

REPORT ON THE 1985 EXCAVATIONS AT THE FOUNTAIN OF YOUTH PARK  
SITE (8-SJ-31), ST. AUGUSTINE, FLORIDA

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(Prepared under the supervision of Kathleen Deagan, Principal Investigator)

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State Museum, who guided this research from its inception, and saw to it that it finally reached completion.

## INTRODUCTION

In the Spring of 1985, archeological excavations were conducted at the Fountain of Youth Park (8-SJ-31). This site is located in St. Augustine, Florida, on Magnolia Avenue, approximately 1.2 kilometers north of the Castillo de San Marcos and two blocks east of State Route A1A (see Figure 1). These investigations were directed by Kathleen A. Deagan of the Florida State Museum, under Grant #85030610 from the Florida Bureau of Historic Preservation (Department of State: Division of Archives, History, and Records Management), awarded through their Historic Preservation Grant-in-Aid Program. Additional support was provided by a grant from the University of Florida, Division of Sponsored Research. These grants funded a survey designed to evaluate the distribution and significance of archeological sites in that area of St. Augustine between the Castillo de San Marcos and May Street, to the east of State Route A1A (San Marcos Avenue). This is a region of rapid commercial and residential development, and thus the sites located there are in danger of destruction unless they can be identified and properly managed.

The approach utilized here integrated subsurface testing, remote sensing data, and documentary evidence to further our understanding of the features and patterns of human settlement within the survey area. The excavations at the Fountain of Youth Park were but one part of this research program, which also included synthesis of the results from a number of previous auger surveys within the project area (Chaney 1986), and limited excavations at 8-SJ-34, the Mission of Nombre de Dios (Chaney in prep.).

Principal Investigator for the 1985 excavations at 8-SJ-31 was Kathleen A. Deagan of the Florida State Museum. Field supervision was provided by Edward Chaney of the University of Florida. The crew consisted of the students of the



UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET.

FIGURE 1  
Site Location

University of Florida Field School in Archeology. Field school training was conducted at both the Fountain of Youth Park and at the Ximenez-Fatio House (8-SA-34-2), where the field supervisor was Bonnie McEwan of the University of Florida (McEwan 1985). McEwan also helped supervise the early stages of the 1985 excavations at 8-SJ-31. Artifact analysis was directed by Chaney at the Florida State Museum. Analysis of the faunal remains from 8-SJ-31 is being undertaken by Elizabeth Reitz of the University of Georgia, while the botanical data is being studied by Margaret Scarry of the Florida Bureau of Archaeological Research.

Although the 1985 excavations at the Fountain of Youth Park were undertaken specifically as part of an analysis of the archeological resources of North St. Augustine, the results are compatible with previous research at 8-SJ-31, which investigated broader issues such as the nature of prehistoric Timucuan Indian lifeways, the form and degree of early Spanish/Indian contact in northeast Florida, and the effects of such interaction on aboriginal culture (Seaberg 1951; Merritt 1977). The integration of the 1985 data with that from previous investigations in order to address these more general problems will be the subject of a masters thesis by the present author.

The immediate objective of the 1985 fieldwork was to further test an area of the site which previous investigations had suggested was the location of a sixteenth century Timucua village (ibid.). The goals of the excavation included determining spatial patterns within the village, establishing a more precise date for the period of occupation at the village, and analyzing the contents of the shell middens associated with the village in order to better understand the diet and material culture of its inhabitants. The latter goal was expected to have broader applications. Archeological evidence from colonial sites in St. Augustine has strongly suggested that the Spanish in Florida adopted certain



elements of aboriginal material culture and foodways (see Deagan 1983).

However, an estimation of the extent of Spanish adaptation has been hampered by a lack of comparable baseline archeological data on the local aboriginal cultures at the time of contact (Deagan 1984). It is thus unclear which changes in the Spanish material culture at St. Augustine were the result of local native influences, which changes were the product of other cultural influences such as that from non-local Indians or peoples of African heritage, and which changes were internal modifications of Iberian lifeways. An expanded understanding of these potential donor cultures would allow archeologists to determine the degree to which they influenced changes among the Spanish in Florida. This research should also have a more general applicability toward attempts to distinguish specific ethnic components on multi-ethnic sites (ibid.). In addition, it was expected that the excavations at 8-SJ-31 would provide data on post-contact aboriginal lifeways in the St. Augustine area, a subject on which there is a paucity of both archeological and documentary information. Little is known about the degree to which non-European populations in St. Augustine adopted Spanish cultural elements, or on the success of Timucua efforts to maintain cultural homogeneity in the face of various disruptive factors (ibid.).

## PHYSICAL SETTING

The Fountain of Youth Park covers a plot of land roughly 4.5 hectares in size. It is bordered to the east and south by Hospital Creek (see Figure 1). Marshes extend beyond this to the Tolomato River, 0.7 kilometers to the east. A smaller wetland is found on the southern edge of the Park, adjoining a cove of Hospital Creek. The western and southern ends of this cove are bordered by the property of the Mission of Nombre de Dios. The Fountain of Youth Park itself is 1.5 to 2.5 meters higher in elevation than the surrounding marsh. The eastern end of the Park is roughly 2.0 meters above sea level. This elevation decreases as one moves westward, but then gradually increases again to a maximum of 2.5 meters above sea level in the developed area at the western end of the Park.

That portion of the Fountain of Youth Park along Magnolia Avenue is the most heavily developed section. A number of buildings have been erected there, including the "Fountain of Youth" Spring House, a museum/gift shop, a planetarium, two Indian burial buildings, the "Historic Space Globe", and a maintenance shed (see Figure 2). A small roadway goes past these structures. A parking lot and a duck pond have been constructed there also. This area has been thickly planted with ornamental bushes and trees.

A tabby path runs eastward from the Spring House to the edge of Hospital Creek (see Figure 3). This path is lined with oleander, bamboo, and deciduous trees. Approximately two-thirds of the way to the eastern end of the path is a statue of Juan Ponce de Leon. This statue has served as an archeological elevation benchmark during recent excavations. At the eastern end of the path is a concrete obelisk commemorating the landing of Ponce de Leon in Florida in 1513. Extending southward from this memorial, between the creek and a row of palm trees, is another, smaller path. This one terminates at a plaque

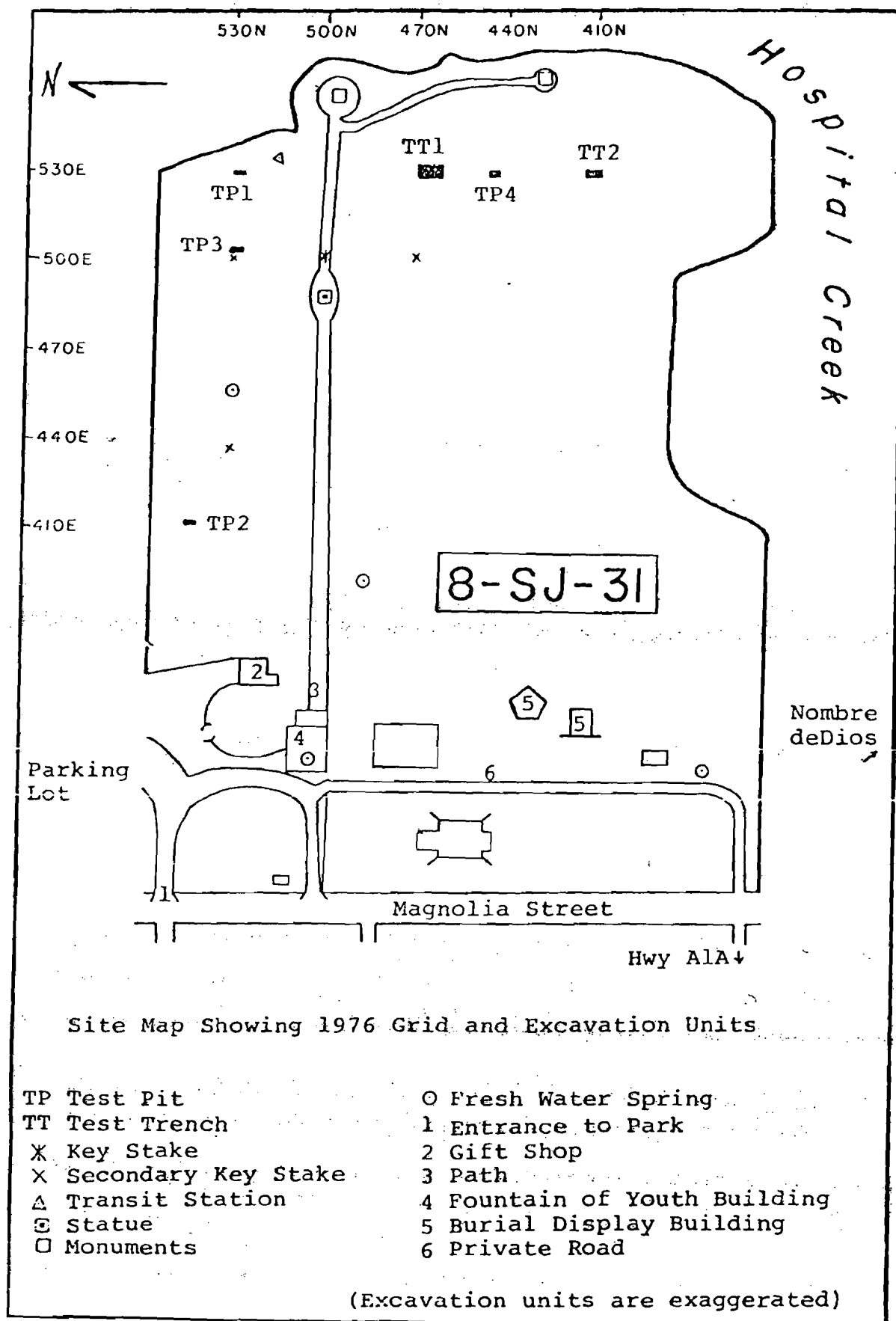


FIGURE 2

1976 Site Map  
 (from Merritt 1977)



proclaiming the Fountain of Youth Park to be the site of Fort San Juan de Pinos, burned by Francis Drake in 1586. Another path, this one rarely used by the public, leads from the maintenance shed in the southwestern portion of the Park to a large open field to the east.

North of the main tabby path are several open, grassy lawns -- some containing fountains -- which are bordered by rows of trees. To the south of the path, and east of the duck pond, is a much larger, overgrown field. This field has been the focus of most of the archeological work done at 8-SJ-31 since the 1950s.

The eastern edge of the Park, along Hospital Creek, has long been subject to erosion. In an effort to stop this process, concrete riprap has been added to the bank in recent years (see Figure 3). Nevertheless, it appears likely that some of the archeological deposits at 8-SJ-31 have washed away. Testing in the 1950s revealed artifacts in the marsh along the Park's eastern border (Seaberg 1951), supporting the idea that part of the site has been lost. However, the extent of this erosion is not known.

The Fountain of Youth Park has for centuries been a particularly suitable spot for human occupation, for a number of reasons. Fresh water springs are found at the Park, providing the water that would be necessary for any substantial prehistoric settlement. Historic period residents could use wells to tap into this artesian water supply. In addition, the land at the Park is suitable for farming, as demonstrated by the extent of agriculture in this area during the eighteenth and nineteenth centuries. The rich marsh and estuarine resources nearby would also provide a stable and easily exploitable subsistence base. The climate and environment of this region have probably changed little since about 2000 B.C. (Goggin 1952; Milanich and Fairbanks 1980), therefore, these three conditions have most likely existed at 8-SJ-31 since that date.

## HISTORY OF 8-SJ-31

The Fountain of Youth Park is a popular attraction, as it is the purported landing place of the explorer Juan Ponce de Leon in 1513. Whatever the validity of this claim, the Fountain of Youth Park is nonetheless an historically significant site. This significance is not derived solely from the European occupation of the area, but from the whole pageant of human activity which occurred at the site, from long before the arrival of Europeans into the New World to the modern era.

### Prehistoric Period

The earliest evidence we have for occupation at 8-SJ-31 is the presence of Orange fiber-tempered pottery (Griffin 1945). This ceramic type was made during the Orange period, dating between 2000 B.C. and 1000 B.C. (ibid.; Milanich and Fairbanks 1980:148). The Orange period culture was among the first in North America to make pottery. Based on the relative rarity of earlier sites in the region, it appears that these people were also the first to make extensive use of Florida's Atlantic coastal resources, beginning to do so sometime after 1500 B.C. (Milanich and Fairbanks 1980:152). The Orange period people depended on hunting, fishing, and plant collecting for subsistence. During the winter months, they moved from inland areas to coastal camps, where they collected shellfish in addition to their other hunting and gathering activities. These winter camps were occupied sporadically over many generations, probably by no more than 25 to 30 people at a time (ibid.).

Some of the Orange pottery found at 8-SJ-31 is decorated by simple incising, often in a parallel or slanting line motif. This is characteristic of

the Orange 3 period, which dates between 1450 B.C. and 1250 B.C. (ibid:156). After about 1200 B.C., increasing amounts of sand tempering are found in Orange fiber-tempered ceramics. This begins what is known as the Transitional period, which culminates around 500 B.C. with the chalky-paste St. Johns Series pottery (Griffin 1945) and the beginning of the St. Johns I period (Milanich and Fairbanks 1980:148). A number of fiber/sand-tempered sherds have been found at 8-SJ-31, indicating that occupation of the site extended into the Transitional period.

Large shell middens are characteristic of Orange period sites (ibid:154). As yet, no trace of an Orange period midden has been found at 8-SJ-31, though it is possible that erosion could have destroyed any evidence of one. It may be that the occupation there was minor even by Orange period standards, as few Orange period features have yet been found. Fiber-tempered pottery is not overly abundant at the site either, constituting about 5% of the approximately 7400 aboriginal sherds recovered in 1976 and 1985. Most of these fiber-tempered sherds were found beneath two St. Johns period shell middens at the eastern end of the Park, in what appears to be otherwise sterile subsoil (although this appearance may be due to the leaching of soil-coloring organic material from the Orange period horizon). Many others were recovered as inclusions in later contexts.

