

### **3.7 Cultural Resources**

Cultural resource issues associated with the proposed Rusk Permit Area include:

- Potential effects to sites listed on or eligible for listing on the NRHP as a result of mine-related construction
- Potential adverse effects to previously undiscovered cultural resources, including burials and associated funerary objects, during ground-disturbing activities associated with mine-related construction
- Unauthorized artifact collection and vandalism
- Introduction of visual or auditory elements that diminish the integrity of a historic property's significant historic feature

The study area for cultural resources encompasses the permit boundary, which also is considered the APE for cultural resources. Under Section 106 of the NHPA, the APE is defined as “those areas in which impacts are planned or are likely to occur. Specifically, the APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Additionally, the APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking” (36 CFR 800.16[d]).

The APE should include:

- All alternative locations for all elements of the proposed project;
- All locations where the proposed project may result in ground disturbance;
- All locations from which elements of the proposed project (e.g., a facility or land disturbance) may be visible or audible;
- All locations where the proposed project may result in changes in traffic patterns, land use, public access, etc.; and
- All areas where there may be direct or indirect effects.

Only those cultural resources located in the APE were reviewed to determine if they would be subject to impacts that could affect their eligibility for the NRHP based on NRHP criteria for evaluation.

The cumulative effects study area for cultural resources is the same as the APE, in addition to the surface disturbance associated with past and present actions and RFFAs (see Section 2.7).

#### **3.7.1 Affected Environment**

##### **3.7.1.1 Regulatory Framework**

Federal historic preservation laws provide a regulatory environment for documentation, evaluation, and protection of archaeological and historic sites that may be affected by federal undertakings, or by private undertakings operating under federal license or on federally managed lands. NEPA states that federal undertakings shall take into consideration impacts to the natural environment with respect to an array of resources, and that alternatives must be considered. The courts have made clear that cultural resources are regarded as part of the natural environment. The NHPA established the Advisory Council on Historic Preservation (ACHP) and the NRHP. The NHPA mandates that federal agencies consider an undertaking's effects on cultural resources that are listed on or eligible for the NRHP, and Section 106 of the NHPA establishes a four-step review process by which cultural resources are given consideration during the evaluation of proposed undertakings. The four steps are: 1) initiate the Section 106 process by defining the undertaking and determining if the undertaking has the potential to affect properties included

on, or eligible for inclusion on, the NRHP; 2) identify NRHP-eligible properties; 3) assess adverse effects applying criteria of adverse effects, and if so; 4) take appropriate steps to avoid or mitigate such adverse effects.

As part of the Section 106 process, federal agencies are required to consult with a variety of parties depending on the specifics of the undertaking. Consultation is defined in Section 106 as “the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process” (36 CFR 800.16(f)). Participants in the Section 106 consultation process include federal agencies, the ACHP, consulting parties (i.e., State Historic Preservation Officer, Indian tribes, Tribal Historic Preservation Officer [THPO], local governments, additional interested individuals or organizations), and the public. To date, the USACE has consulted with the Caddo Tribe of Oklahoma (see Section 3.7.1.4, Native American Consultation, below) for the proposed project.

#### Eligibility Criteria for Listing Cultural Resources on the NRHP

The NRHP, maintained by the NPS on behalf of the Secretary of the Interior, is the nation’s inventory of NRHP-eligible properties. The NPS has established three main standards that a property must meet to qualify for listing on the NRHP: age, integrity, and significance. To meet the age criteria, a property generally must be at least 50 years old. To meet the integrity criteria, a property must “possess integrity of location, design, setting, materials, workmanship, feeling, and association” (36 CFR 60.4). Finally, a property must be significant according to one or more of the following criteria:

- Criterion A – Be associated with events that have made a significant contribution to the broad patterns of U.S. history; or
- Criterion B – Be associated with the lives of persons significant in U.S. history; or
- Criterion C – Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D – Have yielded, or may likely yield, information important in prehistory or history.

#### **3.7.1.2 Regional Overview**

The following prehistoric and historic summaries were extrapolated from *Archaeological and Historic Resources Surveys of 6,925 Acres in the East Part of the Sabine Mine’s South Hallsville No. 1 Mine – Rusk Permit, Panola and Rusk Counties, Texas* (Dockall et al. 2009).

#### Prehistoric Background

The prehistoric chronological sequence represented in this region of Texas includes the Paleoindian, Archaic, Woodland or Early Ceramic, and Caddo. The earliest inhabitants of the region are representative of the Paleoindian Period (10,000 – 7,000 B.C.). Projectile points and other distinctive tools such as scrapers, knives, and adzes are associated with this early period. Adaptive strategies used by PaleoIndians involved mobility over large areas with short-term occupations by small groups that practiced a generalized subsistence strategy focused on hunting and gathering. Population densities were relatively low. Evidence of early occupations in or near the study area consists mostly of isolated projectile points.

The Archaic Period (7,000 – 200 B.C.) is characterized by a greater dependence on a foraging subsistence, with seasonal exploitation of a wide variety of plant and animal species in different ecozones. Distinctive regional artifact styles became more pronounced during this period. Tool assemblages were increasingly diversified and functional as evidenced by the addition of ground stone tools for plant processing. Archaic sites have a greater accumulation of occupational debris, which may be attributed to repeated short-term occupations or fewer long-term occupations at the same locations. Evidence of Archaic occupation in or near the study area includes mostly lithic scatters.

