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## Presidio Los Adaes: Spanish, French, and Caddoan Interaction on the Northern Frontier

### ABSTRACT

Presidio Los Adaes was the capital of the Spanish Province of Texas for much of the 18th century. Named after the local Adaes Indians, a Caddoan group, Los Adaes was built in reaction to the French presence at Natchitoches, less than 20 miles to the east. The remoteness of Los Adaes, the lack of a French missionary effort, the willingness of the French to intermarry with both the Caddoan peoples and the Spanish, and the political/economic savvy of the Caddoan peoples were all factors that contributed to a Spanish, French, and Caddoan interaction characterized by cooperation, accommodation, and mutual support.

### Introduction

Presidio Los Adaes (16NA16) is located in present-day northwest Louisiana, where it was occupied between 1721 and 1773. Named after the Adaes Indians, a Caddoan group, the site of Los Adaes is defined by a presidio, a mission, settlers' houses, agricultural fields, and roads. Much of the site is now owned by the State of Louisiana and is operated as a state historical site by the Louisiana Office of State Parks. Los Adaes is on the National Register of Historic Places and has also been named a National Historic Landmark. The presidio was called Nuestra Señora del Pilar de los Adaes, and the mission was called San Miguel de Cuellar de los Adaes. Historians and archaeologists follow the shorthand observed in 18th-century documents and refer to the fort, mission, and settlement as simply Los Adaes. Los Adaes was located about 20 miles west of Fort St. Jean Baptiste, a French post established among the Natchitoches Indians, another Caddoan group.

Presidio Los Adaes was hardly an exemplary military post (one inspection revealed only two operable muskets for 60 soldiers), and the mission had no living converts (the only baptisms of neophytes were *in articulo mortis*, or, at the hour of death) (Gregory and McCorkle 1981; Avery 1999). The French were more interested in trading than acquiring territory, and the Caddo Indians viewed the Spanish more as a source for material goods rather than spiritual edification. As a result, Los Adaes functioned more as a trading post and settlement than as a fortification and mission. When Los Adaes was abandoned in 1773, the settlement had a population between 300 to 500 people (Gregory and McCorkle 1981; McCorkle 1981, 1996; Perttula 1992; Avery 1999).

Archaeological investigations conducted at Los Adaes by H. F. "Pete" Gregory of Northwestern State University in Natchitoches, Louisiana, have yielded much information about the interaction between the Spanish, French, and Caddoan peoples in northwest Louisiana (Gregory 1973, 1980, 1982, 1984, 1985). In contrast to the exploitation and domination that characterized many of the earlier examples of prolonged contact between Spanish and Native American populations, the 18th century at Los Adaes witnessed a Spanish, French, and Caddoan relationship based, for the most part, on cooperation, accommodation, and mutual support. A key factor in understanding the interaction among the Spanish, French, and Caddoan peoples is the military strength of the Caddoan people. The Caddoans, who numbered upwards of 10,000 people (Swanton 1996:22–23), were allied with the Wichita, who, in turn, were allied with the Comanche (Barr 2002). The Caddo, therefore, did not need the protection of either the Spanish or French, and, in fact, it is very likely that the Caddoan people could have forcibly removed both the French and Spanish from their land. The Caddoan people invited the Spanish and French into their territory (Carter 1995), and as long as these European visitors behaved themselves, they were allowed to stay (Gregory and McCorkle 1981; McCorkle 1981, 1996; Smith 1995; Avery 1999).

The French set the tone of the European intrusion by establishing economic and social

relationships with both the Caddoan groups and the Spanish. The French practice of unrestricted trade and intermarriage with both the Caddoan groups and the Spanish, and the lack of a French missionary effort, created a situation where each cultural group could freely adopt or reject traits of the other groups, without fear of reprisals. The Spanish had little choice but to follow the example set by the French, even though the Spanish would not trade firearms or alcohol to the Caddoan people. The Spanish, French, and Caddoan interaction was a cultural symbiosis whereby three ethnic groups were able to maintain their distinct identities while adopting certain elements of the other groups (Gregory 1973). This interrelationship is quite clear in the archaeological assemblage from Los Adaes. The large percentage of French and Caddoan artifacts recovered from Los Adaes clearly indicates strong economic ties among the Spanish, French, and Caddoan peoples.

#### Historical Background

Ever since the 16th century, Spain was unable to produce all the merchandise required by her colonies, and, therefore, the Spanish Crown would buy goods from France and other coun-

tries and then sell them in the Spanish colonies at a sizable profit. But in order to maximize their profit, the Spanish Crown would not allow the French to trade directly with the Spanish colonies. The early leaders of French Louisiana tried to establish trade relations with New Spain at Vera Cruz in 1710 but were rebuffed. Father Hidalgo, a Spanish priest working near the Rio Grande, wrote two letters to the French governor of Louisiana in 1711 that offered to introduce the French to potential Spanish trading partners with the understanding that the French would support the Spanish missionary efforts in this area. The Louisiana governor instructed Louis Juchereau de St. Denis to establish a trading post among the Natchitoches Indians on the Red River and then to go find Father Hidalgo near the northernmost presidio in New Spain—Presidio San Juan Bautista (Figure 1). In essence, the French had failed to establish trade relations with New Spain through the “front door” at Vera Cruz, and so St. Denis’s task was to try the “back door,” at Presidio San Juan Bautista (Avery 1999).

