preservation, National Park Service, Department of the Interior. Washington, D.C.

Collins, Henry B., Jr.

1941 Relationships of an Early Indian Cranial Series from Louisiana. *Journal of the Washington Academy of Sciences 31:145-155.*

DeSoto Historical Society, Inc.

1980 *DeSoto Plume*. DeSoto Historical Society, Inc., Mansfield, La.

Dundee, Harold A. and Douglas A. Rossman

1989 *The Amphibians and Reptiles of Louisiana*. Louisiana State University Press, Baton Rouge.

Flores, Dan L. (Ed.)

1984 *Jefferson & Southwestern Exploration: The Freeman & Custis Accounts of the Red River Expedition of 1806.* University of Oklahoma Press, Norman.

Ford, James A.

1951 *Greenhouse: A Troyville-Coles Creek Period Site in Avoyelles Parish, Louisiana.* Anthropological Papers of the American Museum of Natural History, 44(1). New York.

Ford, James A. and George I. Quimby, Jr.

1945 *The Tchefuncte Culture: An Early Occupation of the Lower Mississippi Valley.* Society for American Archaeology memoir No. 2. Menasha, Wisconsin.

Gagliano, Sherwood M.

1963 A Survey of Preceramic Occupations in Portions of South Louisiana and South Mississippi. *Florida Anthropologist 16:105-132.*

1964 *An Archaeological Survey of Avery Island.* Avery Island, Inc., Baton Rouge.

Gagliano, Sherwood M. and Roger T. Saucier

1963 Poverty Point Sites in Southeastern Louisiana. *American Antiquity* 28:320-327.

Gagliano, Sherwood M. and Clarence H. Webb

1970 Archaic-Poverty Point Transition at the Pearl River Mouth. *Southeastern Archaeological Conference Bulletin* 12:47-72.

Gagliano, Sherwood M., Charles B. Pearson, Richard A. Weinstein, Diane B. Wiseman and Christopher M. McClendon

1982 *Sedimentary Studies of Prehistoric Archaeological Sites: Criteria for the Identification of Submerged Archaeological Sites of the Northern Gulf of Mexico Continental Shelf* Unpublished report submitted to the Division of State Plans and Grants, National Park Service, U.S. Department of the Interior, Washington, D.C.

Galan, Victor

2013 *An Archaeological Sensitive Area Avoidance Plan for the Merryville 3D Seismic Survey in Newton County, Texas and Beauregard Parish, Louisiana*. Unpublished report on file with the Louisiana Division of Archaeology, Baton Rouge.

Galloway, Patricia

1995 *Choctaw Genesis 1500-1700*. University of Nebraska Press, Lincoln.

Gibson, Jon L.

1975 *Archaeological Assessment of the DeRidder Sanity Sewage Project*. Unpublished report on file with the Louisiana Division of Archaeology, Baton Rouge.

1982 *The Troyville-Baytown Issue.* Louisiana Archaeology 9:29-62.

1994 Before Their Time? Early Mounds in the Lower Mississippi Valley. *Southeastern Archaeology* 13:162186.

Gibson, Jon L. and J. Richard Shenkel

1989 Louisiana Earthworks: Middle Woodland and Predecessors. In *Middle Woodland and Ceremonialism in the Midsouth and Lower Mississippi Valley*, edited by Robert C. Mainfort, Jr., pp. 7-18. Mississippi Department of Archives and History, Jackson.

Goodwin, Benjamin F.

2003 *Remote Sensing at the Broussard Mounds Site: A Prehistoric Multi-Mound Site Located in the Lower Mississippi Valley.* Unpublished M.A. thesis for the Louisiana State University Department of Geography and Anthropology and on file at the Middleton Library, Louisiana State University, Baton Rouge.

Goodwin, R. Christopher, Paul Heinrich, William P. Athens, Stephen Hinks.

1991 *Overview, Inventory, and Assessment of Cultural Resources in the Louisiana Coastal Zone.* Unpublished report on file with the Louisiana Division of Archaeology, Baton Rouge.

Hardin, J. Fair

1937 *Northwestern Louisiana: A History of the Watershed of the Red River, 1714-1937.* The Historical Record Association, Louisville, Kentucky.

Holley, George R. and Gary B. DeMarcay

1977 *Preliminary Report on the Prehistory of Barataria*. Paper presented at the third annual meeting of the Louisiana Archaeological Society, New Orleans.

Jones, Dennis C.

1993 The Case of the LSU Campus Mounds Report. *Louisiana Archaeology* 20:169–78.

Jones, Dennis C. and Malcolm K. Shuman

1988 *Archaeological Atlas and Report of Prehistoric Indian Mounds in Louisiana. Vol. III: Livingston, St. Helena, St. Tammany, Tangipahoa and Washington Parishes.* Unpublished report of a grant project funded by the Louisiana Division of Archaeology and the National Park Service, Department of the Interior and on file with the Louisiana Division of Archaeology.