The Woodland or Early Ceramic Period (200 B.C. – A.D. 800) is defined by significant changes in subsistence, technology, and social structure. Among these changes were the beginning of horticulture, introduction of ceramics, first use of the bow and arrow, and long-term occupation at single sites. Diagnostic artifacts during this period include double-bitted axes, small thin dart points, and corner-notched arrow points. Site types consist of residential camps or base camps, rare mound sites, and occasionally established cemeteries. Sites contain a variety of cultural features including pits, postholes, burials, cremations, burned rock hearths, and burned rock scatters. Documented sites attributed to the Woodland or Early Ceramic period or having components of the period are located in or near the study area.

The Caddo Period is broken down into Early Caddo (A.D. 800 – 1200), Middle and Late Caddo (A.D. 1200 - 1680), and Historic Caddo (A.D. 1680 – 1860). The key elements of the Early Caddo Period are the development of complex social relationships and political authority; appearance of elite status positions in Caddo communities; increased sedentism (the process of settling down); and continued and enhanced reliance on tropical plants selected for cultivation and intensification of maize agriculture after A.D. 1200. Small hamlets and farmsteads were the most common Early Caddo site types; however, mound sites also have been documented. After A.D. 1200, Middle Caddo groups occupied all major drainage basins in the region, occasionally in town-like communities and occasionally in more rural communities. By the Late Caddo, settlements consisted of scattered year-round residential sites and planned cemeteries. Burials were placed within smaller family cemeteries and larger community cemeteries.

Europeans entered Texas in A.D. 1542 as part of the De Soto entrada. Research indicates that the entrada possibly followed an ancient trail known as the Hasinai Trace (later known as Trammel's Trace) that passed through the eastern part of the study area. Around A.D. 1700, Caddo tribes began to form into confederacies. These confederacies were temporarily successful in maintaining control of east Texas from the Spanish and French. However, with disease and competition for traditional resources with other displaced Native American groups, their population started to decline, and they eventually lost control of the area. By 1834, the Caddo relinquished their rights to territory within the U.S. and were pushed from their traditional homeland. By 1860, they were living in Indian Territory, which later became part of Oklahoma. Evidence of Caddo occupation in or near the study area includes a Caddo mound and village site, and possible campsites.

#### Historic Background

The first Anglo American settlers in the vicinity of the study area were William Elliott, who received a Mexican land grant in 1829, and Daniel Martin, who was living in the area in 1833. By 1834, many more settlers began to arrive. Between May and November of that year, the Mexican government issued 43 land grants in what would become Rusk County. After the Texas Revolution (October 1835 to April 1836), the Republic of Texas lifted land restrictions, and subsequent affordable land prices dramatically increased the number of new settlers. Most new immigrants traveled to the area by way of Trammel's Trace, a passageway created in 1813 along pre-existing Indian trails between Nacogdoches and the Red River. The trace extended from the Sabine River generally along the Panola-Rusk County line.

In 1843, the Republic of Texas Congress established Rusk County as a separate entity. The county was named for Thomas Jefferson Rusk, who contributed to Texas independence, development of the Republic, and achieving annexation and statehood. Although small towns such as Camden and Harmony Hill already were established, the newly formed Rusk County lacked a central settlement to serve as its county seat. Settler General James Smith donated 65.5 acres for the original town site of Henderson, which would later become the county seat. In 1846, Panola County was carved out from parts of Harrison and Shelby counties. The county was named for a Cherokee word meaning "cotton." Two years after the establishment of Panola County, the county seat was located at a site that later would become the Town of Carthage.

The population of Rusk and Panola counties increased dramatically during the antebellum era, and agriculture became the largest contributor to the local economy. The leading crops were corn, sweet potatoes, oats, peas, beans, and cotton. In 1850, Rusk and Panola counties were the second and seventeenth most populated counties of the state's 80 counties, respectively. By 1860, Rusk County had become the most populated county in Texas, and agriculture continued as the main economic activity. However, by the beginning of the Civil War, serious drought and abnormally high temperatures had severely damaged crops and affected the local economy. During the Civil War, economic depression and social changes spread throughout both counties. Property values fell and consequently diminished the wealth of Anglo-American planters and farmers. Freed slaves struggled as well; most could only find work as sharecroppers.

During the 1870s and 1880s, the railroads played a significant role in rebuilding the local economy. In 1872, the International-Great Northern came through Overton in Rusk County's northwest corner. Five years later, the 16-mile-long Henderson and Overton Branch Railway connected the county seat to the International-Great Northern Railway. By 1878, the Longview and Sabine Valley Railway, intended to connect Longview with Sabine Pass on the Gulf Coast, had a narrow-gauge line that extended 11 miles southward to Camden. The railroad was especially important to the proposed project area from the late nineteenth century through the early twentieth century by exposing it to more and larger markets.

