Exhibit EE. Freeland Site Phase I Cultural Resources Assessment Report

PHASE I CULTURAL RESOURCES SURVEY OF 541 ACRES (219 HECTARES) NEAR CROWLEY, ACADIA PARISH, LOUISIANA

Negative Findings

Final Report

For

One Acadiana
804 E St. Mary Blvd.
Lafayette, LA 70503
(337) 233-2705

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

PHASE I CULTURAL RESOURCES SURVEY OF 541 ACRES (219 HECTARES) NEAR CROWLEY, ACADIA PARISH, LOUISIANA

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By

Margeaux Murray, Steven Treloar, Matthew Chouest, and Malcolm Shuman

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804 E St. Mary Blvd.

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December 3, 2015

ABSTRACT

In August and November of 2015, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) conducted a Phase I cultural resources survey of 541 acres (ac) (219 hectares [ha]) near Crowley in Acadia Parish, Louisiana for industrial certification under the Louisiana Economic Development (LED) Site Certification Program and to fulfill the requirements of Section 106 of the National Historic Preservation Act. A total of 984 shovel tests were dug; 99% (*n*=975) were negative for cultural resources and 1% (*n*=9) were unable to be dug due to standing water. No cultural resources were found and it was recommended that the area be zoned for industrialization.

ACKNOWLEDGMENTS

The authors are grateful to many people for assistance during the project. We are especially grateful to Mr. Zach Hager, of One Acadiana, who helped coordinate this project and for providing administration assistance. We would also like to thank Mr. Freeland for his assistance throughout the project. The field crew was led by Ms. Margeaux Murray, and consisted of Mr. Matthew Chouest, M.A., Ms. Billie Jones, Ms. Brandy Kerr, and Mr. Karl Shuman. Dr. Malcolm Shuman was the principal investigator.

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CHAPTER ONE:
INTRODUCTION

In August and November 2015, Surveys Unlimited Research Associates, Inc. (SURA) conducted a Phase I cultural resources survey of 541 acres (ac) (219 hectares [ha]) near Crowley in Acadia Parish, Louisiana (Figure 1). The area surveyed consisted of fields used primarily for the agriculture of rice and soybeans as well as patches of wooded swamp surrounding marked watercourses. The survey was carried out to fulfill the requirements of Section 106 of the National Historic Preservation Act and ready the land for industrial certification under the Louisiana Economic Development (LED) Site Certification Program. The Area of Potential Effect (APE) lies within Sections 1, 2, 35, 36, and 41, T9S and 10S, and R1W.

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

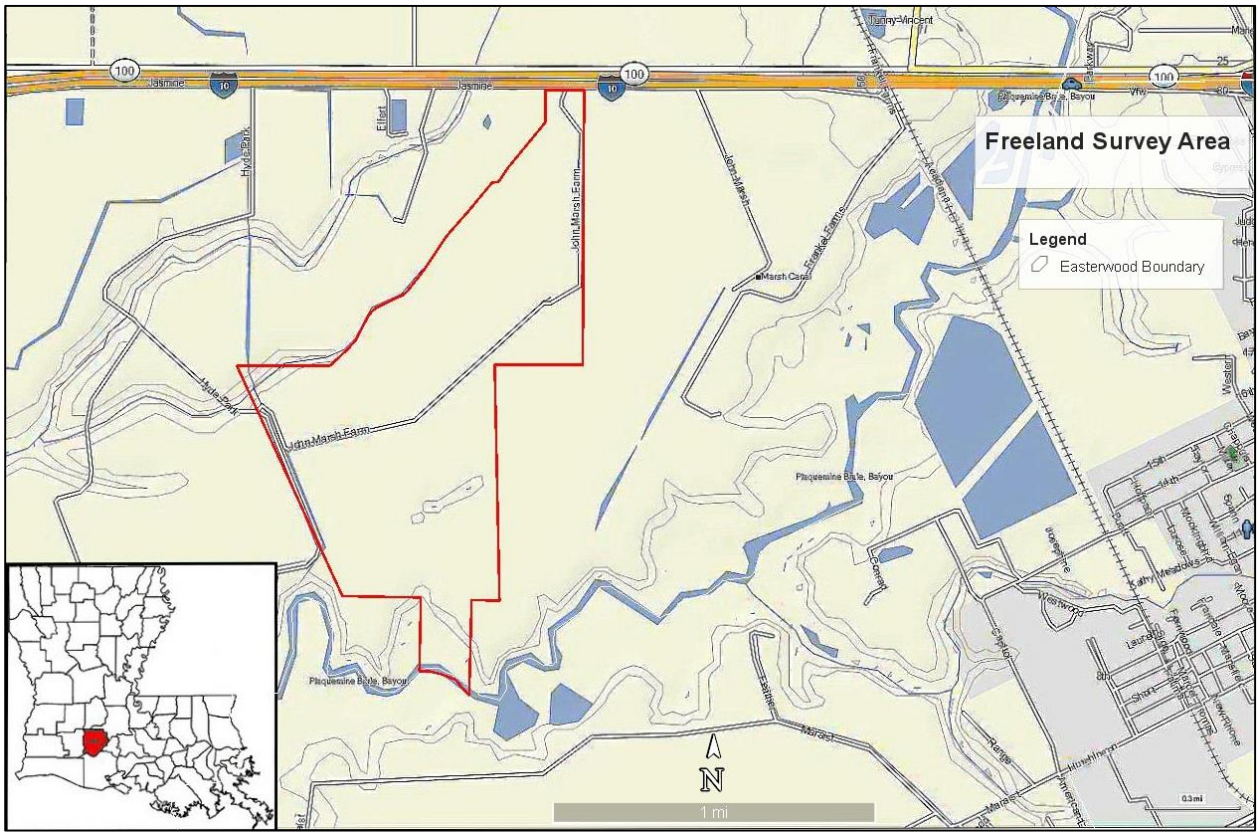

Figure 1 Map of Freeland survey area.

CHAPTER TWO:
ENVIRONMENTAL SETTING

Soils

Acadia Parish lies within the Northern Humid Gulf Coastal Prairie region. This region is a subdivision of the larger West Gulf Coastal Plain ecoregion (Handley et al. 2011:5). It lies between the Sabine and Calcasieu River drainages extending eastward towards Lafayette. According to Daigle et al. (2006), the region is the result of Pleistocene alluvial and deltaic deposits such as silt, gravel, clay, and sand.