Jones, Dennis C., Carl Kuttruff, Malcolm Shuman and Joe Stevenson

1994 *The Kleinpeter Site (16EBR5): The History and Archaeology of a Multicomponent Site in East Baton Rouge Parish, Louisiana.* Louisiana Geological Survey, Anthropology Study No. 5. Baton Rouge.

Kidder, Tristram R.

2006 Climate Change and the Archaic to Woodland Transition (3000-2600 cal B.P.) in the Mississippi River Basin. *American Antiquity* 71: 195–231.

Kidder, Tristram R., Lori Roe and Timothy M. Schilling

2010 Early Woodland Settlement and Mound Building in the Upper Tensas Basin, Northeast Louisiana. *Southeastern Archaeology* 29:121–145.

Kniffen, Fred B., Hiram F. Gregory, and George A. Stokes

1987 *The Historic Indian Tribes of Louisiana from 1542 to the Present*. Louisiana State University Press, Baton Rouge.

Leutenegger, Benedict (Translator)

1978 Puelles' Report of 1827 on the Texas-Louisiana Boundary. *Louisiana Historical Quarterly* 19: 133-181.

LDOA (Louisiana Division of Archaeology)

v.d. *Site Files*. Louisiana Division of Archaeology, Baton Rouge.

LWPA (Louisiana Works Progress Administration)

1941 *Louisiana: A Guide to the State.* Hastings House Publishers, New York.

Lowery, George

1974 *The Mammals of Louisiana and its Adjacent Waters*. Louisiana State University Press, Baton Rouge.

McWilliams, Richebourg Gaillard (Ed.)

1981 *Iberville's Gulf Journals.* University of Alabama Press, University, Alabama.

Manuel, Joe

1979 A Radiocarbon Date from the Hornsby Site-16SH21. *Newsletter of the Louisiana Archaeological Society* 8:9–22.

1987 *The Antiquity of the Hornsby Mound, a Delta Project 1977–78.* Paper presented at the annual meeting of the Louisiana Archaeological Society.

Nardini, Louis R.

1961 *No Man's Land: A History of El Camino Real*. Pelican Publishing Co., New Orleans, La.

NRHP (National Register of Historic Places)

1991 *How to Apply the National Register Criteria for Evaluation*. National Register Bulletin 15, Department of the Interior. Washington, D.C.

Neuman, Robert W.

1975 *Archaeological Survey of the Lake Pontchartrain, North Shore, Louisiana Project*. Unpublished letter report on file with the Louisiana Division of Archaeology.

1984 *An Introduction to Louisiana Archaeology.* Louisiana State University Press, Baton Rouge.

1992 Report on the Soil Core Borings Conducted at the LSU Campus Mounds Site (16EBR6), East Baton Rouge Parish, Louisiana. *Louisiana Archaeology* 15: 1-29.

Phillips, Philip

1970 *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949–1955. Two Vols.* Papers of the Peabody Museum of Archaeology and Ethnology Vol. 60. Peabody Museum, Cambridge, MA.

Piatek, Bruce John

1994 The Tomoka Mound Complex in Northeast Florida. *Southeastern Archaeology* 13:109–117.

Quimby, George I., Jr.

1951 *The Medora Site, West Baton Rouge Parish, Louisiana.* Field Museum of Natural History, Anthropological Series 24:81–135. Chicago.

Rees, Mark A.

2010 Introduction. *In* Rees, Mark A. (Ed.) *Archaeology of Louisiana*, pp. 1-18. Louisiana State University Press, Baton Rouge.

Russo, Michael

1994a A Brief Introduction to the Study of Archaic Mounds in the Southeast. *Southeastern Archaeology* 13:89-92.

1994b Why We Don't Believe in Archaic Ceremonial Mounds and Why We Should: The Case from Florida. *Southeastern Archaeology* 13:93–108.

Saunders, Joe W., Thurman Allen, and Roger T. Saucier

1994 Four Archaic? Mound Complexes in Northeast Louisiana. *Southeastern Archaeology* 13: 134–152.

Saunders, Rebecca

1994a The Case for Archaic Period Mounds in the Southeast. *Southeastern Archaeology* 13:118-133.

Shuman, Malcolm K.

2002 *Cultural Resources Survey of a 3.5 Acre (1.4 Hectare) Tract, Port Bienville Industrial Park, Hancock County, Mississippi*. Report submitted to Neel-Schaffer, Inc., Engineers-Planners, and on file with the Mississippi Department of Archives & History, Jackson.