Between 1900 and 1940, the populations and agricultural economies of Rusk and Panola counties evolved along different paths. In Rusk County, the population rose over time with a notable increase between 1930 and 1936 due to the start of the local oil and gas industry, and then slowly declined. In Panola County, the population rose and fell at a gradually slower pace. The intensity and value of agriculture in both counties also changed, especially during the Great Depression. In Rusk County, the number of farms grew noticeably until 1940 when the county lost one-third of its farms. In Panola County, the number of farms remained relatively static until 1930 when the number of farms increased by 24 percent. However, in the 1940s, those gains were lost when the number of farms declined by 29 percent.

Although oil money helped offset the damaging effects of the Great Depression, Rusk and Panola county's farmers fared poorly. Faced with little, if any, cash income and rising prices, some farmers abandoned farming for jobs in the oil fields. The lumber industry had added wealth to the economies of Rusk and Panola counties since the nineteenth century, but the discovery of minerals caused a boom that continues today. In 1930, Rusk County became a center of wealth when oil was discovered 8 miles east of Henderson. In addition to continued oil and natural gas production, Rusk County's economy has gradually diversified to include metal-plate fabricating, agribusiness, lumbering, manufacturing of brick and tile, and lignite mining. In Panola County, agriculture remained prominent and timber was an important economic resource, but mineral discoveries changed the local landscape there as well. Oil was discovered in 1917 and natural gas in 1936; however, significant production did not start until 1944. In addition to oil and gas, the county has relied on cotton, lumber, poultry processing, cattle, and strip mining for continued economic growth.

### **3.7.1.3 Cultural Resources Investigations**

Between January 2008 and March 2009, cultural resources investigations were conducted for 6,925 acres within the proposed first 5-year RCT permit area of the Rusk Permit Area, the southern half of Mine Area V, and adjacent areas (see **Figure 2-2**), here after referred to as the baseline survey area. This area represents approximately 34 percent of the total proposed Rusk Permit Area. Of the 6,925 acres, approximately 4,597 acres were subjected to intensive pedestrian survey, approximately 473 acres were surveyed at a reconnaissance level, and approximately 1,855 acres did not require survey due to the high level of existing disturbance or the very low likelihood of containing archaeological sites (Dockall et al. 2009).

### Archaeological Survey

Prior to the intensive pedestrian survey, a files search and literature review were conducted to determine if any archaeological surveys previously had been completed within the baseline survey area. Information gathered from the THC's Archeological Sites Atlas and the site files at the Texas Archeological Research Laboratory of the University of Texas at Austin indicated that two archaeological surveys previously had been conducted. Four archaeological sites were documented during the surveys. The four sites consist of two prehistoric lithic scatters, one historic artifact scatter, and one unknown prehistoric site.

Following the files search and literature review, the baseline survey area was reviewed to determine which areas had the potential to contain Native American archaeological sites. Based on anticipated site types and the topography and soils, three areas were determined to have the highest potential for Native American archaeological sites and, therefore, were chosen for intensive pedestrian survey. The three areas included the Pleistocene terrace between the Sabine River floodplain to the north and the uplands to the south; the more elevated parts of the Sabine River floodplain; and the interfluves along the valley wall overlooking the Pleistocene terrace and floodplain of the Sabine River, Cherokee Bayou, and Black Slough to the north and east. In total, approximately 61 percent of the baseline survey area was proposed for intensive survey for Native American archaeological sites.

Historic maps dating to 1863, aerial photographs taken in 1939 and 1960, a 1903 soils map, and 1958 USGS topographic maps were reviewed to determine which areas had the potential to contain historic non-Native American archaeological sites. The maps and photographs identified a mix of potential historic archaeological sites including farmsteads, house sites, roads, railroads, a ferry crossing, mill, tannery, and small railroad junction community. Most of these sites were identified in areas scheduled for intensive pedestrian survey. Small block surveys were proposed for areas outside of the pedestrian survey areas with the potential for historic sites.

The archaeological surveys resulted in the discovery and documentation of 59 prehistoric and historic archaeological sites (**Table 3.7-1**). Of the 59 sites, 21 are prehistoric Native American sites, 35 are historic sites, and 3 are multi-component sites containing both prehistoric and historic components. A total of 14 of the prehistoric sites are lithic scatters, and 7 may contain materials related to Caddo occupation. A total of 26 of the historic sites are farmsteads or house sites, 4 are cemeteries, 2 are improved springs, 2 are roads, and 1 is a cluster of house sites or farmsteads that formed a community. The 3 multi-component sites include a possible Caddo campsite and historic farmstead and sawmill, a possible Woodland campsite and historic house site, and a historic house site or farmstead and prehistoric lithic scatter.

A total of 7 of the prehistoric sites and 7 of the historic sites are eligible or potentially eligible for the NRHP. All 3 of the multi-component sites are potentially eligible for the NRHP. The potentially eligible sites require additional investigations to make a final assessment of NRHP eligibility. A total of 11 of these 17 eligible or potentially eligible sites are located within the proposed life-of-mine disturbance boundary (**Table 3.7-1**).

A number of isolated finds also were located during the pedestrian survey. Prehistoric isolated finds mostly consisted of unmodified lithic flakes, a few ceramic sherds, and fire-cracked rocks. The majority of historic isolated finds consisted of pieces of glass and occasionally nails and ceramic sherds.