St. Denis left his post at Natchitoches in 1714 and within the same year encountered commandant Diego Ramón at Presidio San Juan Bautista (Figure 1). St. Denis’s passport made reference to Father Hidalgo’s letter, but it has also been suggested that the St. Denis and Ramón families were not complete strangers—it appears that they also had economic ties in Europe (Lemée 1998). Strangers or not, it was still against Spanish law for the French to trade directly with the Spanish colonies, and so St. Denis was placed under house arrest, held literally in the house of Diego Ramón. Within two years he had married the step-granddaughter of Ramón and was hired to guide the expedition to set up Spanish presidios and missions in response to his own trading post at Natchitoches. Diego Ramón’s son, Domingo Ramón, who was the uncle of St. Denis’s new wife, led the expedition (Gregory and McCorkle 1981; McCorkle 1981, 1996; Avery 1999).

The Ramón expedition set up two presidios (Dolores and La Bahía) and six missions (Purísima Concepción, Guadalupe, San José de los Nazonis, Espíritu Santo de Zúñiga, Dolores de los Ais, and San Miguel de Los Adaes). The mission for the Adaes Indians was located near modern-day Robeline, Louisiana. St.



Figure 1. Map of 18th-century New Spain showing location of presidios mentioned in text.

Denis returned to his trading post among the Natchitoches, and Domingo Ramón became commandant of Presidio Dolores in modern-day northeast Texas. So at the onset, Mission Los Adaes was located between a Spanish presidio and French trading post whose leaders were related by marriage. This set of familial circumstances set the tone of Spanish-French relations for much of the 18th century (Gregory and McCorkle 1981; Avery 1999).

The only military conflict between the Spanish and French in eastern Spanish Texas came in 1719 when France and Spain were at war, and the French in Louisiana attacked the Spanish on both eastern and western fronts. On the eastern front, Spanish Pensacola was attacked with upwards of 1,200 men, but on the western front, six French soldiers led by Lieutenant Blondel marched out of Natchitoches and entered the Spanish mission for the Adaes. The priest and one of the soldiers were off visiting at Mission Dolores, which left a lay brother and one soldier at Mission Los Adaes. The soldier was asleep and was easily captured, but the chickens did not submit so readily to the French and made such a racket that Lieutenant Blondel was thrown from his horse. The lay brother escaped, and the French lieutenant made prisoners of the Spanish soldier and the chickens and returned with them to Natchitoches. Historians refer to this event as the "Chicken War" (Gregory and McCorkle 1981; Chipman 1992; Avery 1999).

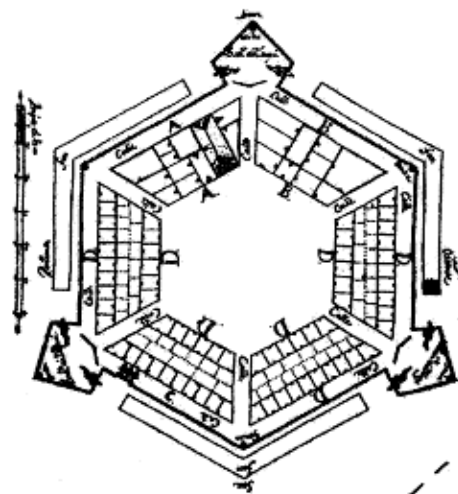
In 1720, there was peace again between France and Spain, but the new governor of Spanish Texas, the Marqués de San Miguel de Aguayo, had already assembled an expedition to drive the French from east Texas. Rather than re-establish Mission Los Adaes at its original location, Aguayo chose to locate the new mission closer to Natchitoches, about one and a half miles east of the former location (Foster 1995). In addition, a presidio was built. The shape of Presidio Los Adaes is unique among colonial fortifications of the northern frontier. Most of the Spanish forts of the northern frontier were square or block shaped, while Presidio Los Adaes was hexagonal. Presidio La Bahía, built at the same time as Los Adaes, also deviated from the block shape, and was a 16-pointed star shape. The location at the Spanish/French border may account for the more elaborate design of Presidios Los Adaes and La Bahía

(Moorhead 1975:161–165). The architect's 1720 plan of the presidio at Los Adaes designates the dwellings for the governor, priests, soldiers, and officers (Figure 2a). The church is clearly shown; the warehouses are designated; and the streets and the defensive ditches in front of the stockade are labeled.