Much work remains to be done before we will fully understand the Orange period occupation at the Fountain of Youth Park. However, examining the artifactual evidence (incised pottery; fiber/sand-tempered sherds), along with comparison of this site to other Orange period coastal sites, suggests that the occupation at 8-SJ-31 may have consisted of a winter camp which began to be used sometime after 1450 B.C. (if not earlier), and which remained in use beyond 1200 B.C., into the Transitional period.

Merritt (1977:130) concludes that the next occupation of 8-SJ-31 occurred "some 1700 years after the Orange period", although he does acknowledge the possibility of a St. Johns I period (500 B.C.- 800 A.D.) component at the bottom of the two eastern shell middens (ibid:93). Seaberg (1951) also suggests that an early St. Johns I period occupation occurred here, although as will be discussed in the Archeological Background section below, there are certain problems with her data that call into question the reliability of this conclusion. As yet, the area of 8-SJ-31 exposed through proper archeological techniques is too small, and the evidence too scanty, to allow us to conclude whether or not the site was occupied during the St. Johns I period.

The most notable prehistoric occupation of 8-SJ-31 appears to have occurred during the St. Johns II period, probably beginning in the St. Johns IIb or IIc period (1300 A.D.- 1565 A.D.). The two eastern shell middens and a village located between them most likely came into existence at this time, and remained in use at least until the initiation of European contact. The artifactual evidence for this consists of very early First Spanish period items in proveniences which lie above prehistoric contexts containing such typical St. Johns II period materials as St. Johns Check Stamped pottery and various unnamed grit, sand, and grog-tempered ceramics (Goggin 1952). The existence of the village is indicated by numerous circular postmold patterns (associated with hearths and trash pits), which appear to be aboriginal structures since they lack the daub and architectural hardware usually found with Spanish buildings (Manucy 1985; South 1980). However, European artifacts recovered from within some of these structures suggest that they were still occupied after Spanish contact. The quantity and locations of the aboriginal structures uncovered so far indicate that the St. Johns II period settlement at 8-SJ-31 was fairly substantial both in size and population.



The culture of the final stages of the St. Johns II period has been identified with that of the Timucua Indians (Milanich and Fairbanks 1980:29). Because of their proximity to -- and interaction with -- French and Spanish settlements, a fair amount of ethnographic data is available on the Timucua of northeast Florida at the time of European contact (for a detailed discussion of this information, see Merritt 1977; Deagan 1978). Although the political and ideological motivations of the European chroniclers of the Timucua kept their observations from being particularly unbiased or reliable, the absence of extensive archeological evidence makes their accounts our best model for Timucua lifeways during the late prehistoric period. The following is a brief sketch of those aspects of Timucua life (as derived from documentary evidence) which should be most noticable in the archeological record.

The St. Johns II period was characterized by the appearance of St. Johns Check Stamped pottery, a chalky paste ware (Goggin 1952:53). The earlier St. Johns Plain ceramics also continued to be produced. Grog-tempered wares were manufactured by some Timucua groups during the latter part of the St. Johns II period (Goggin 1952:112; Merritt 1977:117). Shell and bone tools are also common on St. Johns II period sites, while stone artifacts are relatively rare (Milanich and Fairbanks 1980:158). By the St. Johns IIc period, European glass, metal, and ceramic goods were being adopted into Timucua material culture.

The coastal Timucua of the St. Johns II period were apparently a semi-sedentary people. For six to nine months out of the year, they lived in villages, sustaining themselves through fishing, hunting, collecting shellfish, gathering wild plants, and possibly cultivating crops such as maize, beans, and squash (Reitz and Scarry 1985:45-46). The large shell middens of the St. Johns II period demonstrate the importance of that particular dietary source. It has been suggested that during the winter months, the coastal Timucua moved inland

to hunt and gather (Swanton 1922:359f), a pattern opposite that of the earlier Orange period culture.

Timucua villages were supposedly surrounded by a palisade made of wooden posts (Swanton 1946:693). Guard houses sometimes protected the entrance to the village. The residence of a "cacique", or chief, was often located in the center of the larger villages. The cacique's house, also known as the "Great Bujio" by the Spaniards (Gannon 1965:65), was usually described as a very large, rectangular, post-framed structure which doubled as a public meeting hall (Swanton 1922:352f). Surrounding this may have been a number of smaller round or rectangular post-framed buildings, probably with thatch or wattle-and-daub walls. Most of these were houses, though some may have served as storerooms or had some other function.

The St. Johns II period cultures built ceremonial burial mounds. European accounts indicate that a cacique was buried with grave furniture in a small mound, while his possessions were burnt (Swanton 1946:693). Archeological excavations at St. Johns IIb and IIc period mounds have recovered numerous grave goods, such as copper plates and beads, gold and silver ornaments, greenstone celts, and clay effigy figures (Milanich and Fairbanks 1980:164-166). These investigations also indicate that more than one individual (perhaps entire family groups) was usually buried in a mound, with later burials being added to the upper levels of the mound (ibid.). No burial mounds have been noted at 8-SJ-31. However, there is an extensive Indian cemetery in the southwest corner of the site. The orientation of these burials and the presence of European artifacts in the grave fill indicates that they are post-contact interments, believed to be associated with the mission of Nombre de Dios (Deagan 1983:48), and probably dating to the sixteenth and seventeenth centuries. Cemetery burial had become common among many Timucua groups by the end of the

sixteenth century (Deagan 1978:22). However, J. Ray Dickson (1934) reported that a group of burials he uncovered to the south of these Christian Indian interments exhibited a different type of mortuary practice (bundle burial), and he suggested that these were prehistoric. Vernon Lamme (1935) also reported finding burials in the area which he believed to be prehistoric. Unfortunately, Dickson and Lamme did not provide enough information on the artifacts associated with these latter graves for us to assess the validity of their claims, but if they are correct it could indicate that non-mound burials were also occurring during the St. Johns II period.

### Historic Period

At the time of European settlement in northeast Florida, the Fountain of Youth Park was the location of a large Timucua village. When Pedro Menendez de Aviles arrived in Florida on September 6, 1565 with a force of 800 soldiers, sailors, and colonists, he took refuge in an Indian town whose cacique was named Seloy (Lyon 1976:119). Several lines of evidence suggest that the village site at 8-SJ-31 could possibly be identified with Seloy's town. First, the Spanish landing site was christened with the name of "Nombre de Dios" on September 8, 1565 (Gannon 1965:27), and documents as early as the map made supposedly by de Mestas in 1593 place Nombre de Dios within the vicinity of the Fountain of Youth Park (Figure 4). This tradition concerning the landing location was maintained throughout the First Spanish Period, as the site is shown just north of Hospital Creek on the Puente Map of 1764 (ibid.). The discovery of a Christian Indian cemetery in the southwest corner of the Fountain of Youth Park in the 1930s, which was probably associated with the mission of Nombre de Dios established near the landing site (Deagan 1983:48), further supports the connection between 8-SJ-31 and Seloy's village. We also know that Seloy's village could not be



seen from the sea (Lowery 1959), yet at the same time was situated so that ships could be observed entering the harbor (Chatelaine 1941:41). The village at 8-SJ-31 was located in a low area hidden by marsh islands, yet was near high ground to the south and west from which the entrance to what was then the St. Augustine harbor could be observed. This too is consistent with the description of Seloy's village. In addition, the artifacts recovered in sixteenth century contexts from 8-SJ-31 in 1985 were 50% European and 50% aboriginal in origin, which is a higher ratio of European-to-aboriginal items than was found on sixteenth century sites in the town of St. Augustine (Deagan 1985). This indicates that a Spanish occupation may have occurred at 8-SJ-31, and the absence of any artifacts which must date to the latter part of the sixteenth century suggests that the occupation happened during the earliest stages of Spanish settlement. However, auger surveys in the area have located several possible protohistoric Indian sites just to the north of the Fountain of Youth Park (Chaney 1986), and thus we cannot conclude at this point that the Timucua village at 8-SJ-31 is definitely Seloy's town.

When the Spanish arrived at Seloy's village, the first thing they did was to fortify their settlement against possible attack by the French at nearby Fort Caroline. The Spanish supposedly accomplished this by digging a ditch around the pallo of the cacique, inside of which they erected a defense work of earth and faggots (Chatelaine 1941:41). However, the original accounts are unclear as to the actual extent of this fortification, and it is also uncertain from these sources as to whether the Spanish settlement was within the Indian village or simply near it. According to contemporary French sources, the Spanish also occupied the smaller Indian houses of Seloy's town (Hakluyt 1904:90), but it is not known if the resident Timucua stayed at their village or moved elsewhere (Merritt 1977:25).

Spanish relations with the Timucua were good at first, but soon turned sour. The Indians began to ambush the Spanish whenever they left the security of their settlement in order to search for food (Chatelaine 1941:42). Although fresh water springs were located nearby, the threat of attack probably forced the Spanish into digging wells within the fortified compound. The earliest such well known to be used in St. Augustine was dug in July 1566 (P. Hoffman, personal communication to K. Deagan), but others may have been constructed before this.

The situation for the Spanish reached a low point on April 19, 1566, when much of their fort was burned in an Indian attack (Lyon 1979:1). As a result of this, Menendez decided to move the settlement to a safer location. Traditionally, this has been assumed to be Anastasia Island (see, for example, Chatelaine 1941), but recently scholars have questioned this (Hoffman 1977, personal communication to K. Deagan; Lyon 1979). It now appears that the town remained in the general vicinity of its original site until 1571 (Lyon 1987, personal communication), after which time it was moved to its present location, with initial re-settlement occurring in an area just south of the Plaza (Deagan 1981; 1983). A series of short-lived forts were built to replace the original fort. Their exact locations are unknown, but were probably not far from the first fort (Lyon 1979:4). Even after St. Augustine was moved in 1571, the forts remained in this area, to the north of town (see Figures 4 and 5).

Little is known of the occupation which occurred north of St. Augustine after the Spanish moved from the vicinity of Seloy's village, although there is a suggestion that a blockhouse was established there by the summer of 1567 (Barrientos 1567). The mission of Nombre de Dios was also apparently established near Seloy's town. It was founded in 1565 (Gannon 1965:27), but did not become a successful enterprise until after the Franciscans took over its

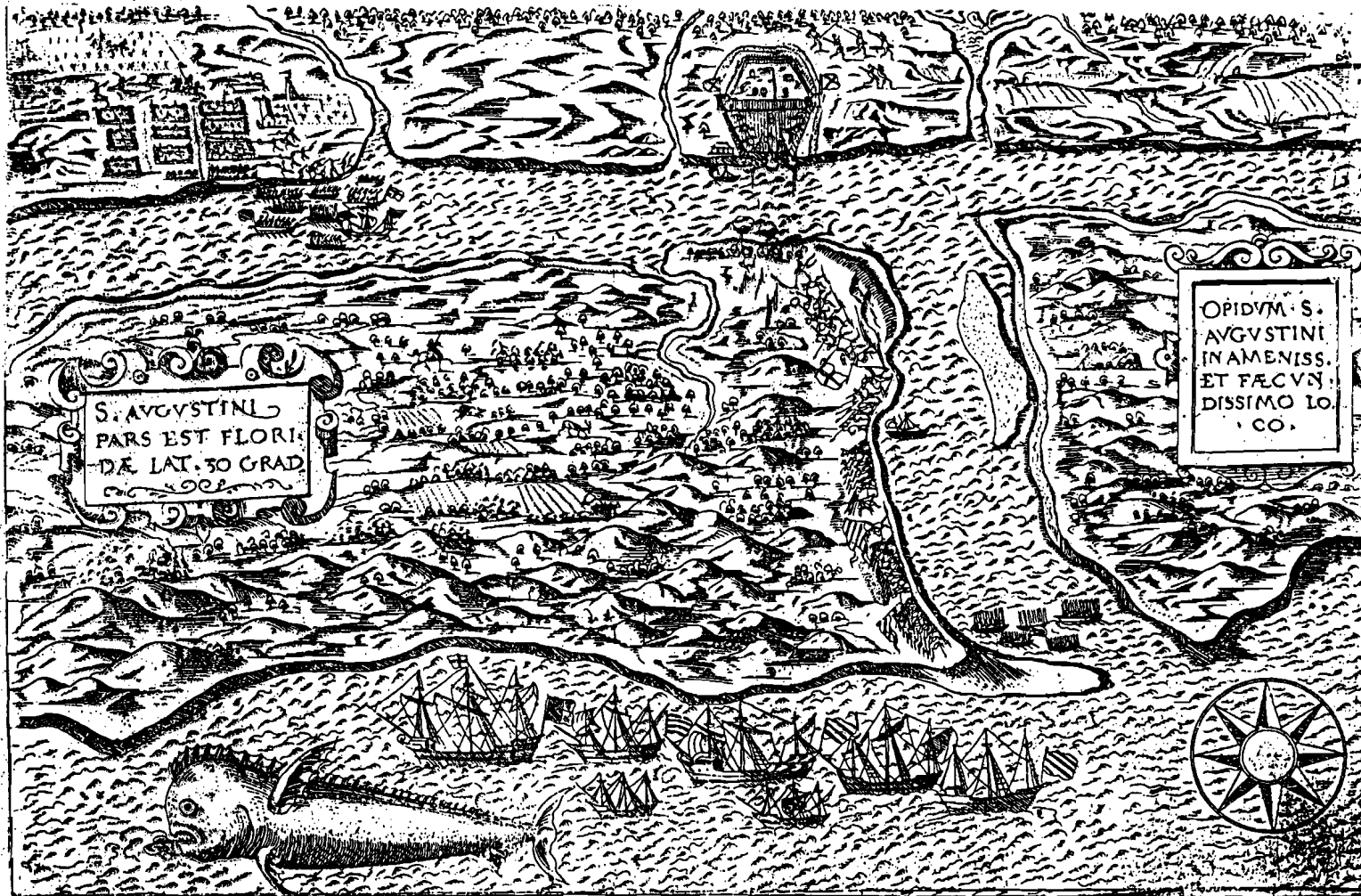


FIGURE 5

Boazio Map of St. Augustine, 1586.