Shuman, Malcolm, Dennis Jones, Melissa Weidenfeld, and John Lindemuth

1995 *Cultural Resources Survey of the Proposed Route of a Liquid Hydrogen Pipeline in Ascension, East Baton, Iberville, and West Baton Rouge Parishes, Louisiana.* Report prepared by Surveys Unlimited Research Associates, Inc. for R-S-H Engineering, Inc. and on file with the Louisiana Division of Archaeology.

Smith, Steven D., Philip G. Rivet, Kathleen M. Byrd and Nancy W. Hawkins

1983 *Louisiana's Comprehensive Archaeological Plan.* Louisiana Division of Archaeology, Department of Culture, Recreation and Tourism. Baton Rouge.

Stoltman, James B.

1978 Temporal Models in Prehistory: An Example from Eastern North America*. Current Anthropology* 19:703–746.

Swanton, John R.

1979 *The Indians of the Southeastern United States.* Smithsonian Institution Press, Washington, D.C.

Toth, Edwin Alan

1988 *Early Marksville Phases in the Lower Mississippi Valley: A Study of Culture Contact Dynamics.* Mississippi Department of Archives and History Archaeological Report No. 1. Jackson.

USDA (United States Department of Agriculture)

1971 Parish *General Soil Maps: Tangipahoa, Louisiana.* Soil Conservation Service, Alexandria, Louisiana.

Wall, Bennett H. (Editor)

1990 *Louisiana: A History.* Forum Press, Arlington Heights, Illinois.

Webb, Clarence H.

1968 The Extent and Content of Poverty Point Culture. *American Antiquity* 33:297-321.

1982 *The Poverty Point Culture (Second Edition, Revised).* Geoscience and Man, Vol. XVII. School of Geoscience, Louisiana State University. Baton Rouge.

Webb, Clarence H., Joel L. Shiner and E. Wayne Roberts

1971 The John Pearce Site (16CD56): A San Patrice Site in Caddo Parish. *Bulletin of the Texas Archaeological Society* 42:1-49.

Webb, Malcolm C.

1982 *Preliminary Report on Excavations at the Early Troyville Period Site (16ST6) on the West Pearl River, Louisiana.* Unpublished manuscript on file with the Louisiana Division of Archaeology.

Weber, David J.

1992 *The Spanish Frontier in North America*. Yale University Press, New Haven.

Weinstein, Richard Alan

1974 *An Archaeological Survey of the Lower Amite River, Louisiana.* Unpublished M.A. thesis submitted to the Department of Geography & Anthropology, Louisiana State University. Baton Rouge.

Weinstein, Richard A. and David B. Kelley

1992 *Cultural Resources Investigations in the Terrebonne Marsh, South-Central Louisiana.* Report submitted to New Orleans District, U.S. Army Cores of Engineers and on file with the Louisiana Division of Archaeology.

Weinstein, Richard A., Eileen K. Burden, Katherine L. Brooks and Sherwood M. Gagliano

1978 *Cultural Resource Survey of the Proposed Relocation Route of U.S. 90 (LA 3052), Assumption, St. Mary, and Terrebonne Parishes. Louisiana.* Unpublished report submitted to the Department of Transportation and Development by Coastal Environments, Inc., and on file with the Louisiana Division of Archaeology.

Weinstein, Richard A., Eileen K. Burden and Sherwood M. Gagliano

1977 *Archaeological Phases—Coastal Louisiana.* Paper presented at the Third Annual Meeting of the Louisiana Archaeological Society. New Orleans.

Williamson, Frederick William and George T. Goodman (Editors)

1939 *Eastern Louisiana: A History of the Ouachita River and the Florida Parishes.* Three volumes. The Historical Record Association, Louisville, KY.

Woodall, J. Ned

1969 *Archaeological Excavations in the Toledo Bend Reservoir, 1966.* Southern Methodist University Contributions in Anthropology No. 3. Dallas, Texas.

Woodiel, Deborah Kay

1993 The St. Gabriel Site: Prehistoric Life on the Mississippi. *Louisiana Archaeology* 20:1-136.

WEBSITES

LDOA (Louisiana Division of Archaeology)
www.state.la.us/cultural-developmentarchaeolg/databases. Accessed September 16, 2016.

United States Census Bureau
http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml. Accessed September 16, 2016.

University of California, Davis (California Soil Resource Lab)
casoilresource.lawr.ucdavis.edu/soil_web/kml/mapunits.kml. Accessed September 16, 2016.

USGS (United States Geological Survey)
www.USGS/gov/pubprod Accessed September 16, 2016.

MAPS

DeRidder, La. (1947) 7.5-Minute Topographic map. U.S. Geological Survey.

DeRidder, La. (1956) 7.5-Minute Topographic map. U.S. Geological Survey.

DeRidder, La. (1986) 7.5-Minute Topographic map. U.S. Geological Survey.

DeRidder, La. (2015) 7.5-Minute Topographic map. U.S. Geological Survey.