Aguayo's plans for a mission and presidio at Los Adaes reflected a clear understanding of the social dynamics necessary for a successful settlement. The two short-lived east Texas missions established in 1690 (Habig 1990:152–153) caused difficulties with the local Native American groups. Part of the problem was attributed to wandering Spanish livestock (John 1975), but mostly it was viewed as a result of the "evil conduct of the soldiers" stationed at the missions (Barker 1929:28). The Spanish soldiers were unmarried men, and they created problems with the Caddoan women. Aguayo realized that more of a family atmosphere was needed to establish successful settlements, and he therefore focused his efforts on recruiting married men—many of whom were in jail at the time, but those who had committed less serious crimes were favored over the more serious criminals (Yoakum 1855:74–76; Buckley 1911). Of the 100 soldiers who were stationed at Presidio Los Adaes by Aguayo in 1721, 31 had families (Foster 1995:155). It is estimated that by the 18th century, 25% of the population of New Spain was of mixed heritage as a result of intermarriage between Spanish, Native American, and African peoples (Moorhead 1975). A document from 1731 that describes the *casta* or (roughly) ethnicity of the soldiers at Los Adaes indicates that 50% were of mixed Spanish, Native American, and African heritage (Avery 1997).

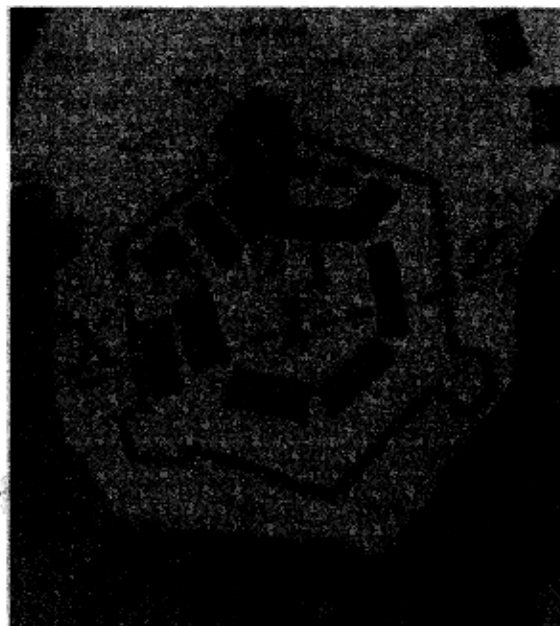
By 1727, it was clear that the French had no intention of attacking Los Adaes, and a military inspector recommended reducing troop strength from 100 to 60. The inspector stated that even if there were 200 soldiers at Los Adaes, they still would not be able to defend against an attack from the French. The French at Natchitoches numbered less than 40 soldiers, but they could rely on upwards of 1,000 Native American allies, while the Spanish apparently were not counting on any Native American support. Los Adaes officially became the capital of the province of Texas in 1729, and many of the

**A** 1720 Architect's plan  
for Presidio Los Adaes



*A Iglesia y tienda de la Real  
B Tienda de la Comandancia y Armas  
C Cuartel de los soldados  
D Depósito de la pólvora*  
(ACQ Los Adaes Plan)

**B** Portions of Joseph Urrutia map  
of Los Adaes, drawn in 1767



(Moorhead 1975:144-145; original of map is in the British Museum, London, England)



Figure 2. Comparison of 1720 architect's plan (A) with portions of Urrutia's 1767 map of Presidio Los Adaes.

Texas governors were involved in illegal trade with the French. The historical documents tell of political, social, and spiritual interaction as well. Priests at Los Adaes would say Mass at the French post before permanent clergy were present, and troops from Los Adaes, accompanied by Caddoan Indians, went to the aid of the French when Natchez Indians attacked the post at Natchitoches in 1731 (Gregory and McCorkle 1981; Weber 1992:172-177; Avery 1999).

In 1762, near the end of the French and Indian War, France ceded all its holdings west of the Mississippi River to Spain, so that they would not fall into the hands of the British. Therefore,

the French fort at Natchitoches became a Spanish fort. In 1767, an inspection of the Texas forts was conducted to determine which forts should remain open now that the so-called French "threat" had disappeared. The inspection of Los Adaes resulted in a map of the fort, mission, associated buildings, agricultural fields, and roads. This map, drawn by Joseph Urrutia, is incredibly detailed and identifies the governor's house, chapel, guardhouse, and powder house inside the fort as buildings 1, 2, 3, and 4, respectively (Figure 2b). Profile and frontal views of these buildings are also part of the Urrutia map, and the architectural style is revealed as being more

French than Spanish (Figure 2b). The presidio buildings appear to represent examples of French *poteau en terre*, or post-in-ground construction with slats wedged between the posts and filled with *bousillage*—a mixture of mud and moss or deer hair (Gregory 1983:14). The gabled, shingled roofs show in profile the detail of king-post construction, a Norman tradition. This is a clear contrast to the flat-roofed adobe structures found at the other Spanish presidios of Texas (cf. Moorhead 1975).