Note location of town and fort.

operation in the 1570s (Deagan 1983:48). The mission remained in existence throughout most of the First Spanish period, although it was moved to a location nearer St. Augustine during the eighteenth century (Tepaske 1964). If the cemetery at the southwest corner of the Fountain of Youth Park is associated with Nombre de Dios, as has been suggested (Deagan 1983), then mission activity could well have occurred at the eastern end of 8-SJ-31 between the sixteenth and early eighteenth centuries. As yet, few if any features dating to that time period have been noted at this part of the site. However, the upper stratum (plowzone) of the shell midden in the southeast corner of the Park contained numerous seventeenth and eighteenth century artifacts, suggesting that trash deposition occurred there, even if direct occupation did not. Based on the information currently available, Nombre de Dios appears to be the most plausible source of these materials. On the other hand, historic artifacts were largely absent from the upper stratum of the northeast shell midden (Merritt 1977), perhaps because of its distance from the mission.

Except for those sections possibly associated with the mission of Nombre de Dios, most of the Fountain of Youth Park was probably uninhabited or used for agriculture during the First Spanish period. Cultivation in this area began at least as early as the eighteenth century. For example, the Arredondo map of 1737 shows agricultural fields there (Figure 6), as does the Castello map of 1764, which depicts St. Augustine as it was at the end of the First Spanish period (Figure 7). Cultivation continued during the British period, when 8-SJ-31 was part of a 2000 acre indigo plantation known as "Grant's Villa", which belonged to James Grant, first governor of British East Florida (Schafer 1982), (see Figure 8). Numerous maps of the period show this area as agricultural. One of these, the Roworth map (c. 1765-1775), describes part of the Fountain of Youth Park area as "Spanish old fields overgrown with forests"



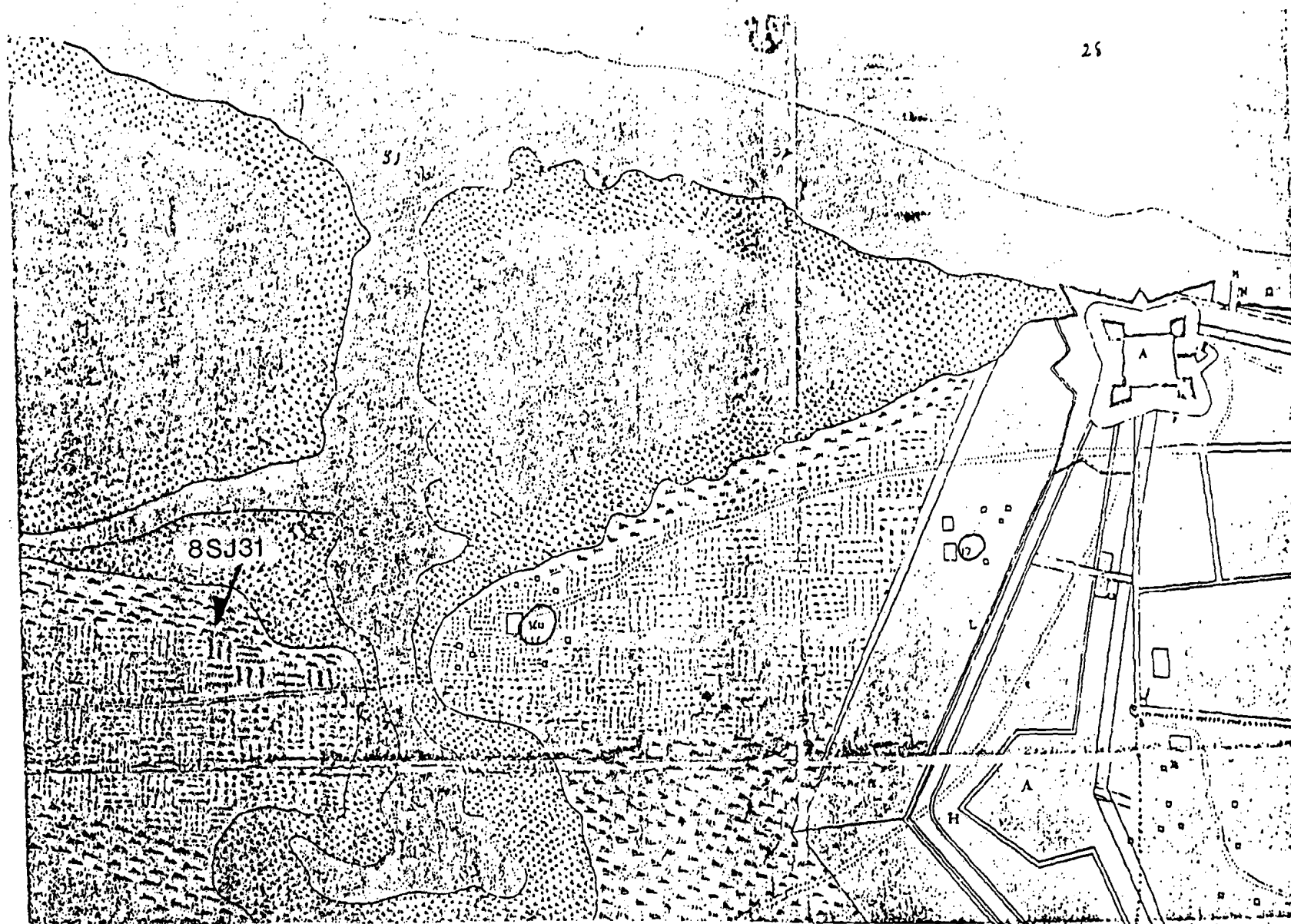


FIGURE 6

Arredondo Map of St. Augustine, 1737.

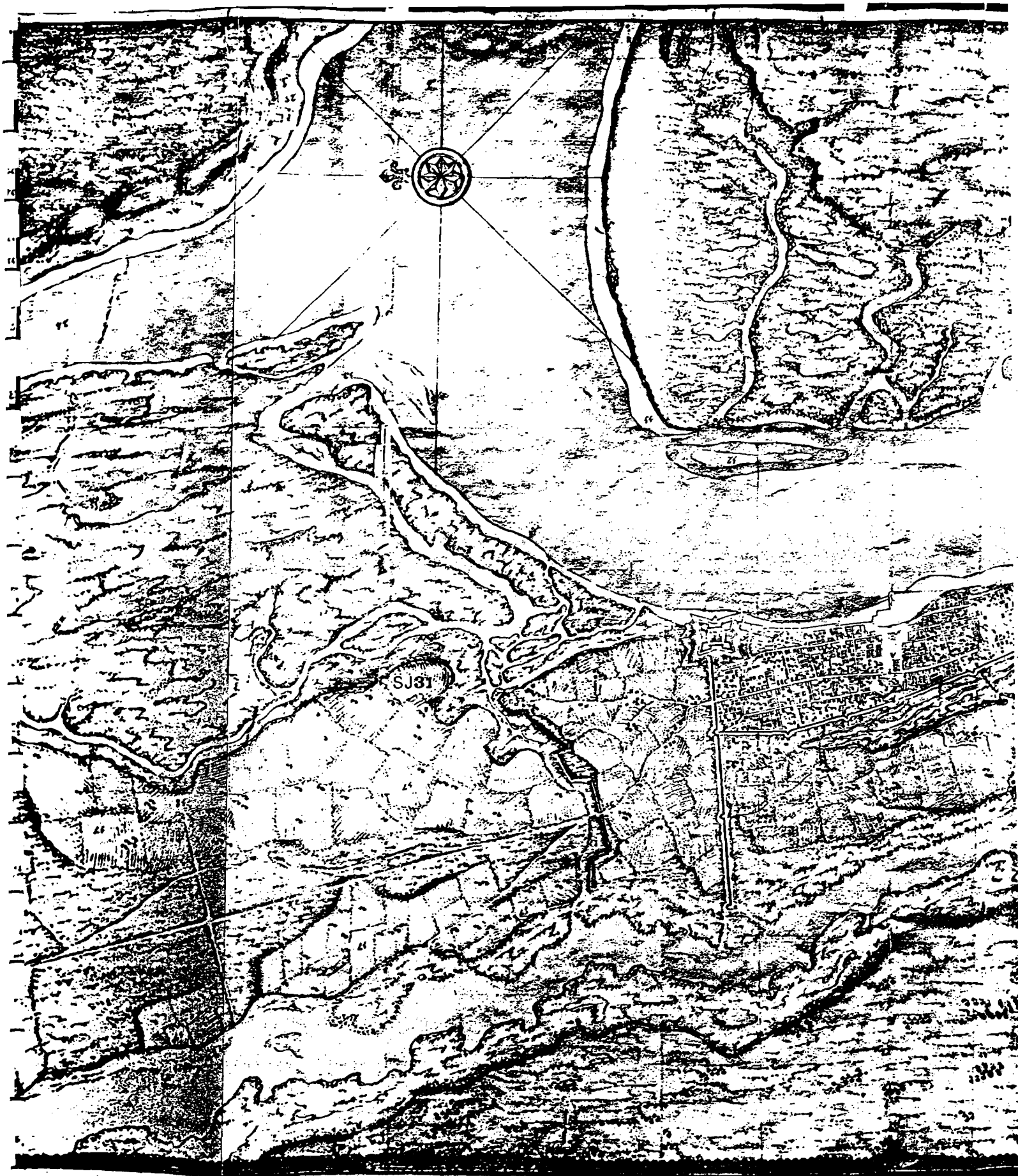


FIGURE 7

Castello Map of St. Augustine, 1764.  
Note site location.



FIGURE 8

De Brahms Map of St. Augustine, 1769.  
Note location of Gov. Grant's land.

(Figure 9). After control of Florida was restored to the Spanish in 1783, the area around 8-SJ-31 was farmed by the Villalonga family from Minorca (Corse 1933). During this Second Spanish period, the Fountain of Youth Park was part of the district known as Mil y Quinienta, where the Spanish would grant land on the condition that it be cleared and planted with low crops, for defensive reasons (Adams et al 1980), (see Figure 10). In 1790, the Park was divided among three small land grants made to Augustus Santana, Juan Ganzaes Montes de Oca, and Tomas Andreu (Lawson 1956). This area continued to be farmed after Florida passed into American hands in 1819, and remained agricultural through the Civil War period (Adams et al 1980).

In 1868, an English florist, H.H. Williams, bought the property now known as the Fountain of Youth Park (Corse 1933), and used it for the commercial cultivation of fruits and flowers (Reynolds 1937). He also constructed a large house with a stone foundation (Lawson 1956). The area was already something of a tourist attraction, as there were coquina ruins on the property believed to be those of the first church at Nombre de Dios (Corse 1933). And even at that early date, the springs on the property were being associated with the legendary Fountain of Youth (ibid.). At first, Williams discouraged this attention, but by 1874 he had opened up the area to the public (ibid.). The St. Augustine Directory of 1885 describes the property as "the extensive grounds and nurseries known as Paradise Grove and Rose Gardens, on the Shell Road ... [Williams] is always ready to welcome visitors to his delightful grounds."

Williams owned this property until 1890. In 1900, the property was sold to Dr. Louella Day MacConnell (Lawson 1956). MacConnell began to develop the Park as the tourist attraction it is today, emphasizing it as the supposed site of Ponce de Leon's landing place (Reynolds 1937). After her death in the 1920s, the property was acquired by the family of the current owner. The Fountain of

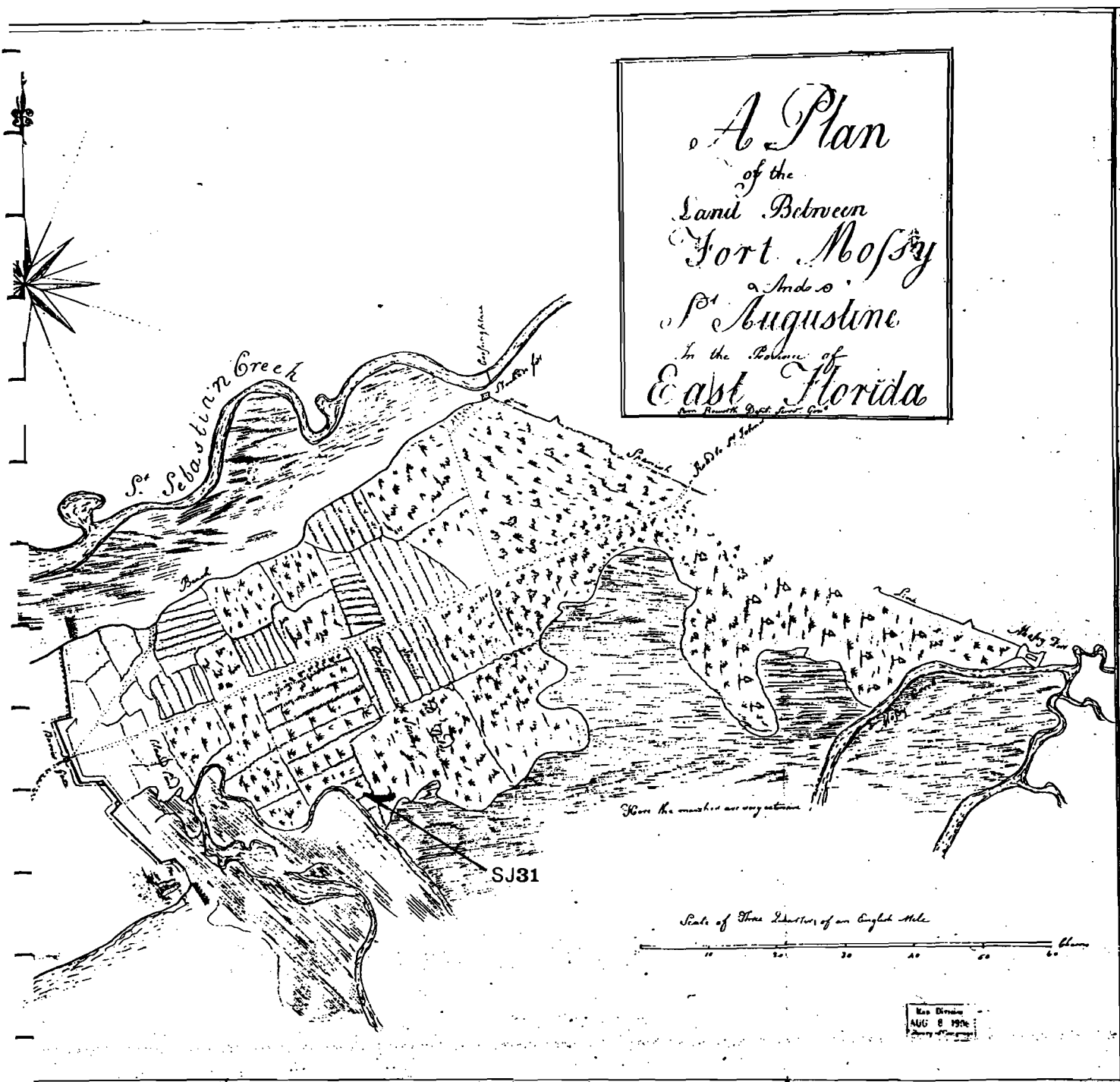


FIGURE 9

Roworth Map of St. Augustine, 1765-1775?