The APE lies atop three different soil types according to the U.S. Department of Agriculture's Soil Conservation Service (1941). The first are the coastal prairie soils that constitute an area of low ridges and depressions, and are utilized primarily for rice and soybean agriculture. They consist of a dark gray or grayish brown silt loam surface with a subsoil of a gray silty clay with red mottling. The depressed portions of this region possess a gray silt loam surface soil, and a subsoil of gray silty clay with strong brown mottling.

The second are forest-prairie transitional soils. These constitute an area of slopes and flat areas that blend with the aforementioned coastal prairie soils, then are abruptly disturbed by the stream bottomlands (USDA 1941). These soils constitute areas of pasture and woodland expanses, as well as rice and soybean agriculture. The sloped segments possess silt loam surface soils atop yellowish brown and gray mottled silty clay subsoils. The highly disturbed bottomlands consist of grayish brown silt loam surfaces with grayish brown silty clay subsoils that contain dark yellowish brown mottling.

Bottom land soils are the final class of soils associated with the APE. These soils rest along the narrow flood planes that make up the lowest elevations in Acadia Parish (USDA 1971). Unlike the first two soil classes, the bottom land soils do not support agriculture. This region primarily supports Oak, Gum, and Cypress tree growth. These soils are wet alluvial deposits of silts and clays that erode from higher elevations. According to the USDA (1971), "These deposits are extremely variable in texture and in degree of drainage…most of these bottom lands are used as grazed woodland on farms that contain other soils."

The following is a map of the soil types encountered during the Freeland Phase I survey (Figure 2):

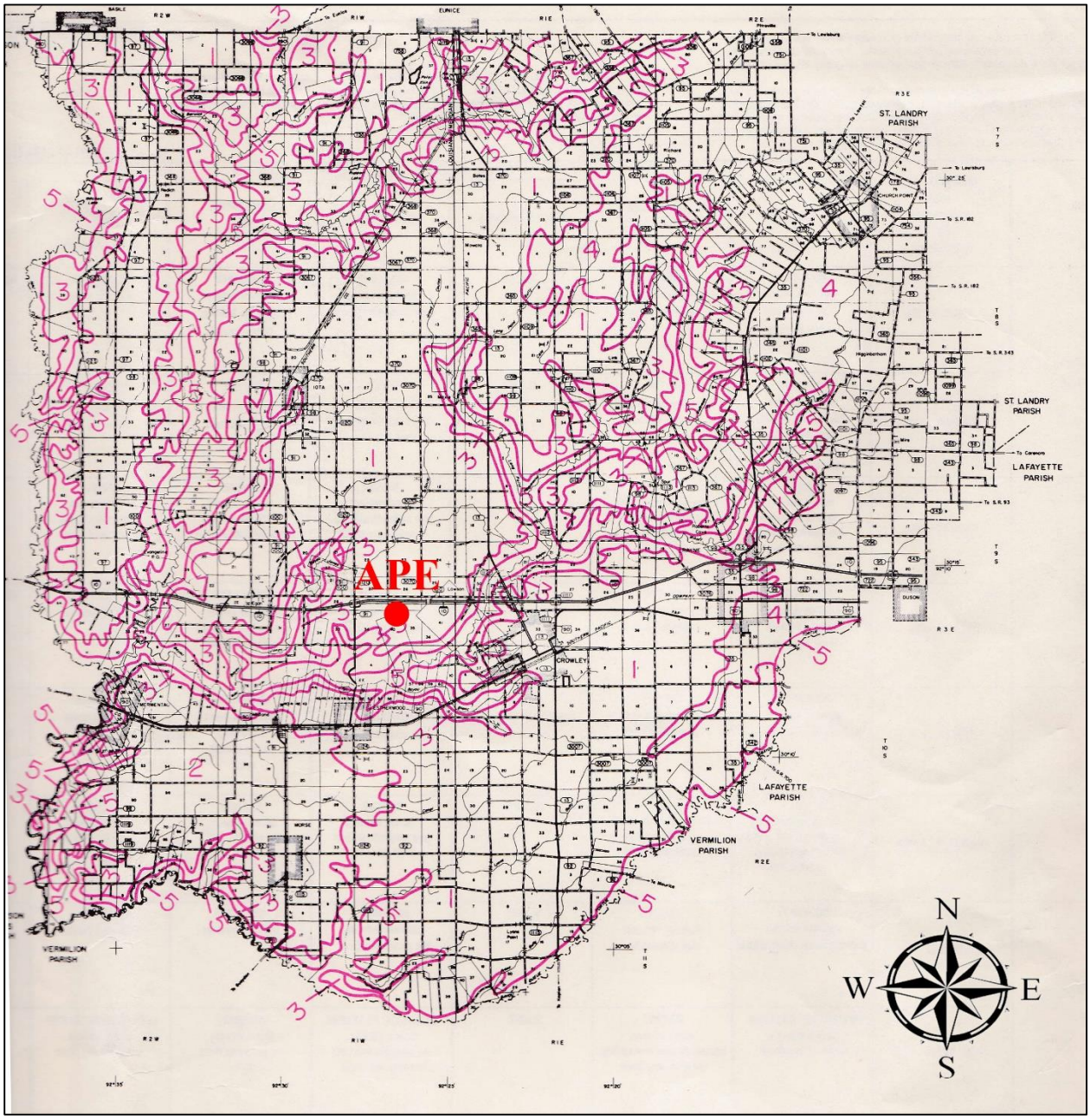

Figure 2 Soil map of Acadia Parish and area of potential effects (APE) (USDA 1971).

Flora

Trees supported by soils within the APE include a variety of hardwoods and pine including Loblolly (*Pinus taeda*).

Fauna

Acadia parish supports a variety of fauna including, but not limited to, mammals such as armadillo (*Dasypus novemcinctus*), opossum (*Didelphis virginiana*), eastern cottontail rabbit (*Sylvilagus floridanus*), common muskrat (*Ondatra zibethicus*), gray fox (*Urocyon cinereoargenteus*), raccoon (*Procyon lotor*), North American mink (*Mustela vison*), and striped skunk (*Mephitis mephitis*) (Lowery, 1974). Amphibians and reptiles of note are the Shaw bullfrog (*Rana catesbeiana*), Harlan southern leopard frog (*Rana sphenocephala*), eastern mud turtle (*Kinosternon subrubrum*), and southern water snake (*Nerodia fasciata*) (Dundee and Rossman, 1989).