### Historic Resources Survey and Archival Research

Prior to the reconnaissance survey, information on historic resources was obtained from the THC's Texas Historic Sites Atlas files, Texas Department of Agriculture, and NPS's Historic American Buildings Survey and Historic American Engineering Record. Additional information was obtained from secondary sources at The University of Texas at Austin libraries, entries in *The Handbook of Texas Online*, and other pertinent internet sources such as *TxGen Web*. Secondary local history sources were used in the identification of appropriate contexts and both known and previously unidentified historic-age resources in the baseline survey area, including *Remembering Rusk County* and *A History of Rusk County*. Appropriate historic contexts identified through the literature review were agriculture, architecture, archaeology

(historic), community planning and development, ethnic heritage (African American), exploration/settlement, industry, and transportation.

The reconnaissance survey of buildings and structures resulted in the identification of 67 historic-age resources on 37 land parcels (see **Table 3.7-1**). Six property types were represented: agricultural buildings (32), domestic buildings and associated outbuildings (20), transportation properties (7), cemeteries (4), industrial properties (3), and a religious building (1). Following the reconnaissance, archival research was conducted at the Rusk and Panola County Clerk offices, Texas General Land Office, Texas State Library and Archives, Rusk County Depot Museum, Heritage Quest Online, and other relevant internet sites that could provide additional information (e.g., chain-of-title, deeds, property owners, land use) on the identified resources. As a result of the reconnaissance and archival research, four of the historic-age resources were recommended as eligible for the NRHP under criteria A or B, and two resources were recommended as potentially eligible under Criterion A. Four of the six eligible and potentially eligible historic-age resources are located within the proposed life-of-mine disturbance boundary (**Table 3.7-1**).

**Table 3.7-1 Archaeological Sites and Historic Resources Identified in the First 5-year RCT Permit Area of the Rusk Permit Area**

Site Number	Age	Site Type	National Register Eligibility	Within Life-of-Mine Disturbance Boundary?
<b>Archaeological Sites</b>				
41PN35	Prehistoric	Lithic scatter	Ineligible	No
41PN36	Prehistoric	Lithic scatter	Ineligible	Partly
41PN55	Historic	Farmstead	Ineligible	Yes
41PN234	Historic	Greenwood Cemetery	Eligible	Yes
41PN235	Historic	Hendricks Cemetery	Potentially eligible	Yes
41PN236	Historic	House site	Ineligible	Yes
41PN237	Historic	Farmstead	Ineligible	Yes
41PN238	Historic	House site or farmstead	Ineligible	Yes
41PN241	Historic	Farmstead	Ineligible	Yes
41PN242	Historic	House site or farmstead	Ineligible	Yes
41PN243	Historic	Farmstead	Ineligible	Yes
41PN244	Prehistoric	Lithic scatter	Ineligible	Yes
41PN245	Prehistoric	Lithic scatter	Ineligible	Yes
41PN246	Prehistoric	Lithic scatter	Ineligible	Yes
41RK4	Prehistoric	Caddo mound and village site	Eligible	No
41RK77	Prehistoric	Possible Caddo campsite	Potentially eligible	No
41RK497	Prehistoric	Possible Caddo campsite	Potentially eligible	No
41RK549	Prehistoric	Lithic scatter	Ineligible	Yes
41RK550	Prehistoric	Lithic scatter	Ineligible	Yes
41RK551	Historic	Farmstead	Potentially eligible	Yes

**Table 3.7-1 Archaeological Sites and Historic Resources Identified in the First 5-year RCT Permit Area of the Rusk Permit Area**

<b>Site Number</b>	<b>Age</b>	<b>Site Type</b>	<b>National Register Eligibility</b>	<b>Within Life-of-Mine Disturbance Boundary?</b>
41RK552	Historic	Improved spring	Ineligible	Yes
41RK553	Historic	Road (Trammel's Trace)	Eligible	Partly
41RK554	Historic	House site or farmstead	Ineligible	Yes
41RK555	Historic	Flanagan community	Ineligible	Yes
41RK556	Prehistoric	Lithic scatter	Ineligible	Yes
41RK557	Prehistoric	Possible Caddo campsite	Potentially eligible	Partly
41RK558	Prehistoric	Possible Caddo campsite	Potentially eligible	Partly
41RK559	Historic	Road	Ineligible	Yes
41RK560	Prehistoric	Possible Caddo campsite	Potentially eligible	No
41RK561	Prehistoric and historic	Possible Caddo campsite; farmstead and sawmill	Potentially eligible	No
41RK562	Prehistoric and historic	Possible Woodland campsite; house site	Potentially eligible	Yes
41RK563	Prehistoric	Lithic scatter	Ineligible	Yes
41RK564	Prehistoric	Possible Caddo campsite	Potentially eligible	No
41RK565	Historic	Improved spring	Ineligible	Yes
41RK566	Prehistoric	Lithic scatter	Ineligible	Yes
41RK567	Historic	House site or farmstead	Ineligible	Yes
41RK568	Prehistoric	Lithic scatter	Ineligible	Yes
41RK569	Prehistoric	Lithic scatter	Ineligible	Yes
41RK570	Prehistoric	Lithic scatter	Ineligible	Yes
41RK571	Historic	Farmstead	Potentially eligible	Yes
41RK572	Historic	Ware Cemetery	Eligible	Yes
41RK573	Historic	Cash-Williams Cemetery	Potentially eligible	Yes
41RK574	Historic	House site or farmstead	Ineligible	Partly
41RK575	Historic	House site or farmstead	Ineligible	Yes
41RK576	Historic	House site or farmstead	Ineligible	Yes
41RK577	Historic	Farmstead	Ineligible	Yes
41RK578	Historic	House site or farmstead	Ineligible	Yes
41RK579	Historic	Farmstead	Ineligible	Yes
41RK580	Historic	House site or farmstead	Ineligible	Yes