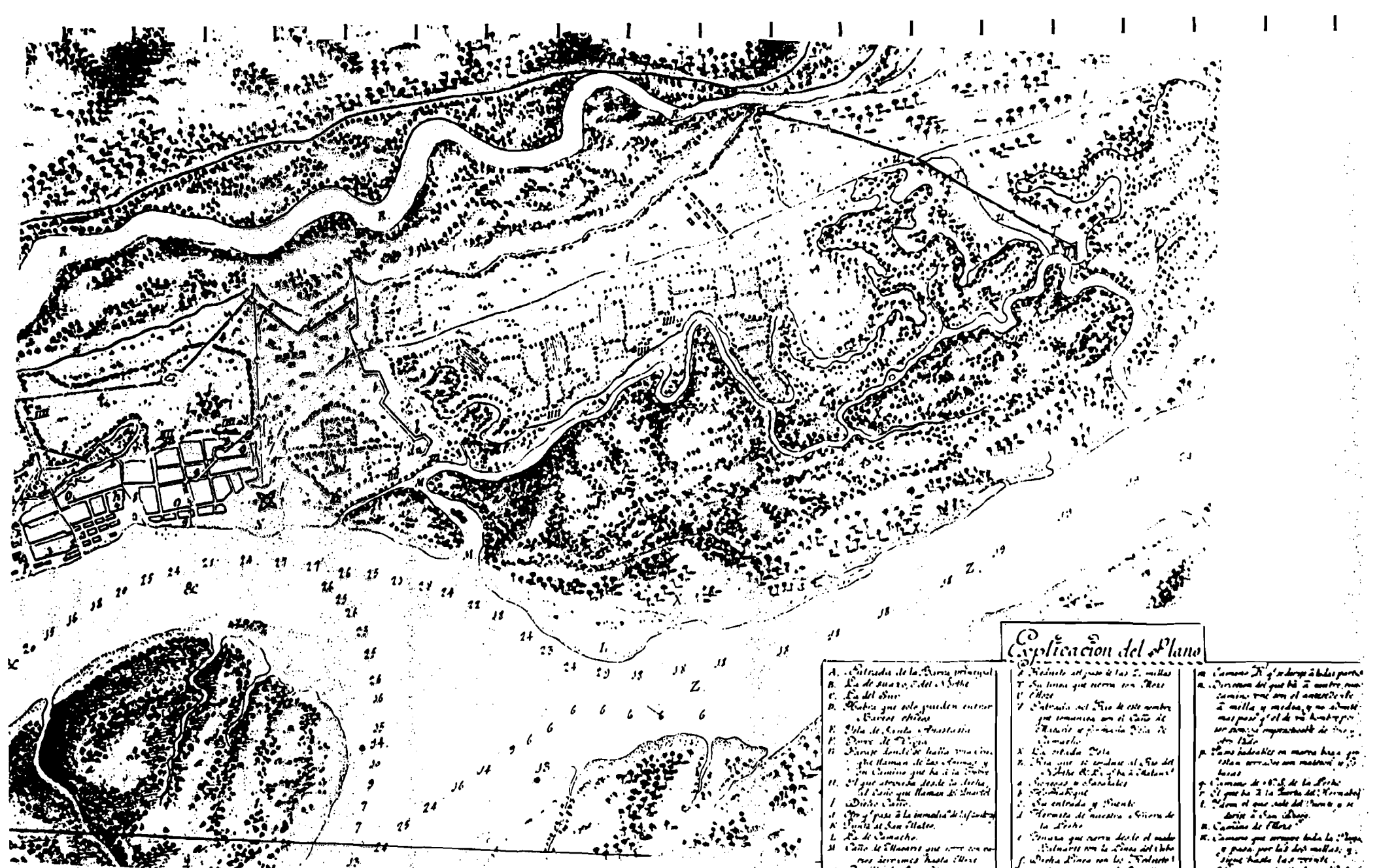


FIGURE 10

Rocque Map of St. Augustine, 1791.

24 La configuración del Reducto para la defensa de la Barrera, está en las mismas terminas que las de San Juan, y Santa Clara.  
25 Este Plano se manifiesta en marea llena bajando esta de S. E. y vice versa; la configuración de las Barreras, y sus Puertos, es la misma que se usó en las Operaciones para el efecto en 24. de Agosto de 1781 variando estas según los tiempos, y movimiento de las Aguas por sus corrientes. Los números del Reducto son 100.

- A. Entrada de la Barrera principal  
B. La de Suar, del Norte  
C. La del Sur  
D. Puerta que solo pueden entrar Barcos chicos  
E. Isla de Santa Anastasia  
F. Puerto de Vega  
G. Puerto donde se halla un acueducto que llaman de las Animas y un Camino que ha a la Puerta del Sur que llaman de San Pedro  
H. Puerta de San Mateo  
I. Puerta de San Mateo  
J. Puerta de San Mateo  
K. Puerta de San Mateo  
L. Puerta de San Mateo  
M. Puerta de San Mateo que corre con un camino de San Mateo  
N. Puerta de San Mateo  
O. Puerta de San Mateo  
P. Puerta de San Mateo  
Q. Puerta de San Mateo  
R. Puerta de San Mateo

1. Campamento de la primera División con un Regimiento de Infantería, un Regimiento de Caballería, y un Regimiento de Artillería.  
2. Ello de la segunda en la misma  
3. Ello de la tercera  
4. Ello de la cuarta

### Explicación del Plano

1. Reducto del punto de las 2. millas  
2. Su línea que corre con el Norte  
3. Ello de la  
4. Entrada del Río de este nombre que terminan en el Canto de la Barrera y se llama de San Mateo  
5. La ciudad de San Mateo  
6. Río que se conduce al Canto de la Barrera y se llama de San Mateo  
7. Puerto de San Mateo  
8. La entrada y Puerto  
9. Reducto de nuestra Barrera de la Barrera  
10. Puerta que corre desde el muelle de San Mateo con la línea del muelle y se llama de San Mateo  
11. Reducto que corre con el Canto de la Barrera  
12. Reducto que corre con la ciudad de San Mateo  
13. Reducto que corre con la ciudad de San Mateo  
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27. Reducto que corre con la ciudad de San Mateo  
28. Reducto que corre con la ciudad de San Mateo  
29. Reducto que corre con la ciudad de San Mateo  
30. Reducto que corre con la ciudad de San Mateo

### Explicación de la Defensa

1. Reducto de la Barrera de San Mateo  
2. Reducto de la Barrera de San Mateo  
3. Reducto de la Barrera de San Mateo  
4. Reducto de la Barrera de San Mateo  
5. Reducto de la Barrera de San Mateo  
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27. Reducto de la Barrera de San Mateo  
28. Reducto de la Barrera de San Mateo  
29. Reducto de la Barrera de San Mateo  
30. Reducto de la Barrera de San Mateo

1. Camino de la Barrera de San Mateo  
2. Camino de la Barrera de San Mateo  
3. Camino de la Barrera de San Mateo  
4. Camino de la Barrera de San Mateo  
5. Camino de la Barrera de San Mateo  
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25. Camino de la Barrera de San Mateo  
26. Camino de la Barrera de San Mateo  
27. Camino de la Barrera de San Mateo  
28. Camino de la Barrera de San Mateo  
29. Camino de la Barrera de San Mateo  
30. Camino de la Barrera de San Mateo

Youth Park assumed its present appearance during this period, as a number of changes were made to the property. The Williams house was relocated from its original position, near where the Spring House is today (manuscript in the Lawson Collection, P.K. Yonge Library). After the discovery of the Indian cemetery, replicas of a stockaded cacique's bulio and a commoner's bulio were built over the skeletons to protect and display them (ibid.). Originally made of wood and thatch, these structures have since been redone with more permanent construction materials, and the stockade has been removed. A replica of the original church at Nombre de Dios was also built at the Fountain of Youth Park, at first out of wood, and later out of stone (Reynolds 1937), but this has since been dismantled. Other structures have been added to the property in recent years to increase its allure as a tourist attraction, but fortunately, it appears that little alteration to the landscape has been done in the area of the Indian village at the eastern end of the Park.

## ARCHEOLOGICAL RESEARCH AT 8-SJ-31

The history of archeology at the Fountain of Youth Park has been described in detail elsewhere (Merritt 1977), so the following discussion will be brief.

During the nineteenth century, the historical ruins at the Fountain of Youth Park were well-known attractions (Corse 1933). Farming in the area at this time also occasionally plowed up human bones and artifacts (manuscript in the Edward Lawson Collection, P.K. Yonge Library). But it was not until 1934 that archeological interest in the site developed. In that year, tree planting activity at the Park revealed human skeletons. The owner, Walter Fraser, contacted Matthew Stirling of the Smithsonian Institution. Stirling visited the site, confirmed its significance, and recommended that J. Ray Dickson be hired to excavate the burials. This was done, and Dickson uncovered well over 100 burials in 1934. The records on this work are scanty, but apparently more than 90 burials exhibiting Christian mortuary practices (extended, supine, feet toward the east, hands folded across the chest) were found in one area, while another cluster of 25 skeletons exhibiting less of a Christian influence (e.g., numerous bundle burials) were found 40 yards to the south of the first group (Dickson 1934). In the larger group, individuals of all ages were represented, and often the burials intruded into one another, thus suggesting that this area served as a community cemetery for a long period of time (ibid.). Beads (gooseberry, Cornaline d'Aleppo, chevron, etc.) were the most common type of grave good, and were usually found in association with child burials (see Seaberg 1951). St. Johns and San Marcos ceramics were also found with the burials. European artifacts (other than beads) were rare, and consisted mostly of sherds of olive jar, unidentified majolica, and glass, along with occasional nails and copper "tinklers" (ibid.). These artifact descriptions are not



explicit enough for a reliable date to be assigned to the Christian Indian cemetery, but they suggest a period of use anytime between the late sixteenth century and the mid-eighteenth century. Dickson found several features in the cemetery, including a large round structure formed by posts 9 inches in diameter, one of which was still preserved below the water table. Dickson suggested that this was a cacique's house, but its exact function remains unknown. The burials exposed by Dickson were left open for public viewing. Although they were treated with a preservative and covered by replicas of aboriginal buildings, the skeletons have almost completely deteriorated in the intervening years.

In 1935, Vernon Lamme, Florida's state archeologist, conducted excavations into the historic Timucua "kitchen midden" near where Dickson had worked (Lamme 1935). Lamme also found structural evidence (postmolds) of the village associated with this midden. Beneath the midden, he found a number of burials. He concluded that these burials must have been interred "several centuries" before the arrival of Ponce de Leon, as the Timucua would never knowingly build a village over a cemetery. However, there is not nearly enough information available on the Lamme dig for us to make a judgement on the accuracy of this conclusion.

During the 1950s, extensive excavations were made at 8-SJ-31 by University of Florida students under the direction of John Goggin. This work uncovered the "remains of three pre-historic Indian occupations dating to around 1000 B.C. ... [and] brought to light a heavy concentration of early (pre-1650) Spanish material" (manuscript in the Edward Lawson Collection, P.K. Yonge Library). Unfortunately, the records on these investigations are for the most part incomplete or non-existent. The best known is that of Lillian Seaberg (1951). Seaberg placed three 5-foot square excavation units in the western end of the

Park (see Figure 11). This is the area that had been most disturbed in developing the tourist attractions, and no structural evidence of an occupation at this part of the site remained. However, seven test units placed in the eastern end of the Park did reveal numerous structural features, as well as two shell middens. Seaberg concluded that there was an Orange period occupation at 8-SJ-31, followed by a St. Johns Ia period occupation. This latter occupation was suggested by the presence of Deptford Series sherds. However, none of the more recent investigators at 8-SJ-31 has reported finding Deptford Series ceramics, so perhaps Seaberg's identification of this type was incorrect. Seaberg concluded that the largest prehistoric occupation at 8-SJ-31 took place during the St. Johns II period. This was based on the number of structures she found dating to that time, as well as on the fact that most of the burials uncovered in the 1930s appeared to be associated with the St. Johns IIc and early historic periods. She also recognized that there was probably a mission established at or near the Fountain of Youth Park, as well as an early Spanish occupation of some sort.