CHAPTER THREE:
PREVIOUS INVESTIGATIONS

The earliest recorded project within 3 mi (4.83 km) of the Freeland survey area was a survey for the Environmental Protection Agency (#22-0466) by Jon L. Gibson (1979), who conducted pedestrian and vehicular survey of the Esterwood village in Acadia parish. In this report, he identified the remains of several structures and discusses their potential eligibility for the National Register of Historic Places.

In 1995, Perkins and Bergman (#22-1766) assessed a total of 61.1 ac (246.9 ha) in association with a proposed 6.7-mile (10.85 km) expanse of property allotted for a gas pipeline. The results of the survey yielded neither cultural material nor standing structures (Perkins 1995).

The following year, Stephanie T. Taylor (1996) carried out a pedestrian survey supplemented by shovel tests for the Environmental Section of the Louisiana Department of Transportation and Development of a 0.7 ac (.28 ha) area near I-10 slated to become a boat launch in Acadia Parish (#22-1936). A site had previously been recorded in this location (16AC38); however, during the survey no significant cultural remains were collected.

In 2000, Jackson et al. conducted a literature review (#22-2329) of previous research in which they compiled a list of archaeological sites within a 1 mi (1.62 km) radius of a proposed fiber optic line set to span several parishes in south Louisiana including Acadia Parish.

In 2011, Martin Handley et al. surveyed approximately 2,744 ac (1108.58 ha) of land through systematic shovel testing while accessing 43.9 mi (70.6 km) of road, temporary work areas, and locations slated for horizontal directional drill, and drill pullbacks (#22-3760) associated with the Gulf Coast Connection Project. Of the sites associated with this survey, four were located within Acadia Parish.

In April of 2013, Price K. Laird conducted a combined pedestrian and shovel test survey of nearly 190 ac (76.76 ha) of land throughout several parishes, including Acadia Parish, for the Trunkline Lake Charles Liquefaction Project (#22-4382) in order to build above ground structures as well as altering existing ones within the proposed areas.

The most recent project (#22-4836) was conducted between May and July of 2014 by Jeremy W. Pye (2015). Pedestrian survey (augmented with shovel testing methods) was executed at 20 Louisiana Army National Guard Readiness Centers throughout several cities in Louisiana, including Crowley.

These projects are listed below in Table 1.

Table 1 Projects within 3 mi (4.8 km) of APE.

Report Number	Author(s)	Type of Survey	Date
22-0466	Gibson	Pedestrian and Vehicular Survey	1979
22-1766	Perkins and Bergman	Pipeline	1995
22-1936	Taylor	Proposed Boat Launch	1996
22-2329	Jackson et. al	Literature Review	2000
22-3760	Handley et. al	Gulf Coast Connection Project	2011
22-4382	Laird	Liquefaction Project	2013
22-4836	Pye	Records Review/Archaeological Survey	2014

CHAPTER FOUR:
METHODOLOGY

Procedures

Methodology for the survey included archival research and fieldwork. Initially, historic maps and aerial photographs at the Louisiana State University Cartographic Information Center (LSUCIC) 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 pedestrian survey and systematic shovel testing. For high probability areas as determined by placement within approximately 100 ft (30.4 m) to a marked watercourse and which made up 5% of the APE, transects were spaced 98.4 ft (30 m) apart with a shovel test dug every 98.4 ft (30 m). The remaining 95% of the APE was shovel tested with transects spaced 164.0 ft (50 m) and shovel tests dug every 164.0 ft (50 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.

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 FIVE:
RESULTS OF THE SURVEY

Background and Archival Research

The preliminary research indicated that one archaeological site has been recorded within 1 mi (1.62 km) of the current APE (see Table 2). The limited frequency of sites within the immediate area appear to lend credence to researchers who argue that settlement was virtually nonexistent until well after colonial occupation (Gibson 1979; Jackson and Saunders 2000). Gibson (1979) has argued the rarity persisted until suitable agricultural technologies were developed to work the tough deltaic soils in the region.

Table 2 Archaeological Sites within 1 mi (1.62 km) of the current APE.

Site Number	Site Name	Culture Affiliation	Material	NR Status
16AC38	P. L. Lawrence Site	Historic	Artifact Scatter/Dump	Not Eligible

A review of historic topographic maps from LSUCIC shows that in the last 66 years, there has been relatively little human intrusion or geomorphological change of the landscape within and around the APE. Figures 3-7 attest to the relative consistency of the geography during 1949, 1955, 1983, 1998, and 2015. The 1949 Crowley La. 7.5-minute map shows the APE as being partially bounded on the northern corner by the highway and wetlands to the south (Figure 3).