**Table 3.7-1 Archaeological Sites and Historic Resources Identified in the First 5-year RCT Permit Area of the Rusk Permit Area**

<b>Site Number</b>	<b>Age</b>	<b>Site Type</b>	<b>National Register Eligibility</b>	<b>Within Life-of-Mine Disturbance Boundary?</b>
41RK581	Historic	Farmstead	Ineligible	Yes
41RK582	Prehistoric and historic	Lithic scatter; house site or farmstead	Potentially eligible	Yes
41RK583	Historic	House site or farmstead	Ineligible	Yes
41RK584	Historic	Farmstead	Ineligible	Yes
41RK585	Historic	House site or farmstead	Ineligible	Yes
41RK586	Historic	Farmstead	Ineligible	Yes
41RK587	Historic	House site or farmstead	Ineligible	Yes
41RK590	Historic	Farmstead	Ineligible	No
41RK594	Historic	Farmstead	Ineligible	Yes
41RK595	Prehistoric	Lithic scatter	Ineligible	Yes
<b><i>Historic Resources</i></b>				
1	ca. 1882	Texas, Sabine Valley and Northwestern Railroad	Ineligible	Yes
2	ca. 1960	Farm complex	Ineligible	Yes
3	ca. 1857	Ware Cemetery	Eligible	Yes
4	ca. 1920	House and outbuilding	Ineligible	Yes
5	ca. 1915	Road	Ineligible	Yes
6	ca. 1915	Pen	Ineligible	Yes
7	ca. 1930/1960	Church and barn	Ineligible	Yes
8	ca. 1950	Well	Ineligible	Yes
9	ca. 1950	House	Ineligible	Yes
10	ca. 1930/1960	House	Ineligible	No
11	ca. 1940	House and barn	Ineligible	No
12	ca. 1930/1960	House	Ineligible	No
13	ca. 1960	House	Ineligible	No
14	ca. 1920/1960	Trough and livestock tank	Ineligible	Yes
15	ca. 1900	Barn and pens	Ineligible	Yes
16	ca. 1920/1960	Farm complex and sawmill	Ineligible	No
17	ca. 1940/1960	Two houses	Ineligible	No
18	ca. 1960	Road	Ineligible	No

**Table 3.7-1 Archaeological Sites and Historic Resources Identified in the First 5-year RCT Permit Area of the Rusk Permit Area**

Site Number	Age	Site Type	National Register Eligibility	Within Life-of-Mine Disturbance Boundary?
19	ca. 1930	Road cut at river ford	Ineligible	No
20	ca. 1830	Road (Trammel's Trace)	Eligible	No
21	ca. 1940/1960	House and outhouse	Ineligible	No
22	ca. 1940/1960	House and outhouse	Ineligible	No
23	ca. 1960	Barn	Ineligible	Yes
24	ca. 1925	Pen	Ineligible	Yes
25	ca. 1881	House	Eligible	No
26	ca. 1960	Barn	Ineligible	Yes
27	ca. 1850	Road	Ineligible	Yes
28	ca. 1854	Greenwood Cemetery	Eligible	Yes
29	Unknown	Hendrick Cemetery	Potentially eligible	Yes
30	ca. 1935/1960	House and outbuildings	Ineligible	Yes
31	ca. 1960	Shed	Ineligible	Yes
32	ca. 1910	Pen and feeder	Ineligible	Yes
33	ca. 1950	Outhouse and well	Ineligible	Yes
34	ca. 1930	House	Ineligible	No
35	Unknown	Cash-Williams Cemetery	Potentially eligible	Yes
36	ca. 1960	Fire tower	Ineligible	Yes
37	ca. 1960	Oil platforms	Ineligible	No

Source: Dockall et al. 2009.

#### Site Density in Mine Area V

The lands within the baseline survey area subjected to intensive pedestrian survey and reconnaissance survey contained one prehistoric component per 231 acres and one historic site per 134 acres. However, site densities were not evenly distributed across the surveyed area. Prehistoric components were most common in the Pleistocene terrace (1 site per 148 acres) and valley wall settings (1 site per 143 acres), and least common in the uplands set back from the valley wall (1 site per 417 acres) and on the Sabine River floodplain (1 site per 548 acres). The low density of prehistoric sites on the floodplain most likely is attributed to frequent inundation, whereas the low density of sites in the uplands away from the valley wall most likely is attributed to too little water. Higher site densities found on the Pleistocene terrace and Sabine River valley wall can be attributed in part to the fact that these settings provided Native Americans with access to water sources. In addition, the terrace has soils that may have been attractive to farmers, which is relevant since a number of the sites appear to have been occupied by Caddo Indians (Dockall et al. 2009).