In the Summer of 1951, two other Goggin students -- Marquerite Porter and Richard Cooper -- conducted excavations at 8-SJ-31. No report on this work has been found, therefore little is known of the results of their research. Based on inferences from Seaberg (1951), it appears that their excavations took place somewhere near the burials, that they opened up a large area, and that they uncovered a multitude of postmolds and possible building sill trenches. In August 1953, Paul Hahn of the University of Florida excavated 10 burials at 8-SJ-31 in preparation for a new burial exhibit which was being planned (Hahn 1953). These burials, unlike many of those found in the 1930s, faced north, not east. Grave goods were rare with these burials, but a spike and a nail were found, leading Hahn to conclude that these were early historic interments. Hahn

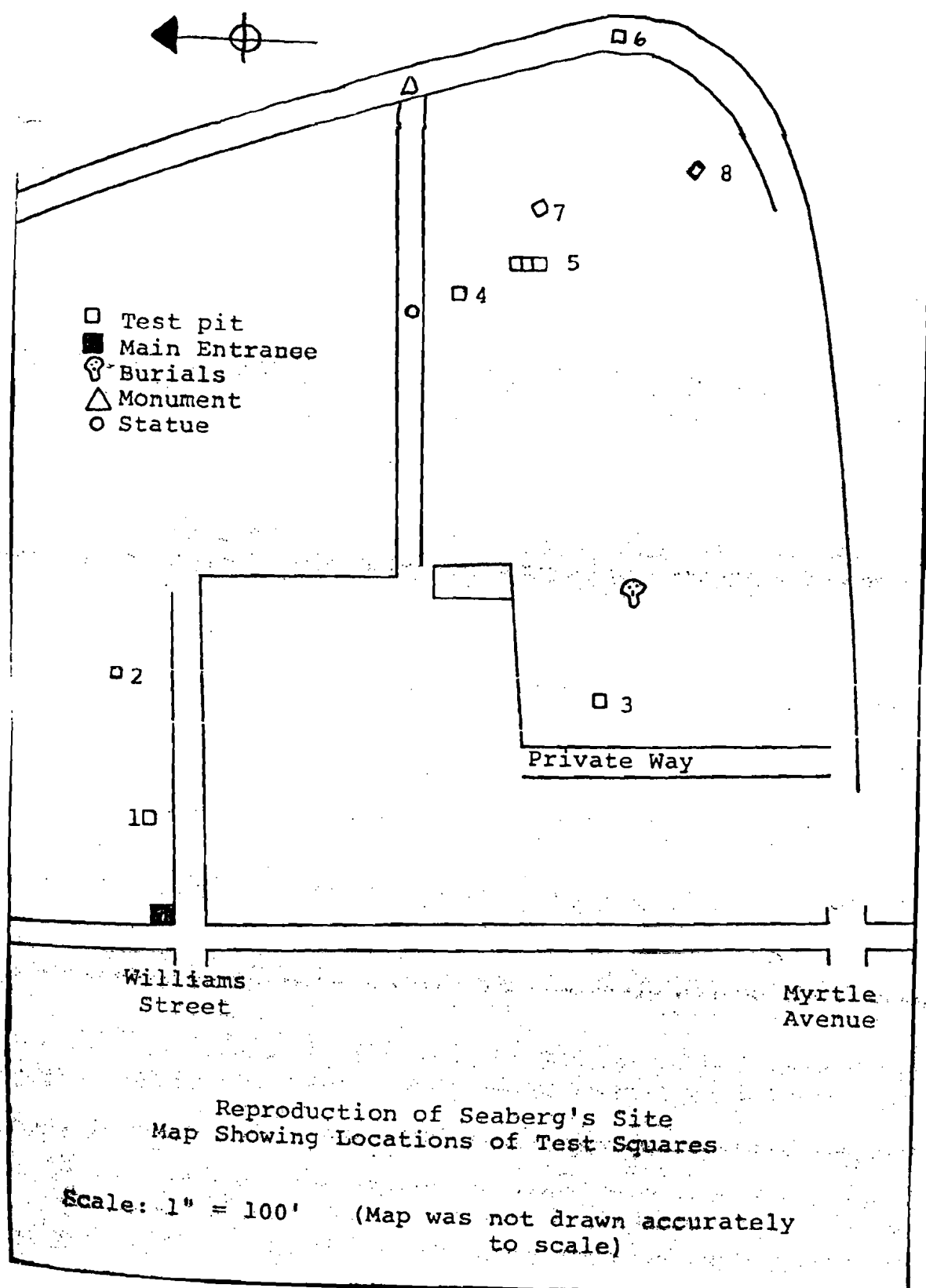


FIGURE 11

1951 Site Map

(from Merritt 1977)

apparently also dug elsewhere at 8-SJ-31 during the 1950s, as a field map is on file at the Florida State Museum showing a very large area which was excavated by him. Unfortunately, it is not possible to tell from this map exactly where on the Fountain of Youth Park property these excavations took place. According to John Fraser (1986, personal communication), Hahn did dig at the eastern end of the Park (possibly uncovering traces of a palisade), but it is not clear whether these are the excavations indicated on the map.

In 1976, archeological investigations were conducted at 8-SJ-31 by J. Donald Merritt (1977) and Nicholas Luccketti (n.d.), under the direction of Kathleen Deagan. Luccketti's work involved an auger survey of the Fountain of Youth Park and Nombre de Dios/Shrine of la Leche properties. The testing at the Fountain of Youth Park revealed three shell middens: at the northeast, southeast, and southwest corners of the Park (see Figure 12). The village area between the two eastern middens was not noticeable through the auger testing. Luccketti also excavated two 1.5-meter square test units. One of these was heavily disturbed by the construction of the main tabby path. The other, in the southeast midden, indicated that the midden deposition began in the St. Johns II period and continued on into the eighteenth century.

Merritt's excavations were much more extensive (see Figure 2). He opened up six test units of varying size. The units in the shell midden north of the tabby path revealed a minor Orange period and possible St. Johns I period occupation, overlain by a St. Johns II period deposit. The upper stratum in these units contained prehistoric artifacts mixed with a few late eighteenth and nineteenth century artifacts, and was probably a plowzone. The test units in the southeast midden revealed a similar stratigraphic profile. However, a great many more European artifacts (including majolica and olive jar) and San Marcos sherds were found in the top stratum of the south midden than were found in the

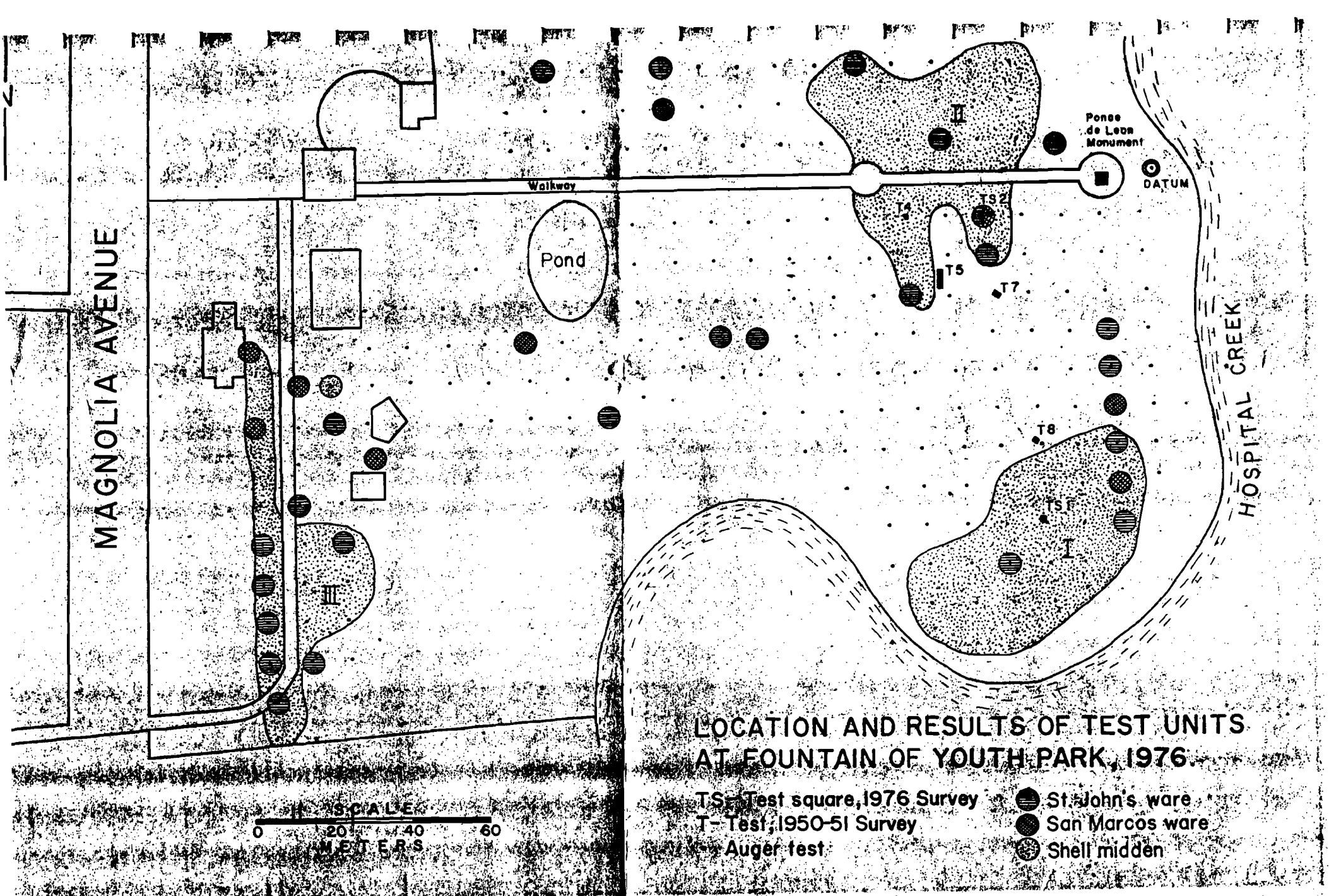


FIGURE 12

1976 Auger Survey Map  
 Note shell midden locations.  
 (from Lucchetti n.d.)

north midden. This suggests that the south midden was more heavily used for trash disposal during the historic era. Excavations in the village area between the two eastern middens revealed a St. Johns IIc period and early historic period occupation. It was apparent that this area was part of a village on the basis of the number of house floors, hearths, and postmolds found there. By comparing his results to those of Seaberg, Merritt concluded that the village may have moved slightly eastward through time.

## FIELD METHODOLOGY

The 1985 excavations at 8-SJ-31 were designed to build upon previous investigations at the site. In order to facilitate this, the modified Chicago grid system used by Merritt for horizontal control in 1976 was re-established. Merritt's key stake (500N 500E), an iron bar set in the tabby path at a point 11 meters east of the eastern edge of the flagstone around the base of the Ponce de Leon statue, was found still in place. However, his other datum stakes were no longer extant. Fortunately, depressions in the ground were still evident where Merritt's excavation units had been located, so by lining up the key stake with a point 1.5 meters west of the west side of unit 527N 501.5E, it was possible to closely approximate the 1976 grid. In order to prevent the loss of grid in the future, the 1985 crew placed permanent iron datum stakes at 500N 530E (in the tabby path), 550N 500E, 450N 500E, and 450N 550E. Wooden datum stakes were placed at various locations throughout the site, but these cannot be reliably used to reconstruct the grid in the future, as they are subject to earth shifting and accidental displacement.

The datum plane used by Merritt for vertical control was established at 1.02 meters above the flagstone at the base of the Ponce de Leon statue. The 1985 datum plane was established at an elevation of 0.43 meters below that of 1976. The reference point for this new datum plane was placed at 1.51 meters above the ground surface on the southwest corner of the Ponce de Leon obelisk monument. Additional reference points (nails with flagging attached) were placed at several trees around the site: one on the isolated palm west of the transit station, 1.31 meters above the ground surface; one on the palm southwest of the obelisk, 1.38 meters above the surface; and one on the palm northwest of the obelisk, at 1.41 meters above the surface. The 1985 datum plane was tied

into sea level elevation by referencing it to manhole covers in Magnolia Avenue, the elevations of which were provided by the St. Augustine Water Department. The manhole cover midway between Ballard Avenue and Williams Avenue on the west side of Magnolia Avenue was 8.06 feet (2.46 meters) above mean sea level, and 0.95 meters below datum. Therefore, the 1985 datum plane was 3.41 meters above mean sea level. All provenience elevations at the site were recorded in meters below datum, using a transit and stadia rod. The transit station for 1985 was established in the southeastern part of the site, between a small stand of cedar and palm trees and the end of the tabby path (at approximately 425N 555E).

A computer-generated topographic map of that portion of the site which has been most intensively investigated archeologically was prepared from elevation readings taken at two meter grid intervals (Figure 13). This same area was also tested using a remote sensing device -- the EM31 Non-Contacting Terrain Conductivity Meter. This machine was designed to rapidly assess the depth and extent of geological deposits by measuring their electrical conductivity. Recently, archeological applications for the EM31 have been found (Bevan 1983). It seems to be particularly suitable for discovering large buried features. At 8-SJ-31, readings of ground conductivity at a depth of 2 meters below the surface were taken with the EM31 at 2 meter grid intervals. A topographic-type map using this data was then generated with a computer (Figure 14). The results of this investigation are discussed in a later section.

All excavation units at 8-SJ-31 were designated by the grid coordinate of their southwest corner stake. A 15 cm. baulk was left around the south, west, and north sides of each unit. The east side had no baulk. The units were excavated by following natural stratigraphic layers, with each strata being removed in arbitrary 5 cm. levels whenever possible. Ten cm. levels were used in the upper portions of the plowzone (Zone 1), in those strata which were



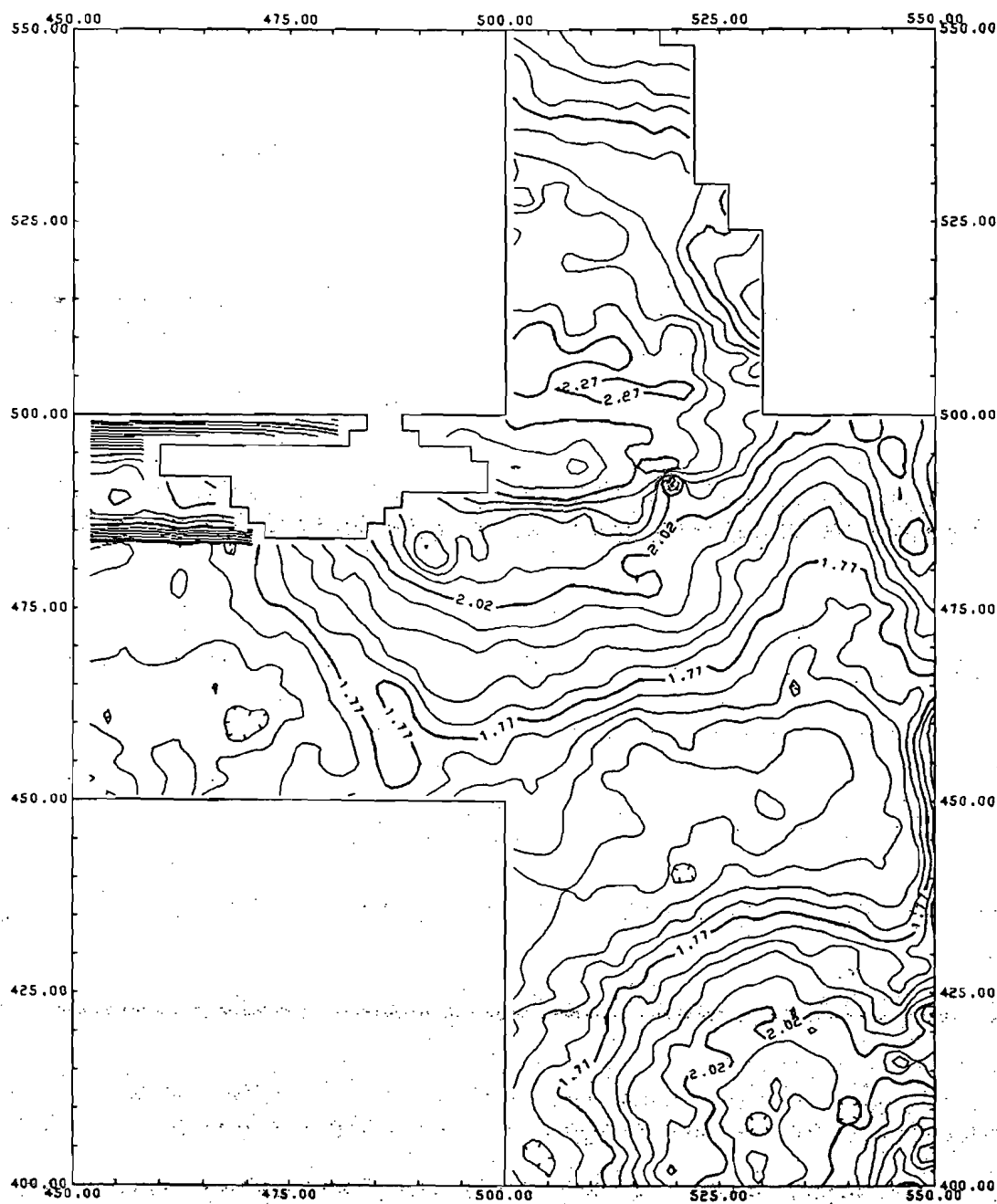


FIGURE 13

8-SJ-31 Topographic Map  
 5 cm. contour interval.  
 Numbers at sides are grid coordinates.