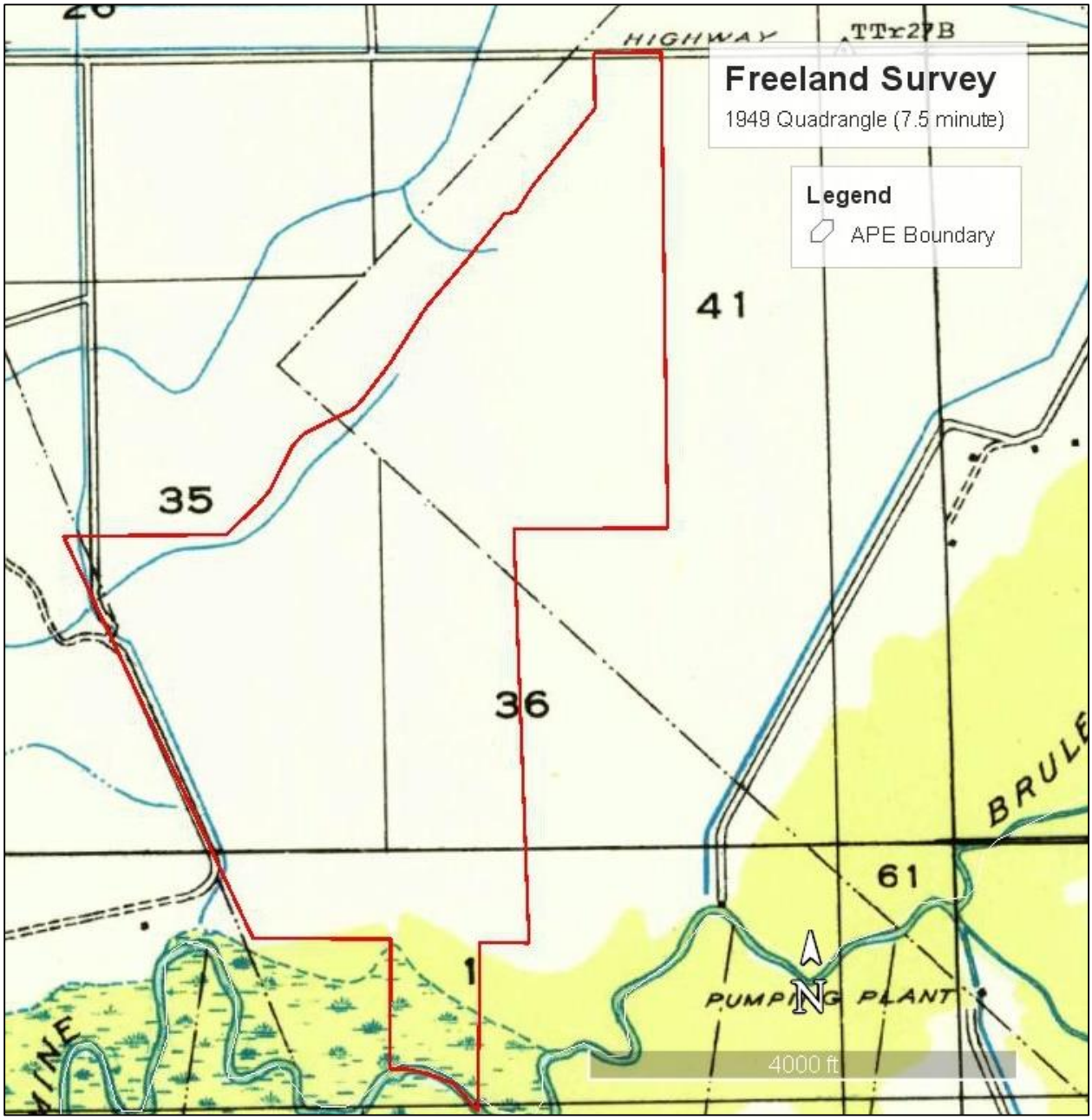

Figure 3 1949 quadrangle (7.5 minute) map of APE.

Six years later, in 1955, two structures can be seen in the northern portion of the APE near a marked highway and a road has been added along the eastern boundary and extending into the middle of the APE (Figure 4).

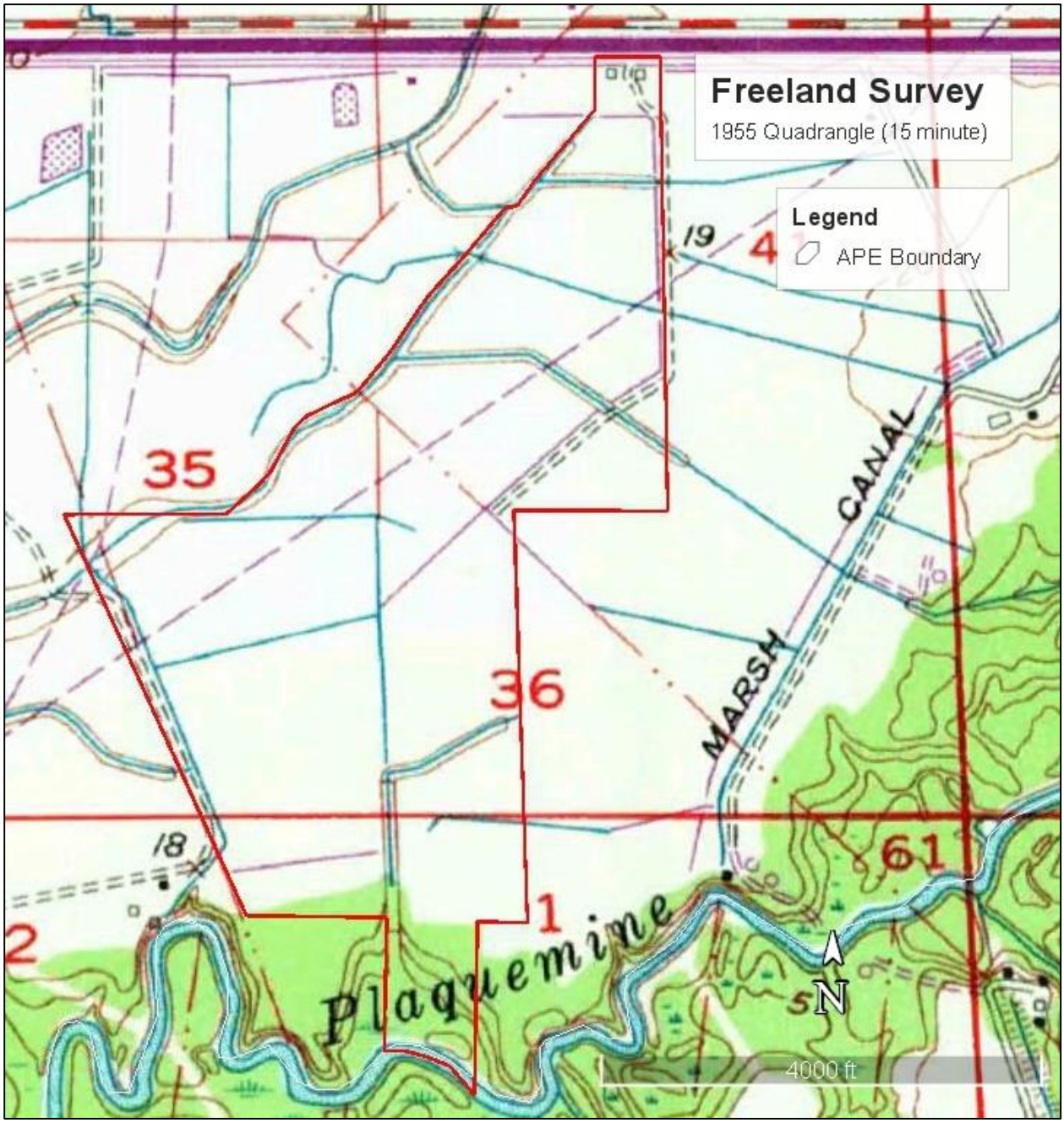

Figure 4 1955 quadrangle (15 minute) map of APE.

The next map, in 1983, shows only one structure remaining in the northern portion of the APE and the road noted in the 1955 quadrangle map has been extended to the western boundary (Figure 5).