The inspections of Los Adaes found that there was no longer a need to maintain the fort and mission, and an order was issued in 1772 to close Los Adaes. In 1773, the fort and mission were closed, and roughly 300 to 500 people left Los Adaes for San Antonio. Many of the people from Los Adaes, or *Adaeseños*, were not happy in San Antonio, and they left to form a settlement initially at Bucareli and later in 1779 at Nacogdoches, Texas. *Adaeseños* also were returning to Louisiana. By 1814 a village called Adaes was established within 2 miles of the abandoned Presidio Los Adaes (Gregory 1973, 1983; Gregory and McCorkle 1981; Pleasant and Pleasant 1990).

Archaeology at Los Adaes—Overview

The fort and mission of Los Adaes are located on hill spurs separated by an intermit-

tent, spring-fed branch. The mission area has seen limited testing, and most of the archaeological work at Los Adaes has focused on the presidio and adjacent structures. Initial excavations at the site focused on site validation. Later excavations were conducted to determine content and extent of the site. Excavations in the area of the presidio include portions of the palisade wall and two bastions of the fort, portions of the governor's house, and three structures outside the fort (Gregory 1973, 1980, 1982, 1984, 1985) (Figure 3). Figure 4 shows the rough locations of excavated areas on the Urrutia map. These excavations led to the site validation for the National Register of Historic Places, a necessary step for acquisition by the Louisiana Office of State Parks. Most archaeological investigations at Los Adaes have been related to management concerns such as land purchase, development, and salvage, such as the recent excavation of stumps of storm-damaged trees in the area of the presidio (Avery 1995, 1996, 1997, 2001).

Variation in both status and ethnicity has been identified among the structures excavated at Los Adaes. Higher status ceramics such as Chinese porcelain, German stoneware, and decorated

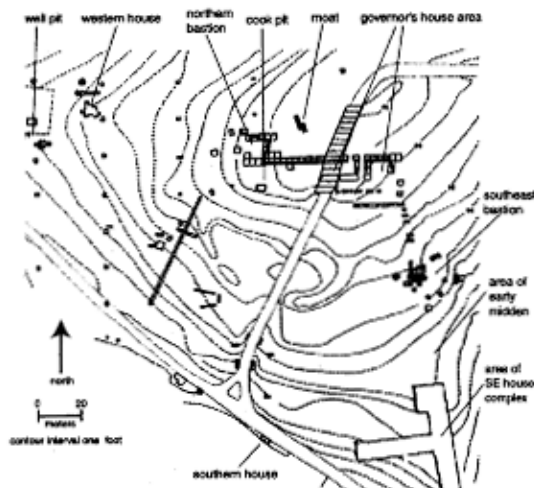


FIGURE 3. Archaeological excavations in the vicinity of Presidio Los Adaes.

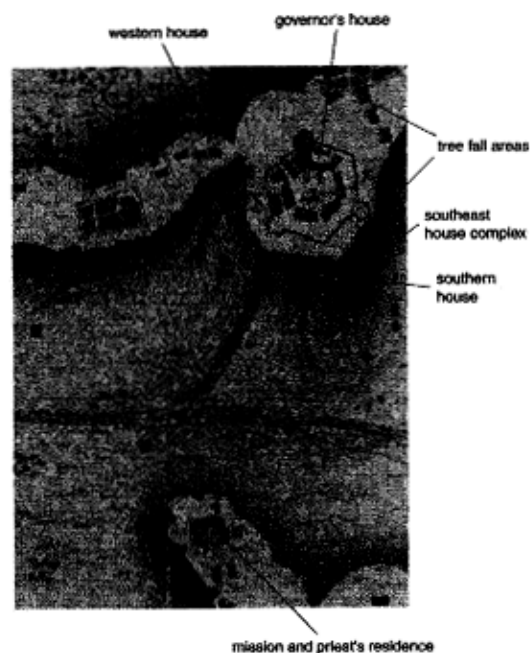


Figure 4. Excavation areas plotted on Joseph Urrutia's 1767 map of Los Adaes.

Caddoan wares are concentrated around the governor's house. The high proportion of French faience from one structure outside the fort suggests the presence of a French trader. Several activity areas have also been identified. They include a kitchen area, associated with evidence for gun repair and shot production just outside the northern palisade, and a probable blacksmith area, indicated by concentrations of slag in the southwest part of the fort or possibly just outside the fort (the location of the palisade line in this area has not been precisely determined).