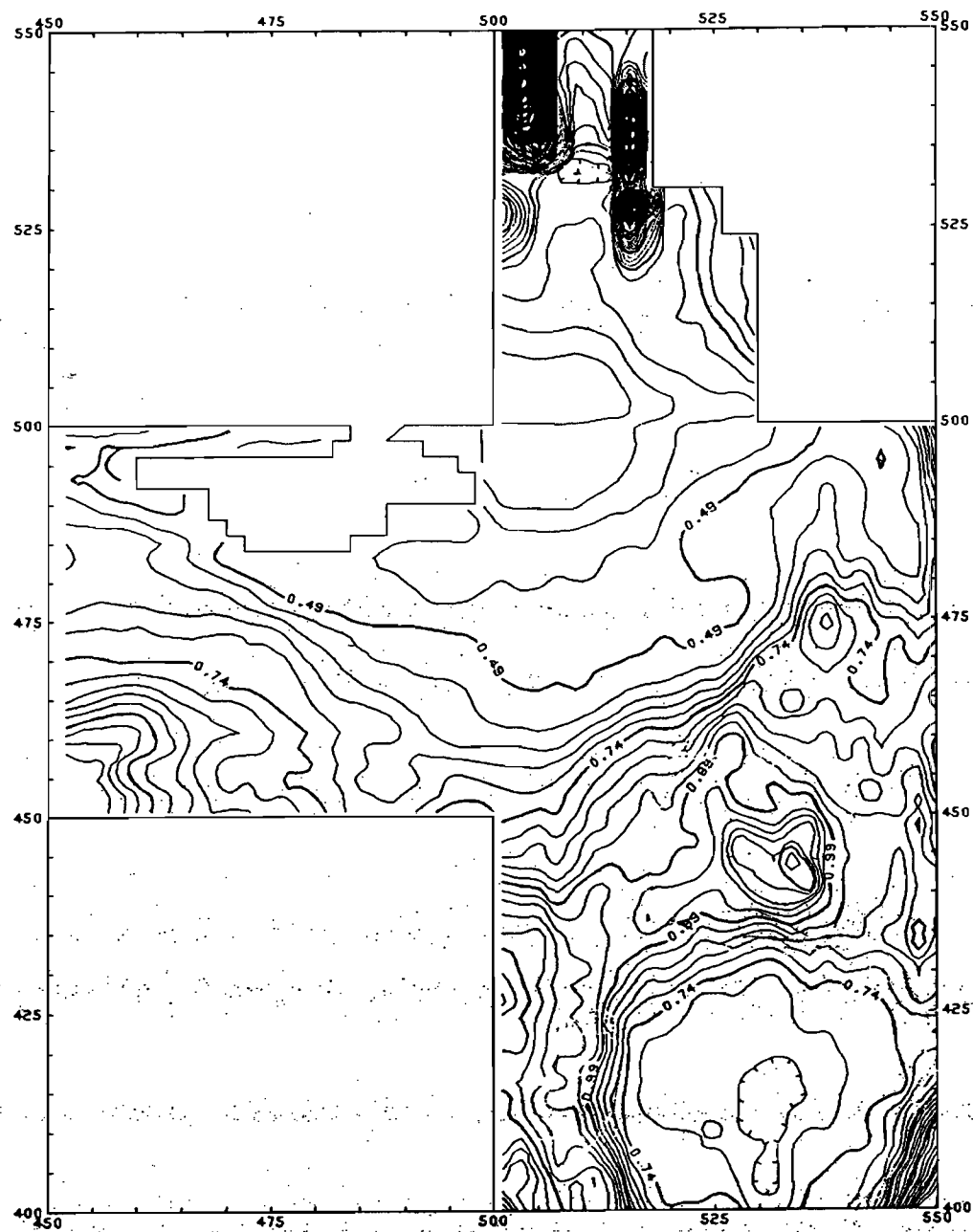


FIGURE 14

EM31 Data Map

Numbers at sides are grid coordinates.

nearly sterile, and in the well and well construction pit below Level 4 (Features 8 and 9). Postmolds and small discrete features such as trash pits were usually removed in their entirety as a single level.

The term "zone" was used to designate natural soil layers and wide-spread, non-intrusive cultural disturbances such as plowzone. "Area" was a catch-all name which designated amorphous intrusions whose origins were not immediately apparent. "Features" were well-defined intrusions which appeared to be related to a single cultural event or activity, such as trash pits, house floors, etc. "Postmold" and "possible postmold" were used fairly interchangeably to designate post-like features. Upon cross-sectioning, many of the intrusions described as "postmolds" were found to be actually root or animal disturbances. This was indicated on the plan maps and in the notes. The only major exception to the above naming system occurred in the test trench, where the area exposed by excavation was narrow and limited in scope, and therefore most sub-plowzone proveniences here were conservatively assigned "area" designations.

The basic excavation unit at 8-SJ-31 measured 3 meters north-south by 1.5 meters east-west. A line of five of these units, spaced 3 meters apart, was placed in the area between the north and south shell middens (see Figure 3). This was done to fill in the gaps between the areas exposed by Merritt in 1976, thus allowing the creation of a stratigraphic profile for the site along a line running from the north shell midden to the south midden. When opened, each of these test squares was given a unit number, starting where the 1976 designations had left off. Thus, the square at 441N 527E was Unit #12, followed by Unit #13 (447N 527E), Unit #14 (435N 527E), Unit #15 (429N 527E), and Unit #16 (423N 527E). Unit #12 was found to contain part of a sixteenth century Spanish barrel well. In order to completely expose and excavate this feature, several units adjacent to Unit #12 were opened. These included a test square 3 meters

north-south by 1.5 meters east-west at 441N 525.5E (Unit #37); a 2 meter by 1.5 meter square at 444N 525.5E (Unit #38); and another 2 meter by 1.5 meter square at 444N 527E (Unit #39). The final excavation unit used at 8-SJ-31 consisted of a 1 meter wide exploratory trench running east-west along the 441N line.

Excavation of this trench was undertaken to search for evidence of Spanish fortifications at the site. The trench was separated into two halves by Unit #12, and each half was divided into sections 3 meters in length. In the eastern half of the trench, the first of these sections --Section #1-- began at 530E. It was followed by Section #2 at 533E, Section #3 at 536E, Section #4 at 539E, Section #5 at 542E, and Section #6 at 545E. These sections were assigned Units #17-#22. In the western half of the trench, the first section --Section #7-- began at 521E. It was followed by Section #8 at 518E, Section #9 at 515E, Section #10 at 512E, Section #11 at 509E, Section #12 at 506E, Section #13 at 503E, Section #14 at 500E, Section #15 at 497E, Section #16 at 494E, Section #17 at 491E, Section #18 at 488E, Section #19 at 485E, and Section #20 at 482E. These sections were assigned Units #23-#36.

All features found at the site were numbered sequentially, starting with Feature #7 (Merritt had used Features #1-#6 in 1976). Zones, areas, and postmolds within every excavation unit were each numbered sequentially also, starting with #1. Arbitrary levels within each feature, area, zone, and postmold were numbered sequentially, again starting with #1. Thus, the third level within the uppermost zone of a unit would be given the provenience designation "Zone 1, Level 3".

All proveniences were assigned a Field Specimen (FS) number at the site. Reference to this FS number, rather than to the unit coordinates and designation of each provenience, helps to simplify later analysis and record keeping. 1985 FS number assignments began with #189, which was the point at which Merritt had

stopped in 1976, and continued sequentially through FS #511. However, a few FS numbers were not used, or were assigned to proveniences which were later recombined with other proveniences, thus there are a few gaps in the FS number series. On the other hand, FS #416 was accidentally used twice, and so given the suffixes 'A' and 'B'.

Field records kept during the 1985 excavation season included supervisor and student field notes, FS catalogue, excavation unit records, feature records, photo log, and plan and profile drawings with their associated record forms. All field records, along with black and white and color photographs, are kept on file at the Florida State Museum. A duplicate set of field records is housed in the library of the Historic St. Augustine Preservation Board.

All excavated soil was water sifted through 1/4 inch and 1/16 inch stacked screens, with the exception of the top 10-20 cm. of plowzone. This was screened through 1/4 inch mesh only, largely because plowing mixed together deposits dating from the sixteenth century through the nineteenth century. That disturbance placed limits on the conclusions which could be made from plowzone data. This was particularly true of faunal remains, the recovery of which was the primary reason for using fine screens. In addition, the tendency of roots and other organic material in the soil to clog the fine mesh made the use of this screen cumbersome in the plowzone. The plowzone excavated from the test trench was not sifted at all, in order to expedite opening as long a trench as possible, but artifacts from here were saved when noticed. Material from the 1/4 inch screen was separated in the field into cultural, faunal, and botanical categories, and the material from each category was placed into an appropriately marked plastic bag. Shell from most proveniences was weighed and discarded. Shell from features was saved, although if the feature contained a large amount of shell, only a small sample was kept. If additional shell is desired for some

future analysis, it can be obtained from the soil sample saved from each provenience. All material from the 1/16 inch screen was bagged together unseparated, after first being allowed to dry.

Water for screening purposes was provided by a series of 3/4 inch garden hoses attached to a well head located between the southern Indian burial building and a storage shed. A gasoline-powered pump was used to increase the pressure and volume of the water reaching the screens. This system proved adequate, but could probably be improved by using 2 inch hoses instead of garden hoses, thereby increasing the amount of water delivered to the screens.

As the excavations proceeded, the top and bottom elevations of each provenience were recorded using a transit. The soil composition and content of the proveniences was noted, and the soil color was described using the Munsell Soil Color Charts (1975). Plan view maps and photographs (black-and-white and color) were made of each excavated level as new proveniences appeared, or if old proveniences changed shape with increasing depth. Each new map was given a map number, starting with #1. Each set of photographs of a particular provenience was given a photo log (PL) number, also starting with #1. A photo board was placed in each photograph to indicate the provenience and the assigned PL number. Drawings and photographs were also made of completed unit wall profiles (usually the north and east walls), as well as of the profiles of excavated features and postmolds. Color and infrared aerial photographs of the site were taken by James Quine, in a plane piloted by Dr. Prudence Rice of the University of Florida.

A one-liter soil sample was saved from each provenience. Part of this will be floated for botanical material, while the rest will be saved for any analyses which may later be necessary. Uncontaminated charcoal samples suitable for carbon dating were placed in aluminum foil and saved whenever they were

encountered. A 20 cm. column sample was taken from the southwest corner of Units #12 and #13, while similar sized column samples were taken from both the northeast and southwest corners of Units #14, #15, and #16. These column samples were excavated by following the same series of proveniences as that found in the rest of the unit. Each column sample level was given an FS number. All soil was saved from the column samples, and then water sifted in the laboratory through a 0.0197 inch mesh geological screen. The material that collected in the screen was saved for any future required analyses.

All artifacts recovered from the 1/4 inch screen were washed and analyzed at the Florida State Museum. Material from the 1/16 inch screen was processed by first being immersed in a Calgon solution in order to remove botanical remains, and then in a zinc chloride solution to separate out the bone. The non-floating heavy fraction which remained was then hand sorted. Shell was weighed and discarded. Diagnostic artifacts such as lead shot, glass beads, straight pins, etc., were placed in a vial and added to the cultural material from the 1/4 inch screen. The small ceramic, glass, and iron chips from the fine screen were also separated out and saved, but were not quantified as they were too small to be reliably identified. Bone from both the 1/4 inch and 1/16 inch screens was used in zooarcheological analysis, while the floral remains from both the screens and the float samples were the subject of paleobotanical study. Standard analysis forms were used to describe and enumerate all the materials recovered from each provenience. This data was then codified, using an alphabetic system devised by Charles Ewen of the University of Florida. The coded data was then entered into a computer, where it could be easily managed and manipulated in later analyses.

## EXCAVATION RESULTS

In this section, the stratigraphic findings from each excavation unit at 8-SJ-31 will be described (see Figure 3). A more synthetic summary of the results of the 1985 field season will be included in a later section.

### Units #12, #37, #38, #39

Immediately upon removing the sod over Unit #12, a shell-flecked, dark grey-brown intrusion was noted in the northeast corner of the unit. This intrusion, designated as Area 1, was recognized as being the result of the slumping of the west wall of Test Pit #4 (443N 528.5E), during the backfilling of that unit in 1976 (see Figure 15). Because the matrix of Area 1 consisted mostly of spoil dirt, it was not screened, but rather was simply removed and discarded as the rest of Unit #12 was taken down. Surrounding Area 1 was a dark grey-brown sandy loam. This soil layer was 24 cm. thick, and was removed in five levels (Zone 1, Levels 1-3; Zone 2, Levels 1-2). The artifacts from this layer included aboriginal, Spanish colonial, nineteenth century, and modern types all mixed together. Nearly all other test units excavated at 8-SJ-31 have also revealed a soil layer of similar thickness and artifact content laying just below the surface. The broad areal extent of this soil layer, and the nature of the artifacts found within it, indicates that this layer is in fact a plowzone. Although the Fountain of Youth Park property has not been plowed within the memory of the current owner, a period dating back to the 1930s (John Fraser 1985, personal communication), the Park area appears to have been in agricultural use at least during the eighteenth and nineteenth centuries, and it seems almost certain that plows were employed in that activity. The upper layer is also a "flood zone", in that the site is frequently inundated by storm tides.