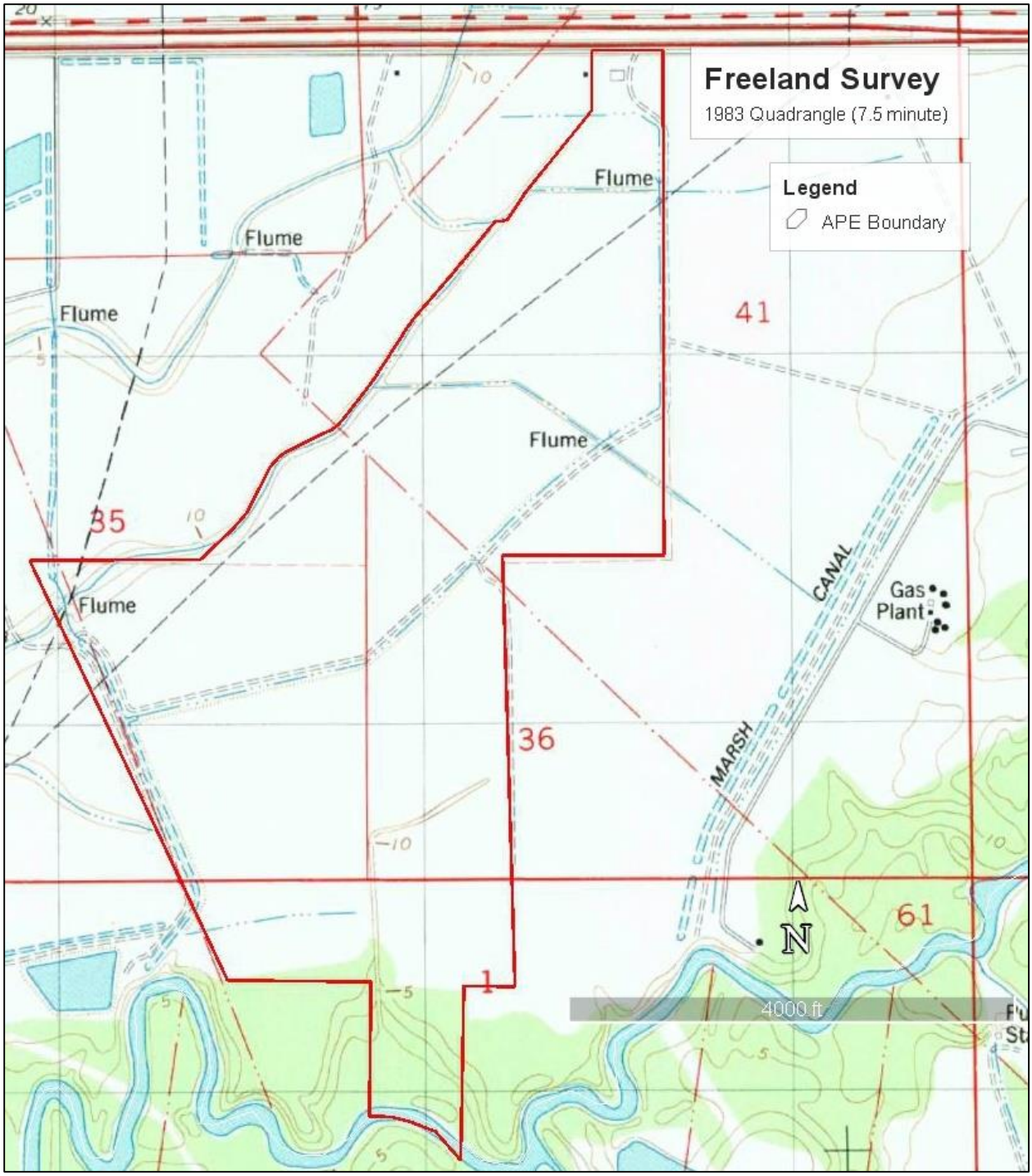

Figure 5 1983 quadrangle (7.5 minute) map of APE.

In 1998, the APE appears to show little change from the previous map issued. The structure and road are both still present (Figure 6).