The cooperative nature of the relationship between the Spanish, French, and Caddoan groups at Los Adaes is abundantly clear in the archaeological assemblage. There are roughly equal amounts of tin-enameled wares from France and Spanish colonial Puebla, located in present-day Mexico. Fragments of French wine bottles are well represented at Los Adaes, and most of the lead cloth seals are French. French trade knives and French and British firearm fragments occur with less frequency. British goods, including tin-enameled sherds, salt-glazed ceramics, and pipestem fragments occur in small amounts, as do German (stoneware) and Asian (porcelain) goods. Hispanic traditions are represented by Spanish horse gear, Spanish weaponry, basalt *metates* and *manos*, Spanish holy medals, a cloth seal from the Spanish port of Cádiz, and *higas* to combat the *mal de ojo*, or evil eye. The most dramatic non-Spanish artifact is the overwhelming presence of Native American pottery at Los Adaes. Caddoan pottery, represented by more than 30,000 sherds, dominates the Los Adaes ceramic assemblage. Faunal remains, mostly domesticates (cattle, pigs, horse, etc.), represent by bulk more than 60% of the Los Adaes collections (Lee 1986; Pavao-Zuckerman 1999). Analysis of floral remains indicates the presence of maize and beans and a variety of hardwoods and pine, along with peach tree and watermelon (Dering 2001).

#### Archaeology of the Presidio

Comparison of the architect's plan and the 1776 inspection reveal that construction of the presidio generally followed the architect's plan (Figure 2). Two notable differences between the plan and the Urrutia map include the powder house (not shown on the plan but depicted in the

middle of the presidio on the Urrutia map) and the defensive ditch, which is shown on the plan but not depicted on the Urrutia map. Excavations of two bastions and the connecting palisade wall have verified the general accuracy of the Urrutia map, although the angle at the northeastern corner of the palisade is less than that shown on Urrutia's map (compare Figures 2b and 3).

Excavations of the palisade between the northern and southeastern bastions revealed a trench (50 cm wide, 40 cm deep), with post molds spaced no closer than 20 cm. The post molds ranged from 8 to 15 cm in diameter. Test excavations failed to locate the western palisade or southwestern bastion. Excavations of the defensive ditch just north of the northern palisade (Figure 3) revealed a ditch (6 m wide, 1.1 m deep) filled with cultural debris and capped with a layer of clay. It appears that the defensive ditch was indeed excavated with the initial construction of the presidio but was subsequently filled in with refuse and capped with a layer of clay before 1767, the date of the military inspection that produced the Urrutia map. It is not yet determined if all the ditches were excavated or if only portions were completed, then filled and capped.

Several activity areas have also been identified in association with the presidio. A possible kitchen area associated with evidence for gun repair and lead shot production was identified just outside the northern palisade, and a probable blacksmith area defined by concentrations of slag was identified in the area where the southwest bastion would have been located. A cook pit with large reconstructible portions of five Native American pots (Figure 3) was located near the governor's house and the northwest bastion, and a well was excavated within the southeast bastion. Another well with a lift or *noria* was excavated outside the western palisade area. A well and a small jacal (hut) were excavated adjacent to the southwest palisade, likely well outside the presidial walls. At least two other wells were located.

Excavations in the area of the governor's house were related to salvage along a 20th-century road (1930s) that cut through the presidio (Figure 3). Architectural remains were observed, including areas of burned beams and burned clay. One interesting observation relating to the structural remains of the governor's house was the presence of snipe hinges (Gregory 1973:100). This reflects



a Spanish practice, and although Urrutia's 1767 drawing of the governor's house clearly indicates a French style *bousillage* construction (Figure 2b), it is possible that these French influences came later, and that the initial construction was more similar to the Spanish pattern (Gregory 1973:100). German stoneware, decorated Caddoan wares, and French tin-enameled polychromes were found in greater proportions at the governor's house than in other areas of the site and suggest that these items may have been higher status goods.

The area immediately west of the presidio was tested to locate the western palisade and other cultural features. Sixty-three excavation units (1 X1 m) were excavated at 12 m intervals along north-south transects spaced 20 m apart in a 4.6 acre area, including and adjacent to the hypothesized western palisade. Three trash pits and two wells were investigated, and another two wells were observed but not excavated. The western palisade was not located. Unfortunately, this area had been clear-cut just prior to acquisition by the Louisiana Office of State Parks, and it is possible that any remnants of the western palisade were destroyed; however, it seems more likely that the excavation strategy was too limited to find this section.

#### Excavation of Jacal Structures Adjacent to the Presidio

A French visitor to Los Adaes in 1763 described the structures in the area surrounding the presidio as "about 40 miserable houses constructed with stakes driven into the ground" (Pagès 1801). This French visitor appears to be describing jacal-type structures. Three structures that have been interpreted as jacal-type structures have been excavated at Los Adaes, and are located within 50 m of the presidio.

The first structure excavated just south of the southern wall of the presidio consisted of a shallow pit with a clay cap (Figure 3) (Gregory 1973:83–86). This shallow pit is located in the vicinity of a structure depicted south of the presidio on the Urrutia map (Figure 4). Similar pits have been observed at the Gilbert Site, an 18th-century *Norteño* site along the Sabine River in Texas (Jelks 1966). No post molds or hearths were observed, but the predominance of Native American ceramics and the presence of Virginia deer and freshwater mussel suggested a

temporary Native American structural depression (Gregory 1973:86).