In contrast, historic components are most common in the uplands set back from the valley wall (1 site per 60 acres). Historic sites are moderately frequent on the Pleistocene terrace (1 site per 191 acres) and relatively infrequent on the valley wall (1 site per 425 acres) and on the Sabine River floodplain (1 site per 988 acres). The patterns in historic site distributions most likely are related to the following: 1) the floodplain was too low and wet to have seen substantial use; 2) the uplands set back from the valley wall had relatively intensive use because the landscape is level to gently sloping and amenable to farming and stock raising, and because the area is close to early roads and the railroad; 3) valley wall settings may have been less intensively settled because ridges and interfluves tend to be narrower with steeper slopes, making it harder to farm them; and 4) broad expanses of land are well suited to farming and the establishment of communities (Dockall et al. 2009).

#### Pending Cultural Resources Investigations

At this time, the actual number of acres in the currently unsurveyed portion of the proposed Rusk Permit Area requiring intensive pedestrian survey is unknown; however, the results of the baseline survey provide some insight as to areas that may require intensive survey and the types of cultural resources that may be located in unsurveyed areas. Cultural resources in the currently unsurveyed area are expected to be similar to those in the baseline survey area for two reasons: 1) these areas have similar topography, which includes uplands along the south wall of the Sabine River valley, and are drained by small streams that flow north toward the Sabine River or its major tributary (Cherokee Bayou); and 2) early maps show a similar network of roads in these areas, which likely conditioned where historic settlement occurred. Based on the results of the baseline survey and the similar topography, the majority of intensive surveys in the unsurveyed portion of the Rusk Permit Area most likely would occur in the uplands back from the valley wall. Second to the uplands would be the valley wall overlooking the Pleistocene terrace and floodplain beyond, followed by the Pleistocene terrace bordering the Sabine River floodplain, and lastly, the Sabine River floodplain.

Based on the findings in the baseline survey report (Dockall et al. 2009), it is anticipated that Native American sites found in the currently unsurveyed area would be lithic scatters representing short-term campsites, some of which may contain temporally sensitive artifacts such as dart points, indicating these campsites were used during the Archaic period. However, most of the campsites likely would lack these types of artifacts, which would make it difficult to determine a period of occupancy. A smaller number of sites most likely would contain artifacts indicating occupation during the late prehistoric Caddo period, or less likely, the earlier Woodland period. The Caddo sites most likely would be small residential locations (i.e., hamlets or small villages). Woodland sites most likely would be small campsites. Native American sites most likely would not be evenly distributed across the currently unsurveyed area, but would be concentrated along the valley wall above the floodplains of the Sabine River and Cherokee Bayou, and potentially along the small streams that drain the uplands south of the valley wall. Few sites would be anticipated in the uplands set back from the small streams and valley wall, and in the floodplains.

Historic archaeological sites most likely would be 20<sup>th</sup> century house sites and farmsteads. In contrast to Native American sites, historic archaeological sites most likely would be situated on the uplands back from the valley wall. Surveys of buildings and structures in the baseline survey area identified 67 historic-age resources, most of which were agricultural buildings and associated outbuildings. It is anticipated that the majority of historic-age resources in the currently unsurveyed area also would be agricultural buildings (e.g., barns and sheds) and domestic single-family dwellings and associated outbuildings. As with historic archaeological sites, it is anticipated that historic-age resources would be most frequent in upland settings and in close proximity to transportation corridors such as roads.

#### **3.7.1.4 Native American Consultation**

In compliance with the NHPA and USACE Policy Guidance Letter No. 57 (Indian Sovereignty and Government-to-Government Relations with Indian Tribes), the USACE is mandated to consult with Native American tribes concerning the identification of cultural values, religious beliefs, and traditional practices of Native American people that may be affected by federal undertakings. This consultation includes the

identification of places (i.e., physical locations) of traditional cultural importance to Native American tribes. Places that may be of traditional cultural importance to Native American people include, but are not limited to, locations associated with the traditional beliefs concerning tribal origins, cultural history, or the nature of the world; locations where religious practitioners go, either in the past or the present, to perform ceremonial activities based on traditional cultural rules or practice; ancestral habitation sites; trails; burial sites; and places from which plants, animals, minerals, and waters possessing healing powers or used for other subsistence purposes, may be taken. Some of these locations may be considered sacred to particular Native American individuals or tribes.

In compliance with the NHPA and USACE Policy Guidance Letter No. 57, the USACE sent a copy of the Public Notice for the proposed project to the Tribal Historic Preservation Officer (THPO) of the Caddo Tribe of Oklahoma on June 25, 2009. The Public Notice was sent to inform the Tribe of the proposed undertaking and to solicit their comments and information to assist the USACE in making “a reasonable decision on factors affecting the public interest.” In addition, prior to the public scoping meeting held on July 7, 2009, the USACE phoned the THPO to inform the Tribe of the scoping meeting and ask if the Alabama-Coushatta Tribe should be included in the consultation efforts. The THPO stated that the Alabama-Coushatta Tribe was relocated to an area approximately 75 miles south of the proposed project area in the late 19<sup>th</sup> century and, therefore, is not ethnographically linked to the proposed project area. Based on the THPO comments, the Alabama-Coushatta Tribe was not contacted by the USACE. No representatives from the Caddo Tribe of Oklahoma attended the scoping meeting. To date, the Tribe has not commented on the proposed project.