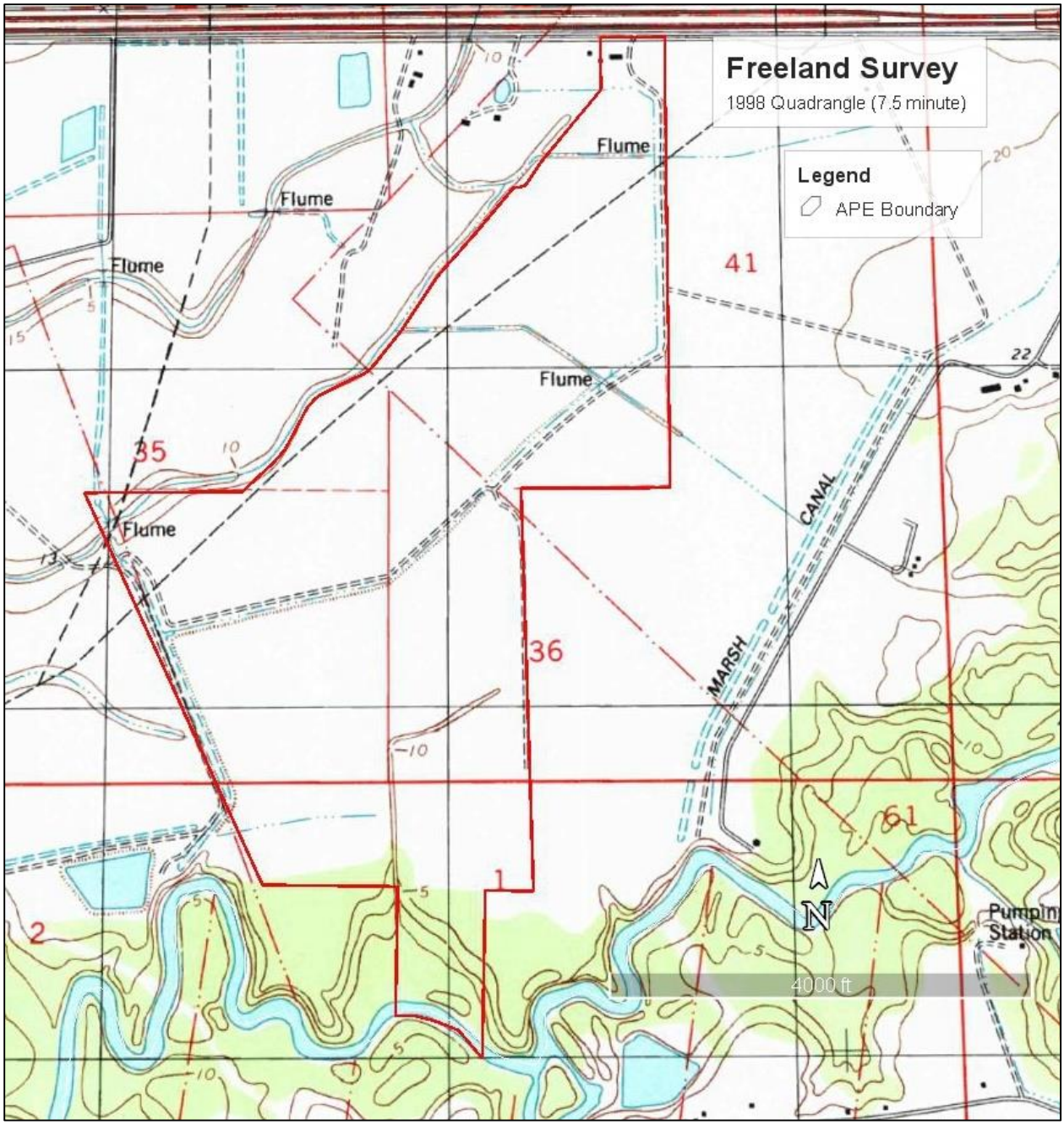

Figure 6 1998 quadrangle (7.5 minute) map of APE.

In 2015, there is a body of water indicated just outside the western boundary of the APE, otherwise there is little change (Figure 7).

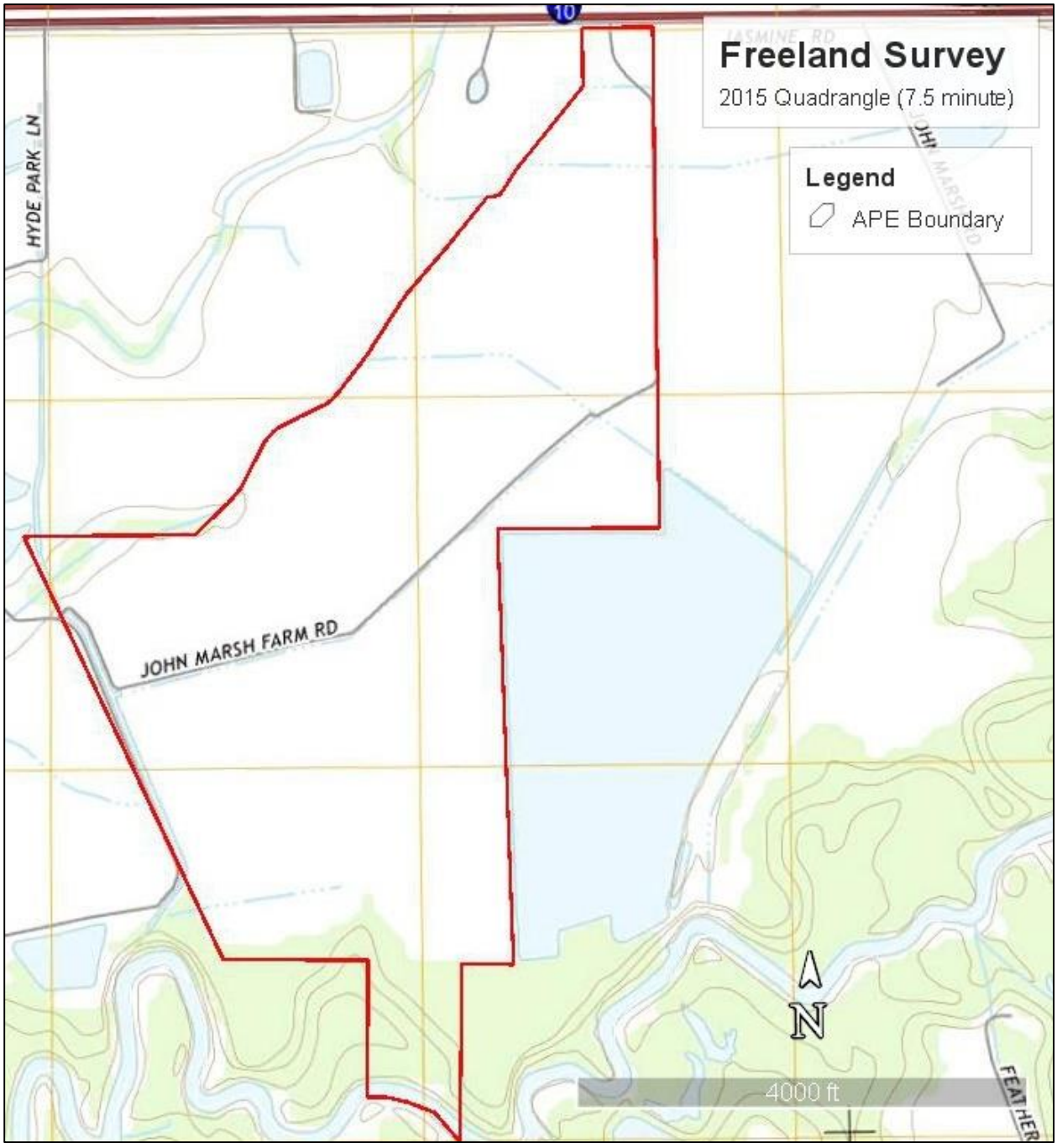

Figure 7 2015 quadrangle (7.5 minute) map of APE.

Fieldwork

Field survey was conducted on August 25-26 and November 16, 19, and 20 of 2015. Other than the swampland present in the southern portion, the majority of the APE consisted of open fields used primarily for the agriculture of soy bean and rice. Figure 8 depicts transects throughout the APE while Figures 10-25 show a representation of the area surveyed from several points across the APE.