Another structure associated with pit features was excavated near the southeastern bastion of the presidio (Figure 5). This structure appears to have two components. It is possible that

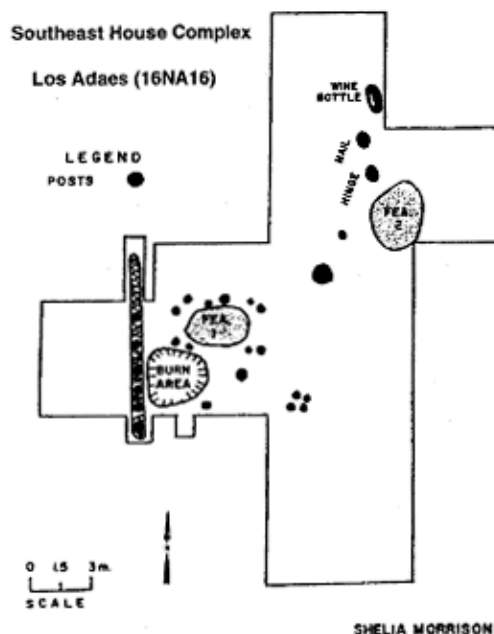


FIGURE 5. Southeast house complex, Los Adaes (16NA16).

this structure may correspond to the rectangular house with an adjoining structure depicted on the 1767 Urrutia map near the bastion (see Figure 4). A high proportion of French tin-enameled sherds were recovered from an associated pit feature (Feature 2), and Indian pottery from Mexico was concentrated in this area of the site. It is suggested that this house might have been the residence of a French trader (Gregory 1984). This structure was originally interpreted as a jacal, apsidal in shape, oriented northwest/southeast, with a hearth encircled by posts located in the northeast corner of the structure (Figure 5). Clay had been placed within the interior of the structure along the west wall to mitigate the deep sand present at the location. Architectural items such as

nails were present, although they were thinly scattered across the footprint of the building and not directly associated with any remnant structural elements. The complete absence of hinges, pintles, and *bousillage* suggests that the jacal was open-ended. The hearth, size of the structure, and artifact content suggested that the building was a detached kitchen combining Native American and European construction techniques (Gregory 1984:12–19, figure 3).

Another interpretation of this structure differs from the former in that the building is rectangular in shape, oriented east/west, and the hearth placed in the center of the building. The original interpretation of the west wall remains unchanged; however, a cluster of four small posts is believed to form the southeast corner of the jacal, while a single, large post denotes the northeast corner. Rather than a circle of posts around the hearth, the building plan suggests that pairs of posts were placed at each end of the hearth. These post sets, along with the central post placed in the hearth, served as interior roof supports for the jacal. A door or entrance to the jacal may have existed between the west wall and a small post located just south of the burned area.

Walls of the structure were open to allow heat to escape from the hearth during the hot season between April and October. The *poteau en terre* west wall protected the hearth from prevailing southwesterly winds and rain crossing the region during spring, summer, and early fall. It is suggested that some type of temporary covering and/or combinations of coverings was placed on the walls during late fall, winter, and early spring to protect the interior of the structure from inclement weather entering the region primarily from the north and northwest. Location of the suspected entrance on the south side of the structure would allow ingress/egress during the cold season without exposing the interior to inclement weather.

The third structure excavated at Los Adaes was located west of the presidio, and also appears to be depicted on the Urrutia map (figures 3 and 4). This structure also consists of a shallow depression surrounded by intermittent post molds, a central hearth, and contains post-1740 trash, including the French tin-enameled ware Rouen Polychrome, which dates after 1770 (Gregory 1985). Archival documents state that

three French traders and their wives remained at Los Adaes after the presidio was abandoned (Avery 1998), and this structure may contain material from this post-1773 occupation. This structure clearly was a small jacal-type structure, even though it may have had French occupants.

#### Tree-Fall Excavations

In spring 1993, a severe storm possibly associated with a tornado knocked down close to 100 trees at Los Adaes. Some of the larger trees ripped up large portions of earth when they fell, many of them exposing 18th-century deposits. The excavations of the stumps of storm-damaged trees revealed that tree-falls with high artifact densities were located in the vicinity of structures depicted on the 1767 Urrutia map (Figure 4). The tree-fall associated with the structure adjacent to the road trace just north of the palisade had a higher proportion of glass trade beads and French wine bottle glass and seems to indicate commercial activity. The tree-fall located just south of the southeast bastion revealed a 25 cm deep midden dating to an early occupation of the presidio (Figure 4). Puebla Polychrome and Abó Polychrome were present, and the absence of Aranama Polychrome suggests a pre-1750 date (Deagan 1987:79–82,87). Native American ceramics again dominate, but very few French artifacts are present, suggesting that the early years at Los Adaes saw more Spanish interaction with local Caddoan peoples than with the French (Avery 2001).