### **3.7.2 Environmental Consequences**

Section 106 of the NHPA requires that federal agencies consider the potential effect of an undertaking on historic properties and provide the ACHP an opportunity to comment. Historic property, as defined by the regulations that implement Section 106, means “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the NPS.” The term includes properties of traditional religious and cultural importance to any Native American tribe or Native Hawaiian organization that meet the National Register criteria.

Under the NHPA, potential impacts to NRHP-eligible sites are assessed using the “criteria of adverse effect” (36 CFR 800.5[a][1]): “An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.” There are five broad categories of effect:

1. Physical destruction or alteration of a property or relocation from its historic location;
2. Isolation or restriction of access;
3. Change in the character of the property’s use or of physical features within the property’s setting, or the introduction of visible, audible, or atmospheric elements that are out of character with the significant historic features of the property;
4. Neglect that leads to deterioration or vandalism; and
5. Transfer, sale, or lease from federal to non-federal control, without adequate and legally enforceable restrictions or conditions to ensure the preservation of the historic significance of the property.

Under NEPA, effects to NRHP-eligible sites can be direct or indirect. Direct effects are caused by an undertaking and occur at the same time and place as the undertaking (40 CFR 1508.8[a]). These types of effects to NRHP-eligible sites include physical damage resulting from surface-disturbing activities and can occur to both known sites and subsurface sites. Indirect effects are caused by an undertaking and are later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR 1508.8[b]). These types of effects often are not quantifiable and can occur both within and outside of the APE. Indirect

effects to NRHP-eligible sites include, but are not limited to, changes in erosion patterns due to construction activities, inadvertent damage due to off-road maintenance traffic, and illegal artifact collection due to increased access to an area.

### 3.7.2.1 Proposed Action

#### Potential Effects

Although effects to NRHP-eligible sites are determined on a site-specific basis, certain activities associated with the Proposed Action would have a greater potential to adversely affect these sites. Activities that could result in direct effects to NRHP-eligible sites include ground-disturbance associated with development of the mine area; construction of the transportation and utility corridor; and construction of haul roads, ancillary facilities, and sediment control ponds located peripheral to the mine area (see **Figure 2-2**). These effects could result in the vertical and horizontal displacement of soil containing cultural materials and the resulting loss of integrity, loss of information, and the alteration of the site setting. Vegetation clearing also could directly affect NRHP-eligible sites by compacting soils, crushing artifacts, disturbing historic features, or displacing cultural material from its original context.

Potential indirect effects to NRHP-eligible sites located within or outside of the project APE could include erosional effects from runoff or mine water discharge and illegal collection, inadvertent damage, and vandalism due to increases in both surface disturbance and the number of people in the Rusk Permit Area. Other potential indirect effects could include the introduction of visual or auditory elements that would be out of character with a site and disrupt the site's setting.

The potential for the discovery of unanticipated archaeological deposits during construction activities exists within proposed disturbance areas and could result in direct effects. Unanticipated discoveries could result in displacement or loss (either complete or partial) of the discovered material. Displacement of archaeological deposits affects the potential to understand the context of the site and limits the ability to extrapolate data regarding prehistoric settlement and subsistence patterns.

#### Resolution of Effects

Cultural resources investigations of the unsurveyed portions of the proposed Rusk Permit Area would be phased according to Sabine's planned schedule for mining. Cultural resources survey, report preparation, and report review would be completed 1 year in advance of any mine disturbance to allow time for additional work that may be necessary to evaluate identified cultural resources for the NRHP and implement mitigation measures, if needed. Prior to the surveys, a files search and literature review would be conducted to identify previous cultural resource surveys and previously recorded cultural resources in the unsurveyed areas. Additionally, topographic and soils maps would be reviewed to identify areas with the potential to contain Native American sites. All areas identified as likely locations for Native American sites would be chosen for 100 percent pedestrian survey; areas with a low potential would be subjected to less intensive pedestrian survey. Topographic and highway maps, as well as aerial photographs would be reviewed to identify likely locations for historic archaeological sites and historic structures, buildings, and objects. Surveys for these types of resources would target the identified location rather than conducting systematic pedestrian surveys of large blocks of land.

Based on surveys completed to date and discussed in Section 3.7.1, Affected Environment, 126 archaeological sites (prehistoric and historic sites) and historic resources have been identified and recorded in the baseline survey area (inclusive of the first proposed 5-year RCT permit area, southern half of Mine Area V, and adjacent areas). Of these sites and resources, 18 are eligible or potentially eligible for the NRHP, 11 of which are located in the life-of-mine disturbance boundary. It should be noted that there are 5 eligible or potentially eligible sites (Trammel's Trace and the Greenwood, Hendricks, Ware, and Cash-Williams cemeteries) that are listed twice in **Table 3.7-1**, as both archaeological sites and historic resources; however, they are only counted once in the total number of eligible or potentially eligible sites. If any of the above-described direct and indirect effects were to alter, directly or indirectly, any of the

characteristics of a NRHP-eligible site that qualify the site for inclusion in the National Register, the effects would be considered adverse under Section 106 of the NHPA.