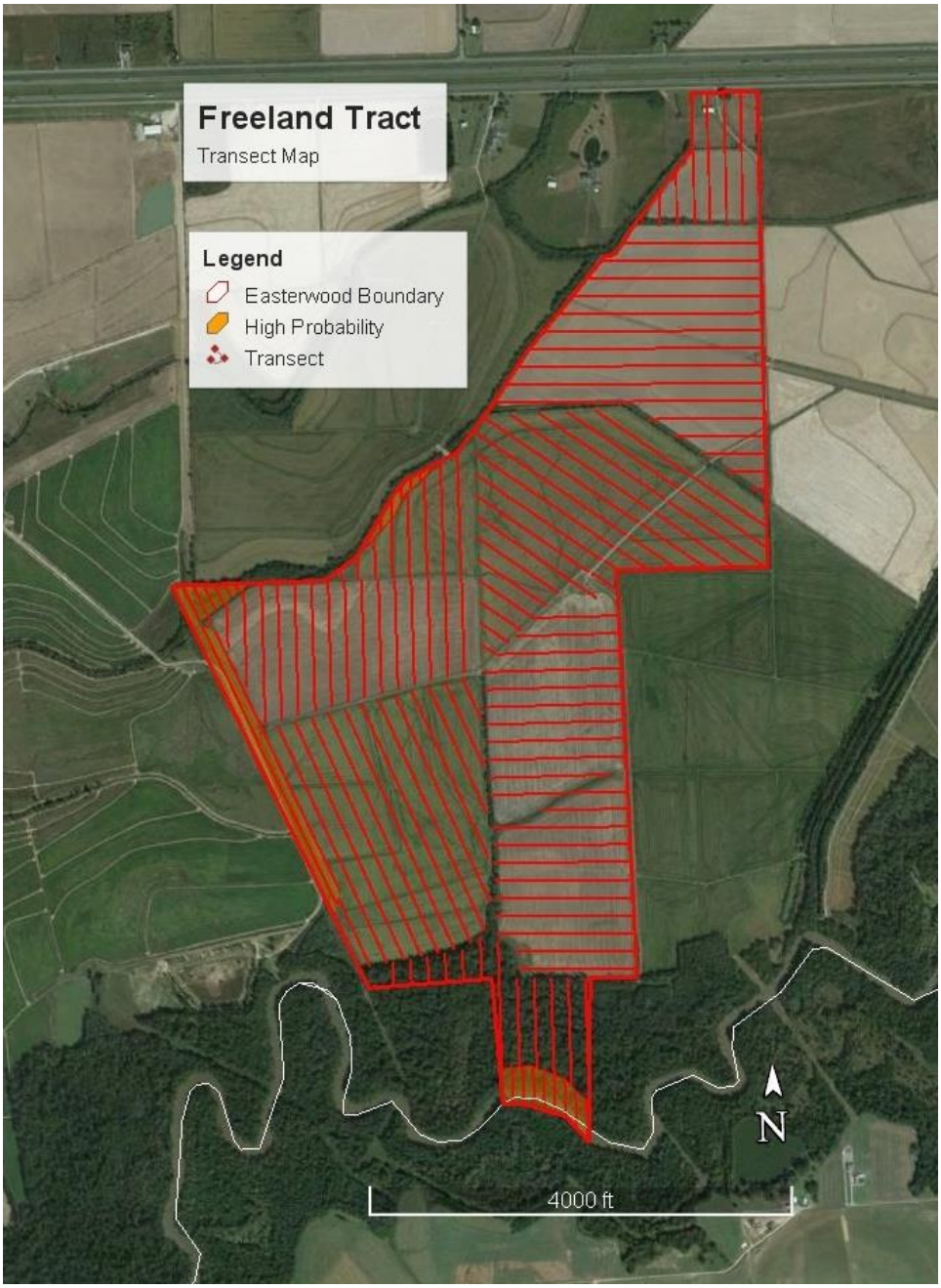

Figure 8 Shovel testing transects of the APE.

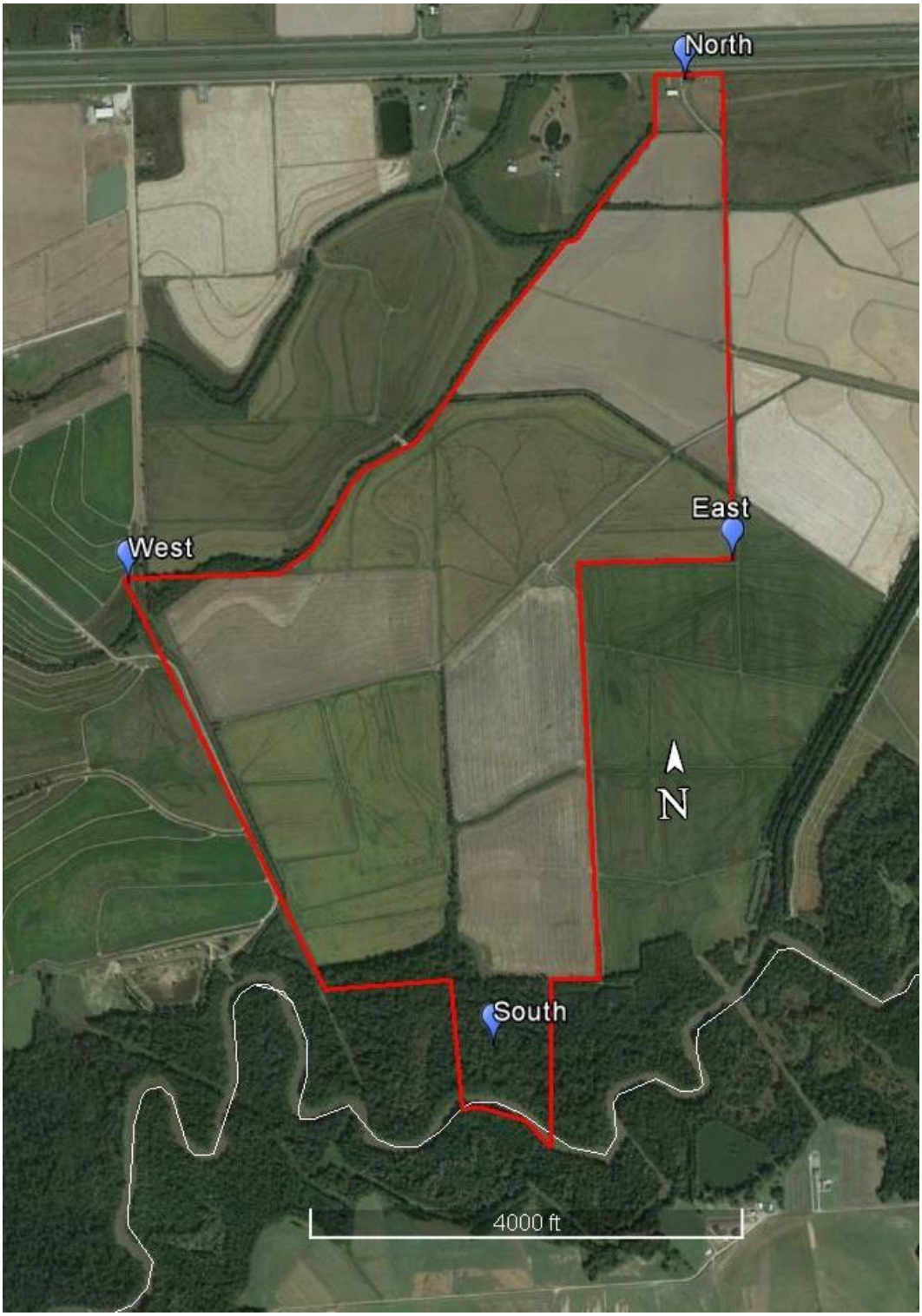

Figure 9 Points at which representative photographs were taken.