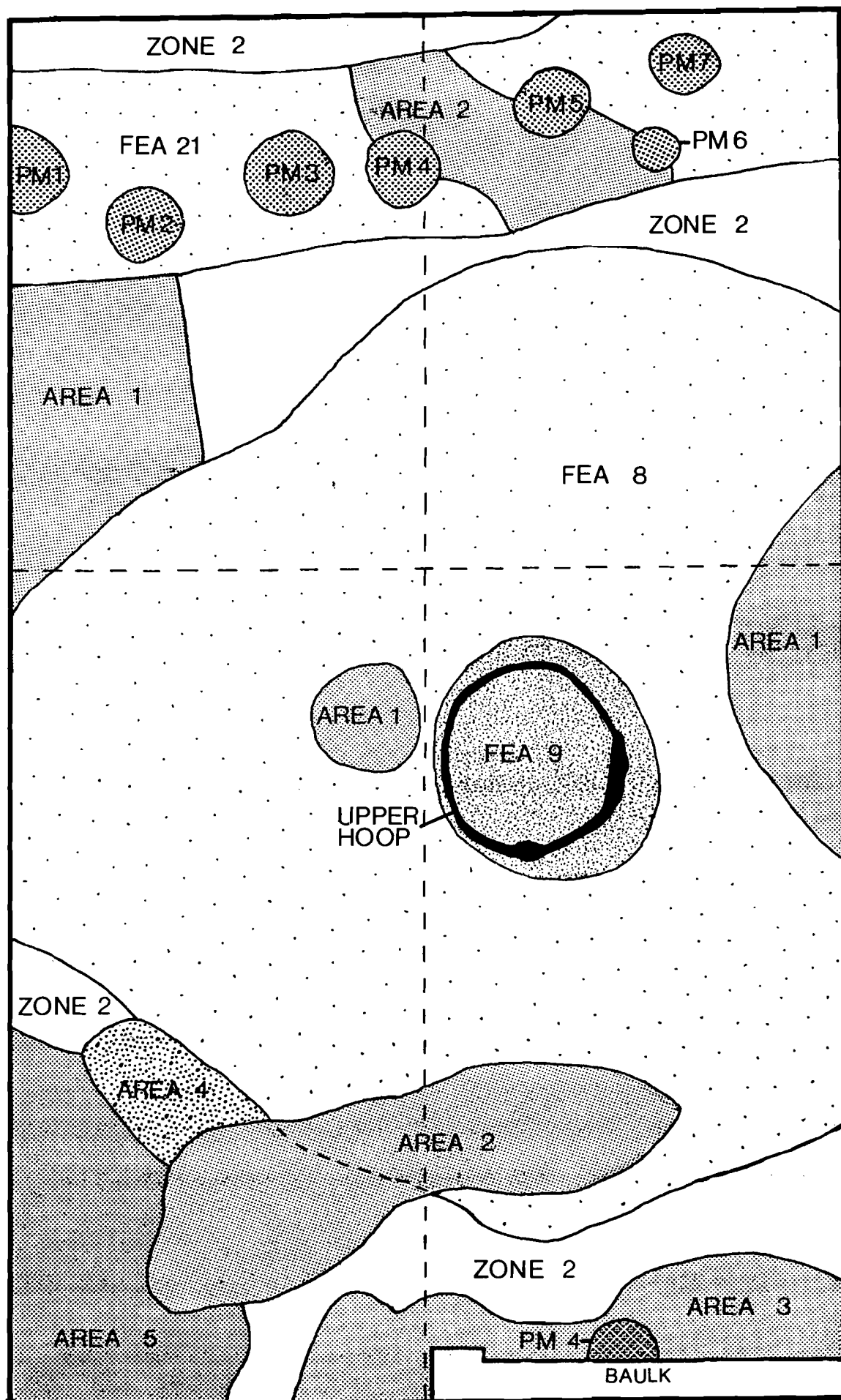


FIGURE 15

UNITS 12, 37, 38, 39  
PLAN VIEW

The flooding results in the deposition of additional soil on the site, and this accumulation was apparently great enough to protect at least some of the prehistoric and sixteenth century strata from plow disturbance.

Beneath the plowzone in Unit #12 was a 5 cm. layer of probable sixteenth century sheet midden deposit, designated as Zone 2 Level 3. Artifacts from this strata included Columbia Plain majolica, olive jar, glass, lead shot, and aboriginal pottery. Of the aboriginal sherds, 67% (n=20) were the grog-tempered and St. Johns Series types characteristic of the St. Johns II and early historic periods (Goggin 1952), while only 16% (n=5) belonged to the later San Marcos Series wares (the remaining aboriginal sherds were unidentified sand-tempered and grit-tempered types). This sherd ratio adds further support to a sixteenth century date for Zone 2 Level 3. One piece of black plastic was uncovered in this level, but it was the only post-sixteenth century artifact found there, and was probably an accidental intrusion.

Intruding into Zone 2 Level 3 was the first feature noted in Unit #12. This intrusion, designated as Area 2, was a narrow, 10 cm. deep, dark brown depression running east-west across the southwest quadrant of the unit. Area 2 was later found to continue into the adjacent Unit #37, where it was also designated as Area 2. In Unit #37, Area 2 was up to 15 cm. thick. Artifacts from Area 2 (Units #12 and #37) included lead shot, olive jar, and equal amounts of St. Johns and San Marcos pottery. Area 2 contains no artifacts which are diagnostic to a particular century, but given that it contains equal amounts of St. Johns and San Marcos ceramics and intrudes into the apparently sixteenth century Zone 2 Level 3, it seems probable that this feature was formed sometime during the seventeenth century. The exact function of Area 2 is less clear. As a shallow linear intrusion, it may be a plowscar, but the possibility of it being a wall trench or other feature cannot be discounted. A small, round, dark

brown feature was found at the bottom of Area 2, along its south edge (in Unit #37). Time did not permit the excavation of this feature, but it could be a structural postmold.

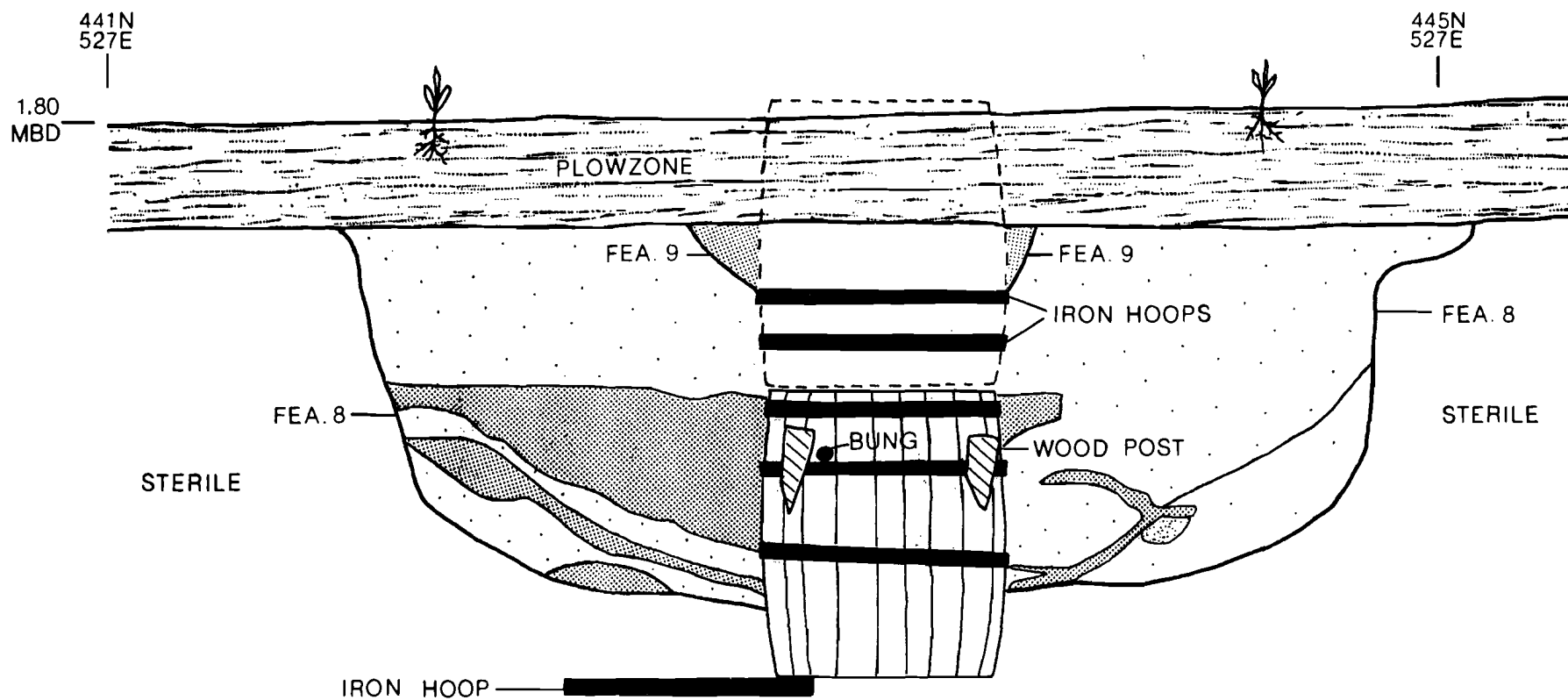
Beneath Zone 2 Level 3 several intrusive features and areas were noted. One of these, designated Area 3, ran along the south wall of the test square, and was later found to extend into Unit #37, where it was also designated as Area 3. Area 3 was less than 5 cm. deep, and contained one St. Johns sherd as its only artifact. Assigning a date to this provenience is thus impossible. Because very little of Area 3 appears to have been exposed, its function also remains unknown, but it may just be a deep area in the sheet midden which overlies it. Beneath Area 3 was found a small, dark yellowish-brown intrusion designated as Area 4, along with two darker areas designated as PM 2 and PM 3. Upon excavation, PM 2 and PM 3 were found to be just dark mottles in Area 4, and were thus combined with that provenience at the screens, while the original Area 4 was redefined as PM 4 after its top 5 cm. were excavated. PM 4 was a large, square-sided, round-bottomed post which extended down 24 cm. from the level at which it initiated, at the top of Area 4. This top elevation was approximately the same as that of the nearby sixteenth century barrel well, so PM 4 may have possibly been associated with either the use or construction of that well. Both PM 4 and Area 4 contained olive jar sherds (along with St. Johns and grog-tempered pottery in PM 4), further suggesting that PM 4 was put into place after the Spanish arrived at St. Augustine. Area 4 may be a disturbance resulting from the erection or the removal of the post at PM 4.

Also beneath Zone 2 Level 3 were two of the most interesting features found during the 1985 season: a sixteenth century Spanish barrel well (Feature 9), and the surrounding well construction pit (Feature 8), (see Figure 15). The top 20 cm. of each feature was removed in 5 cm. levels, after which 10 cm. levels were

used. Excavation of the well was facilitated by the use of a water pump and well points provided and installed by the St. Augustine City Water Department. This system was able to lower the water table to a level beneath the bottom of the well, thus allowing for the first dry excavation of an entire well in St. Augustine (K. Deagan 1985, personal communication).

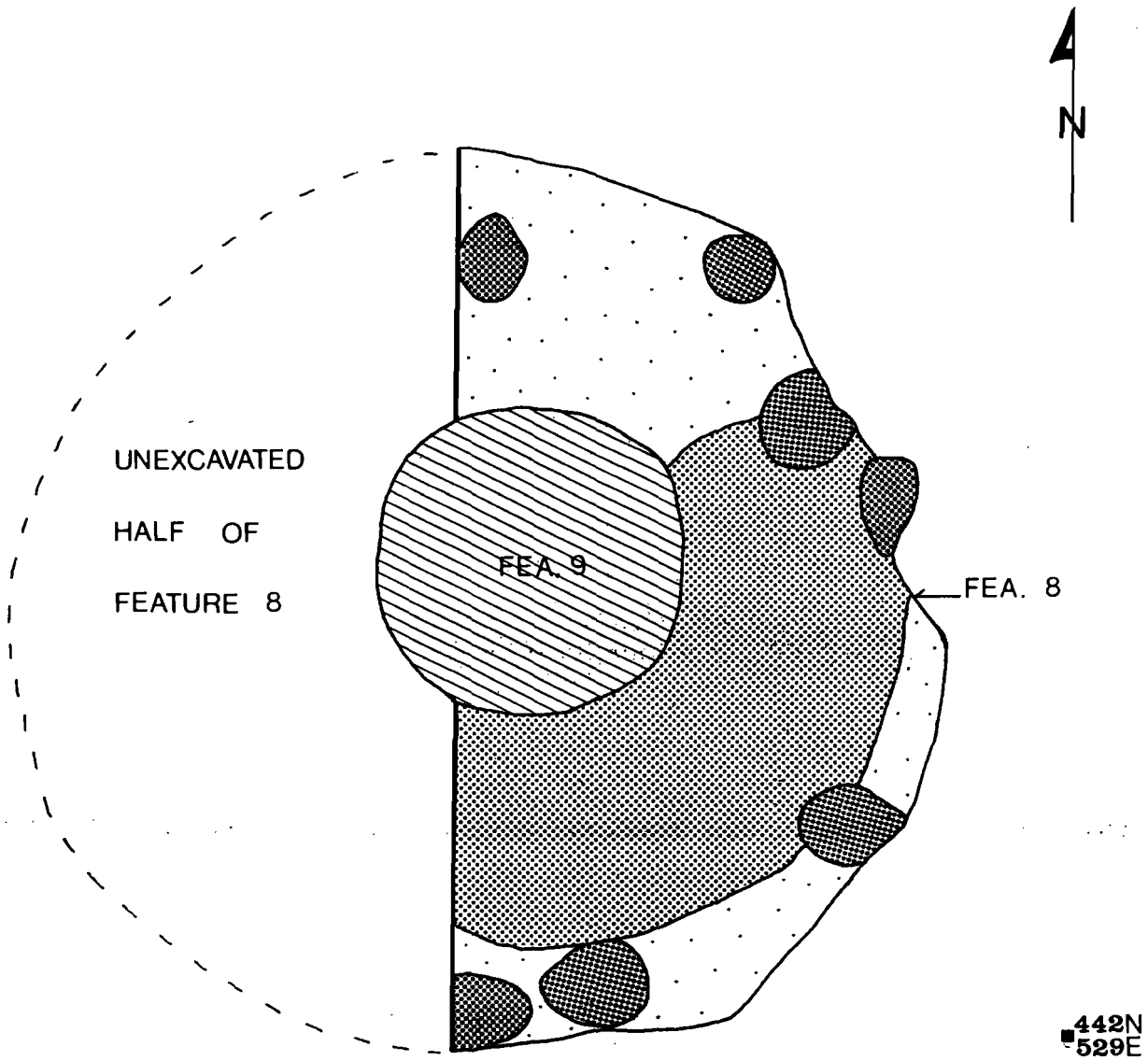
Units #37, #38, and #39 were opened up around Unit #12 in order to expose all of the well construction pit. The soil lying above Feature 8 in these units was removed as a single provenience, designated as Zone 1, and screened through 1/4 inch mesh only. However, in Unit #37, an additional 2 cm. thick level, Zone 2 Level 1, was excavated beneath Zone 1, in order to more clearly delineate Feature 8. In Units #37, #38, and #39, Levels 1 and 2 of Feature 8 were combined as a single 10 cm. provenience, as were Levels 3 and 4. When this was completed, all of Features 8 and 9 stood at the same elevation. After the excavation of Level 6 of Feature 8, it was decided to remove only the eastern half of this feature, along a line touching the western edge of Feature 9, thereby ensuring that the excavation would be completed and that a cross section of the well would be provided (see Figure 16). Feature 9 continued to be excavated in its entirety.