#### Artifact Discussion: Ceramics

The ceramics are dominated by Native American wares, which number over 30,000 sherds and comprise almost 85% of the total sherd collection. Most of the Native American wares are plain; only 15% of the sherds show any form of decoration. Vessel forms include bowls, jars, and rarely bottles. Some bowls and jars were clearly for cooking (as evidenced by sooting and associations with cook pits). There are some Native American forms that show European influences. These include shallow, brimmed bowls and pitchers. Less than 1% of the Native American pottery is non-Caddoan. These non-Caddoan wares include Natchez and Choctaw sherds as well as



lead-glazed sherds, presumably from northern Mexico or Texas.

Roughly equal amounts of Spanish, and French and British and/or Dutch tin-enameled wares are present. The Spanish tin-enameled wares are all from New Spain and include Puebla Polychrome (blue variety), Puebla Blue-on-White, San Agustín Blue-on-White, Huejotzingo Blue-on-White, Abó Polychrome, Aranama Polychrome, and San Elizario Polychrome. Guadalajara Polychrome and other unidentified slipped wares are present in small amounts. Spanish olive jars are represented by only one rim sherd and less than 50 body sherds. The French tin-enameled wares include Brittany Blue-on-White, Provence Blue-on-White, Provence Yellow-on-White, Normandy Blue-on-White, Normandy Polychrome, Moustiers Blue-on-White, Moustiers Yellow-on-White, La Rochelle Polychrome, Rouen Polychrome, and St. Cloud Polychrome. The less-expensive French lead-glazed wares are present only in small amounts at Los Adaes. There appears to have been a preference for the more-expensive tin-enameled wares. There are also small amounts of British or Dutch tin-enameled sherds. Hard-paste ceramics, including British stoneware, pearlware, and creamware, have also been recovered from Los Adaes and may be associated with French traders who remained at the presidio after it was closed.

The ratios of Native American to European wares for the western house (8.3 to 1), the area of the southeastern house complex (8.2 to 1), and the governor's house (9.9 to 1) are very similar; Native American ceramics are less at the southern house (2.0 to 1) and substantially more in the early midden area (24.7 to 1). The southeastern house complex is notable for the predominance of French ( $n=273$ ) over Spanish ( $n=153$ ) tin-enameled ware sherds.

#### Artifact Discussion: Glass

Bottles, drinking glasses, and stemmed ware are ubiquitous at Los Adaes. French wine bottles seem to predominate. Each of the soldiers at Los Adaes were supposed to have six horses and a mule. When one military inspection revealed that soldiers had much less than this number, the governor explained that his soldiers liked French wine and would trade one horse for one bottle of wine (Avery 1997).

Glass "sets" from buckles, earrings, and rings are also present. At least one "neck" bead from a rosary was found. Glass beads suggest the presence of the Indian trade and the advent of sewn beadwork at the site. Seed beads of several varieties were common. Large compound and simple construction "necklace" beads were found. These seem to include both Venetian and "Dutch" beads. Mulberry beads (in three colors) and large press-faceted and wire-wound beads seem related to necklaces. Seed beads from tiny to medium in size, included several sizes of Corneline d'Aleppo red beads; various tubular (mostly blue) beads round out the sample. The beads recovered from Los Adaes encompass all the variation seen on local Native American Sites (Gregory and Webb 1965).

#### Artifact Discussion: Metal

A wide variety of metal artifacts have been recovered from Los Adaes. Space limitations prevent discussion of all metal artifact categories; therefore, the following discussion is necessarily selective. A detailed description of all metal artifacts by Jay C. Blaine is currently in progress. Before discussing the metal artifacts, it is important to relate a management concern regarding the metal artifacts from Los Adaes. The marked deterioration of metal artifacts recovered from Los Adaes since the mid 1960s has been observed and attributed to variation in rainfall acidity by Blaine (1993). Metal artifacts, particularly iron, will oxidize until equilibrium is reached with the surrounding soil. If this equilibrium is changed, the artifact will oxidize to reach a new equilibrium. It is hypothesized that regular variation in soil pH can result in overall degradation and eventual destruction of buried metal artifacts (Blaine 1993). Measurement of rainfall acidity at Los Adaes since 1996 has demonstrated higher acidity rates during the summer and winter months, possibly caused by increased emissions from nearby power plants burning coal to produce more electricity during these months (Avery 2001). Studies of the effect of variation in rainfall acidity have generally focused on aboveground artifacts such as buildings and sculpture (NCPTT 1999). The effect of rainfall acidity variation on buried artifacts is largely unstudied.