Figure 10 Northern boundary of APE facing north.

Figure 11 Northern boundary of APE facing east.

Figure 12 Northern boundary of APE facing south.

Figure 13 Northern boundary of APE facing west.

Figure 14 Eastern boundary of APE facing north.

Figure 15 Eastern boundary of APE facing east.

Figure 16 Eastern boundary of APE facing south.

Figure 17 Eastern boundary of APE facing west.

Figure 18 Southern boundary of APE facing north.

Figure 19 Southern boundary of APE facing east.

Figure 20 Southern boundary of APE facing south.

Figure 21 Southern boundary of APE facing west.

Figure 22 Western boundary of APE facing north.

Figure 23 Western boundary of APE facing east.

Figure 24 Western boundary of APE facing south.

Figure 25 Western boundary of APE facing west.

No cultural resources were recovered during survey of the APE. Representative shovel test soil profiles based on the Munsell soil color system are depicted below in Figure 26.

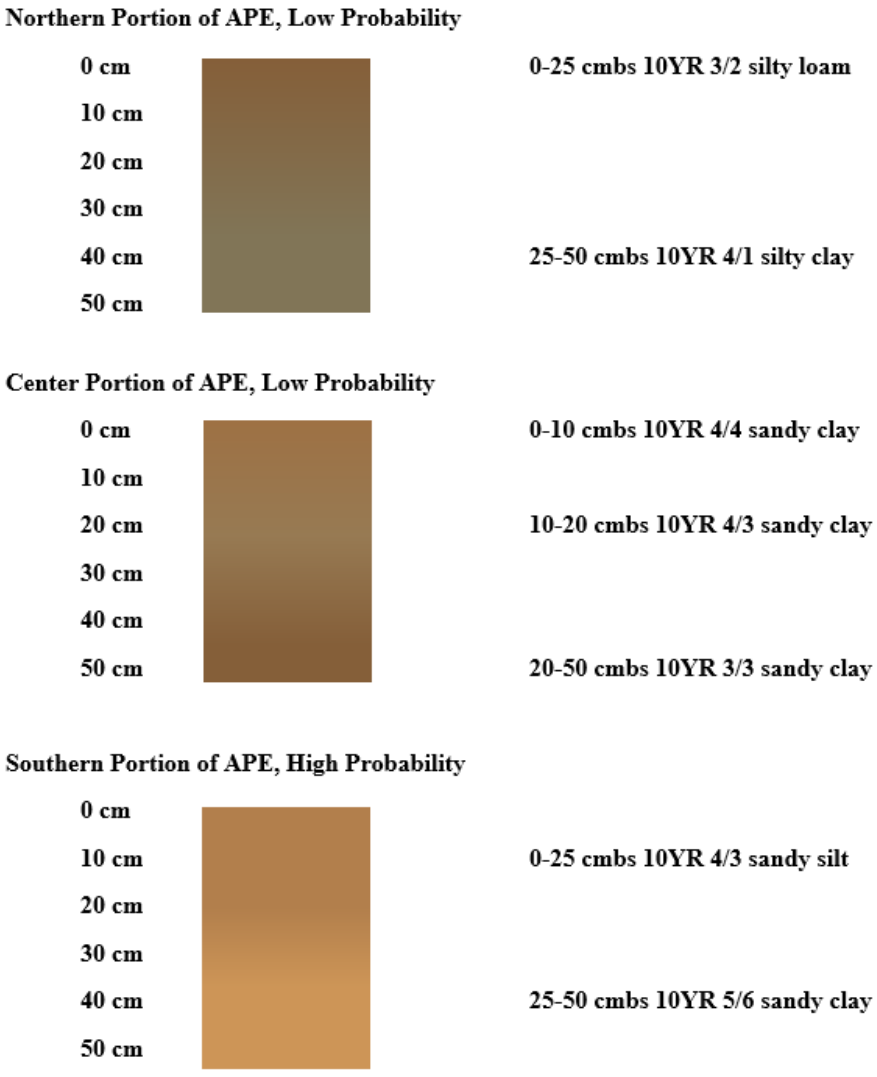

Figure 26 Representative shovel test profiles for APE.

In the northern portion of the APE, there is a prefabricated agricultural storage building constructed of corrugated metal with a center located at 30°14.092'N, and 92°25.383'W measuring approximately 98 ft (30 m) x 42 ft (13 m) with an approximate height of 20 ft (6 m). Despite USGS quadrangle maps as early as 1955 showing a structure in this vicinity, the current structure would not be considered eligible for the *National Register of Historic Places* as it is a more recent construction having been erected within the last 20 years or so. Figures 27-30 below show the storage building from different angles.

Figure 27 Prefabricated agricultural storage building facing north.

Figure 28 Prefabricated agricultural storage building facing east.

Figure 29 Prefabricated agricultural storage building facing south.

Figure 30 Prefabricated agricultural storage building facing west.

CHAPTER SIX:
CONCLUSIONS AND RECOMMENDATIONS

On August 25-26 and November 16-20 of 2015, Surveys Unlimited Research Associates, Inc. (SURA, Inc.) conducted a Phase I cultural resources survey of a 541 ac (219 ha) tract near Crowley, Acadia Parish, Louisiana to satisfy criteria for industrial certification under the Louisiana Economic Development (LED) Site Certification Program. The Area of Potential Effect (APE) lies within Sections 1, 2, 35, 36, and 41, T9S and 10S, and R1W.

A total of 984 shovel tests were excavated with 99% (*n*=975) reported as negative and 1% (*n*=9) as unable to be dug due to standing water. No cultural resources were recorded and SURA, Inc. concludes that there are unlikely to be properties eligible for the NRHP in the current APE and recommends that the area be zoned for industrialization.

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Maps

Crowley West, La. (1949) 7.5-Minute Topographic map. U.S. Geological Survey.
Crowley, La. (1955) 15-Minute Topographic map. U.S. Geological Survey.
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