In general, cemeteries are not considered eligible for the NRHP; however, they may qualify if they are integral parts of districts or derive their primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events. All four cemeteries (Greenwood, Ware, Hendricks, and Cash-Williams) are recommended as eligible for the NRHP because they were key components of two pre-Civil War plantations, the Seaborn Jones Hendrick Plantation and Levi Hill and Elizabeth H. Vinson Ware Plantation. The Greenwood cemetery includes the earliest known burials of the Hendrick family, while the Ware Cemetery includes the earliest known burials of the Levi Hill Ware family. The two remaining cemeteries, Hendricks and Cash-Williams, were used as burial grounds for slaves at the Hendrick and Ware plantations and, therefore, are considered key components of those plantation landscapes. If the cemeteries cannot be avoided by project construction, archaeological excavation would be conducted to identify the graves, and, if necessary, the graves would be relocated.

In consultation with the THC, the USACE will determine whether construction and operation of the Proposed Action would have an adverse effect on any properties eligible or potentially eligible for listing on the NRHP. If the USACE and THC determine that a property would be adversely affected, then avoidance would be recommended. If avoidance is not feasible, mitigation would be developed and implemented in accordance with a site protection or treatment plan developed in coordination with the THC and USACE.

Potential indirect effects to NRHP-eligible sites located within and outside of the APE as a result of runoff or water discharge are anticipated to be minor based on the proposed surface water control system and implementation of erosion control measures discussed in Section 2.5, Description of Proposed Action. Mitigation is being considered to minimize the potential for indirect effects associated with illegal collection and vandalism (see mitigation measure CR-1 in Section 3.7.4, Monitoring and Mitigation Measures).

In the event previously unknown archaeological deposits are discovered during construction, all construction activities would cease within the vicinity of the discovery, and the THC would be notified of the find. Steps would be taken to protect the site from vandalism and further damage until the THC could evaluate the nature of the discovery. Construction would not resume in the area of the discovery until the THC has issued a notice to proceed.

If construction or other project personnel discover what might be human remains, then construction would cease within the vicinity of the discovery, and the THC would be notified of the find. Treatment of any discovered human remains would be handled in accordance with the NHPA and Chapter 711 of the Texas Health and Safety Code. If the remains were determined to be prehistoric, the Caddo Tribe of Oklahoma would be notified by the THC. Construction would not resume in the area of the discovery until the THC has issued a notice to proceed.

### **3.7.2.2 No Action Alternative**

Under the No Action Alternative, the 126 archaeological sites and historic resources, including the 18 eligible or potentially eligible sites, identified to date in the Rusk Permit Area would not be affected, as the proposed project would not be constructed. However, archaeological sites and historic resources located within the Rusk Permit Area currently are exposed to natural elements (e.g., wind, rain), which would continue to affect these resources. Under the No Action Alternative, ongoing mining operations in the South Hallsville No. 1 Mine (inclusive of the South Marshall Permit Area) would continue to operate under existing permits until the lignite reserves are depleted (in approximately 2027). Prior to construction of the permitted facilities, adverse effects to NRHP-eligible sites located in the approved approximately 17,600 total acres of disturbance were, or would be, fully mitigated in accordance with the NHPA and NEPA. Therefore, no effects to NRHP-eligible sites would occur under the No Action Alternative.

### 3.7.3 Cumulative Impacts

The past and present actions and RFFAs in the cumulative effects study area are identified in Section 2.7 and shown in **Figure 2-13**. Although difficult to quantify, the cumulative impacts to archaeological sites would include natural impacts (i.e., erosion and dilapidation), as well as direct disturbance and removal of sites that were located, or currently may be located, within the cumulative effects study area. However, all NRHP-eligible sites located in the project APE would be mitigated in accordance with site protection or treatment plans developed in coordination with the USACE and THC. In addition, any previously unknown NRHP-eligible sites that may be discovered during construction or operation activities would be mitigated in accordance with site protection or treatment plans developed in coordination with the THC. Therefore, the proposed project is not expected to contribute to direct cumulative effects to NRHP-eligible sites.

Indirect effects, such as illegal collecting of artifacts, have occurred and most likely would continue to occur in the cumulative effects study area through increased access, development, and increased human presence, as a result of past, present, and RFFAs.

### 3.7.4 Monitoring and Mitigation Measures

Based on the EIS analysis, the USACE is considering the following additional mitigation for cultural resources:

**CR-1:** To minimize the potential for indirect effects to cultural resources as a result of illegal collection or vandalism, Sabine would educate project-related personnel as to the sensitive and confidential nature of the resources and implement a strict policy against illegal collection and against revealing the location of any cultural resources located in the Rusk Permit Area.

Effectiveness: This measure would be effective in reducing the potential impacts of the proposed project on cultural resources.

### 3.7.5 Residual Adverse Effects

The Proposed Action would result in the loss of cultural resources that are not eligible for the NRHP. Although these sites would be recorded to USACE and THC standards and the information integrated into local and statewide databases, the sites ultimately would be destroyed by project construction. NRHP-eligible sites identified within proposed disturbance areas would be avoided or, if avoidance is not feasible, mitigated in accordance with site protection or treatment plans developed in coordination with the USACE and THC. Although NRHP-eligible sites would be mitigated through implementation of data recovery or other forms of mitigation, some of the cultural value associated with these sites cannot be fully mitigated; therefore, it is anticipated that residual impacts to these resources would occur.