Los Adaes was ostensibly a Spanish military post, but Spanish gun parts are not common on the site, and most came from a large trash pit/cook pit just outside the palisade. French gun parts are even less common, with an "MNI" of two, that is, while it cannot be said that all the French gun parts come from the *same* two weapons, they only represent the component parts of *two different* weapons. A single English firearm part has been identified. Spanish military buckles have been recovered, but only one Spanish military button has been recovered from excavations at Los Adaes; the rest are French. French cloth was much in demand in New Spain, and lead seals from bolts of cloth of French origin have been recovered from Los Adaes. One Spanish customs lead seal has been recovered, but most of the other lead seals recovered from Los Adaes are French; one is British. Only two French trade knives have been identified at Los Adaes; the Spanish seemed to have preferred their own knives, which had a straight cutting edge and curved back. The Spanish also preferred their own horse gear; all the horse gear from Los Adaes is distinctly Spanish. A caveat must be inserted here in that there are few, if any, recorded finds of specifically identified French horse gear from any colonial site in Louisiana. It may be identical to Spanish gear in many respects. Certainly the primary source of livestock and horses for French Louisiana was Spanish Texas (Blaine 1982, 1984, 1985).

#### Los Adaes Station Archaeology Program

Consolidating the Los Adaes collections and summarizing the excavations of Gregory's excavations, as well as compiling archival material related to Los Adaes, have been part of the activities of the Los Adaes Station Archaeology program. The collections and archival material are currently available to researchers. Aubra Lee's (1986) master's thesis analyzed the faunal remains from a large trash pit in the southeastern bastion and noted exotic wild fauna as well as corn, beans, and peach pits. His analysis suggests the population was well nourished. The analysis of the faunal material from the *jaca* structure near the western palisade area revealed an assemblage dominated by deer, unlike the faunal assemblages from the other excavated structures within and adjacent to

the presidio (Gregory 1985). Shawn Carlson's (1994) dissertation, which included a study of ceramics from the Texas missions, included Los Adaes. Diana Loren's (1999) dissertation focused on the social order at Los Adaes, and Raymond Berthelot (2001) has recently completed his master's thesis that compared material culture recorded in the documents to artifacts recovered in the excavations. Barnett Pavao-Zuckerman (1999) of the University of Georgia analyzed faunal material recovered from Gregory's excavations of the presidial area and found no statistical difference between faunal remains recovered from the governor's house and the *jaca* structures located near the southeast bastion and southern palisade. Gregory Waselkov (n.d.) very graciously helped with identifying some of the French, British, and Dutch tin-enameled ware sherds in the Los Adaes collections.

#### Concluding Remarks

Los Adaes offers a wonderful opportunity for the study of culture contact in a frontier situation. The site is one of the best-preserved examples of Spanish, French, and Caddoan interaction in the area. Past archaeological investigations have been prudent, and although much has been learned already, there is still potential for addressing a myriad of research questions related to culture contact. The story of Los Adaes does not stop with the closing of the presidio in 1773, as descendants of the people of Los Adaes still live in northwest Louisiana and northeast Texas. The park facility at Los Adaes is currently in the planning stage for future development, and part of this process has required identifying and understanding the legacy of Los Adaes. Presidio Los Adaes will not be remembered for any military prowess, but, rather, the legacy of Los Adaes is the new economic and social order that was created during the colonial period, and which still exists today.

#### ACKNOWLEDGMENTS

The Daughters of the American Colonists, with the assistance of avocational historian J. Fair Hardin, facilitated the establishment of Los Adaes as a parish historical park in 1933. Robert Welch and Dottie Cooper were instrumental in starting the Los Adaes Foundation in 1972. Natchitoches Parish Police Juror Younger Stewart established a parish ordinance prohibiting unauthorized excavations at Los Adaes in the

mid 1970s. Most of the archaeological investigations at Los Adaes from 1966 to 1979 were conducted as part of Northwestern State University field schools in archaeology, directed by H. F. Gregory. Members of the Texas Archeological Society also assisted during this time and include R. King Harris, Jay C. Blaine, and Jerrylee M. Blaine. Members of the Los Adaes Foundation are acknowledged for their tireless efforts to place Los Adaes on the National Register of Historic Places in 1978. In 1979, the parish donated the Los Adaes historical park property to the State of Louisiana and the Louisiana Office of State Parks. From 1979 to 1985, archaeological investigations at Los Adaes have been funded by the State of Louisiana through the Louisiana Office of State Parks. In 1986, the efforts of the Los Adaes Foundation, H. F. Gregory's archaeological investigations, and the Louisiana Office of State Parks culminated in the naming of Los Adaes as a National Historic Landmark. Beginning in 1995, the Los Adaes Station Archaeology Program was funded by the National Park Service and the State of Louisiana through the Louisiana Division of Archaeology, in cooperation with the Louisiana Office of State Parks and Northwestern State University. After 1996, the Los Adaes Station Archaeology Program has been funded solely by the State of Louisiana through the Louisiana Division of Archaeology.

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