At its top, Feature 8 was approximately 3.5 meters in diameter along its north-south axis. Its matrix was a fairly uniform dark brown to dark grayish-brown sandy loam in the upper levels, but became progressively more mottled with depth. At 80 cm. below the top of Feature 8, a series of possible postmolds was uncovered around the edge of the well construction pit (see Figure 17). These molds had a swirled, water-disturbed appearance, and lacked a distinct post-like profile. However, they were found well below the water table, so their amorphous shape does not preclude them from being postmolds. Despite being below the water table, no wood was found in features, suggesting



0 50  
cm

FIGURE 16  
WELL PROFILE



0 50  
cm




-  POSTMOLDS
-  DARK SOIL
-  LIGHT SOIL

FIGURE 17  
WELL POSTS

that, if indeed they were postmolds, the posts had been removed. If temporary posts were set into the water-filled bottom of the construction pit during the building or possible repairing of the well, perhaps as part of a structure designed to prevent the sides of the pit from slumping, and then removed once work was completed, a somewhat indistinct postmold would probably result.

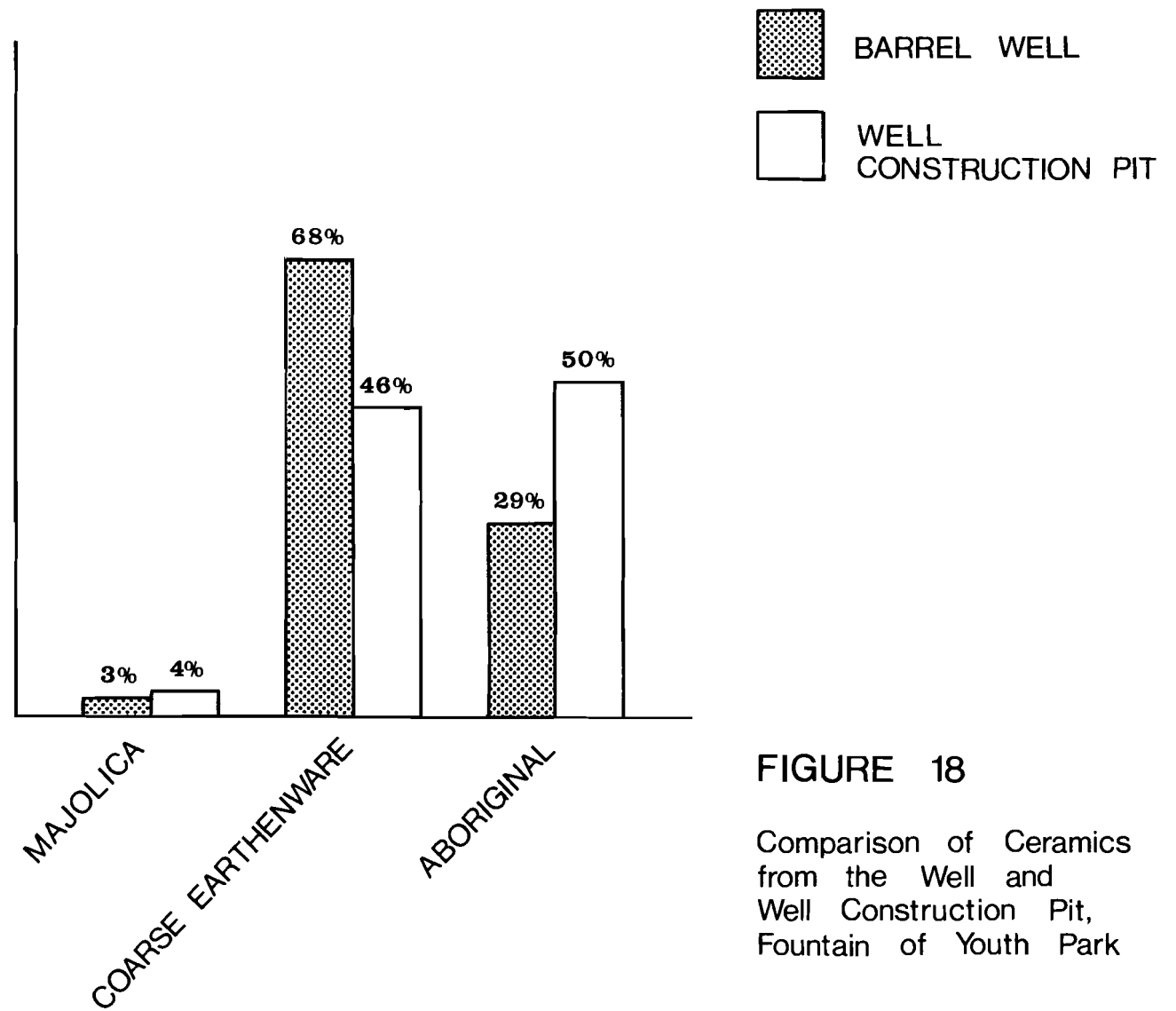
Further support for this hypothesis can be found in the fact that at the level at which the postmolds were discovered, the sides of the construction pit change from being nearly vertical to being more nearly horizontal. The maximum depth of Feature 8 is only 34 cm. below the elevation of the tops of the postmolds. This suggests that further excavation of the construction pit below the level of the postmolds was no longer practical or necessary, because of the water seeping into its bottom -- water which would tend to erode the sides of the pit. Using posts and boards to shore up the sides of the pit would help to prevent this erosion. Nevertheless, it appears from the profile of Feature 8 that slumping did occur at some phase in the construction or possible repair of the well (see Figure 16).

A large number of European and aboriginal artifacts were found throughout Feature 8. Diagnostic European artifacts included Columbia Plain and Santa Elena Mottled majolicas, along with an unnamed white-enameled majolica with a soft, red paste; middle style olive jar and Orange Micaceous ware; and various bead types, including a colorless olive-shaped form resembling Type #110 in Smith and Good (1982), a chevron bead, and seed beads in blue, black, red, and colorless, which were found mostly in upper levels of the construction pit. Olive jar constituted 92% (n=450) of the European ceramics recovered, while 7% (n=34) were majolica. The predominant aboriginal artifact type was St. Johns Series pottery (73%, n=360). Grog-tempered wares were next highest in abundance (19%, n=95), followed by much lesser amounts of San Marcos Series types (1.6%,

n=8, 6 of which came from the upper 10 cm. of the feature). Orange fiber-tempered wares, and various unnamed sand-tempered and grit-tempered types, made up the remaining 6.4% (n=32) of the aboriginal ceramics from Feature 8. A triangular chert projectile point fragment was also found. The lower levels of Feature 8, below the water table, contained cut and adzed wood fragments. Whether these are of European or aboriginal origin is as yet unclear, but some were apparently produced with metal tools (Elise LeCompte 1986, University of Florida, personal communication). It is tempting to suggest that this wood was a by-product of well construction, perhaps from the manufacture of possible shoring posts. However, many of the artifacts found in the fill of Feature 8, such as the fiber-tempered ceramics, were surely redeposited there from earlier contexts during the Spanish excavation of the well construction pit, and this may be true for some of the cut wood as well.

The most numerous artifacts found in the well construction pit were the ceramics, with 985 sherds recovered. These were divided evenly between European and aboriginal types (Figure 18). They were fairly evenly distributed throughout the construction pit, decreasing in number per level as the size of the feature decreased with depth. The large drop in the sherd frequency which occurs between Levels 6 and 7 is due to the fact that only half of Feature 8 was excavated below Level 6. However, another discontinuity in the sherd count, that between Levels 8 and 9, is less easily explained. Perhaps there was an episode of well repair which required partial re-excavation of the construction pit. If so, then additional artifacts would be included only in the disturbed construction pit fill, thereby inflating the sherd count relative to that of the lower, undisturbed levels. These additional artifacts (and indeed all those found in Feature 8) could have been the result of the accidental inclusion of





holding the barrel head plate had been cut into the interior rim, 3 cm. above the bottom of the barrel. A similar groove for holding the other head was not evident at the top of the barrel. Three iron hoops were holding this barrel together. The upper hoop was 5 cm. wide, and was located 84 cm. above the bottom of the barrel. The next one was 4 cm. wide, and was placed 66 cm. from the bottom. The last hoop was also 4 cm. wide, and encircled the barrel at a height of 41 cm. above the bottom. A fourth iron hoop, 3.5 cm wide and the best preserved of all the hoops, lay beneath the barrel. This hoop was considerably offset from the barrel; in fact, only a small portion of it was actually underneath the barrel. Most likely, this was the bottom hoop of the barrel. A possible explanation for its unusual position in relation to the rest of the barrel is that the hoop was accidentally detached from the barrel during the construction, or perhaps repair, of the well.

Two small, roughly hewn wooden posts were found wedged against the side of the barrel, and there may well have been one or two similarly located posts in the unexcavated portion of Feature 8. The posts were short -- less than 30 cm. long -- and were situated approximately 40 cm. below the top of the barrel. One end of each post had been crudely tapered with an adze or axe, while the rest of it was still bark-covered. These wedges may have been used to stabilize the barrel in the ground. Neither support posts nor postmolds similar to those uncovered in Feature 8 have been noted on other wells excavated in St. Augustine (K. Deagan 1985, personal communication). Apparently, wells which were no longer functional were simply abandoned, and a replacement well constructed nearby (Deagan 1983:57). It may be that the posts and postmolds found with the well at the Fountain of Youth Park reflect an unusual attempt to repair, rather than replace, a non-functioning well.

The height of the barrel at 8-SJ-31, 87 cm., was exactly the same as the average height of a number of whale oil barrels recovered off Labrador from a wrecked Basque galleon, believed to have sunk in 1565 (Ross 1985). It was slightly smaller than the later sixteenth century barrels which have been discovered archeologically in other wells elsewhere in St. Augustine. These barrels have ranged from 95 cm. to 120 cm in height (K. Deagan 1986, personal communication). Sixteenth century barrels found in Santa Elena have been considerably larger-- up to 150 cm. in length (South 1982). Obviously, barrel size is related to the original function of the barrel. We do not know what the barrel at 8-SJ-31 was originally used for. However, the absence of a top croze groove may mean that it carried an imperishable cargo, one which did not need to be covered.

Unlike Feature 8, where the artifacts were homogeneously mixed throughout the pit, the artifacts in Feature 9 had a stratified distribution. For example, 196 pottery sherds were recovered in the bottom 40 cm. of the well. Of these, 94% (n=185) were European, while the rest were aboriginal. In the top 40 cm. of the well, 61 sherds were found, of which 49% (n=30) were European, and 51% (n=31) were aboriginal. In the middle 60 cm. of the well, 45% (n=55) of the 123 sherds were European, while 55% (n=68) were aboriginal. The large number of European artifacts found toward the bottom of the well suggests that they were deposited there at the time when the site was still intensively occupied, so perhaps other, later wells remain to be found at 8-SJ-31. Cross-mending of these artifacts has revealed that no whole vessels are present, suggesting that the ceramics at the bottom of the well came not from pots which were accidentally dropped into it, but rather from trash deliberately disposed of (presumably after the well was no longer being used for water).

Most of the European artifacts recovered from Feature 9 were ceramics. Of these, 96% (n=257) were olive jar, while 4% (n=11) were majolicas. The majolicas were identical to those in Feature 8, and included Columbia Plain, Santa Elena Mottled, and an unnamed white tin-enamelled ware with a soft, red paste. Some of the majolicas had a "gun-metal" discoloration, probably from being exposed to water. Several glass fragments, and a decomposed seed bead, were found in the well. Tiny lead shot and various unidentified iron objects were found also. Organic artifacts were preserved beneath the water table. These included numerous cut and adzed wood fragments, as well as several wooden artifacts. One of these was a stick 55 cm. long and 2 cm. in diameter. The bark had been stripped from the stick, and one end had been whittled to a point. However, the final 3 cm. of this end had not been whittled down, but instead simply squared-up and roughly pointed. This produced a finial-like effect at the end of the stick. The function of this object is unknown. Another artifact was a roughly carved object made of wood. It was 57 cm. long, and wider at one end than at the other. A nail or bolt was driven through the wide end. The function of this object is also uncertain. A large cobble, possibly used as a ballast stone, was found in the well, as were two busycon shells which possibly functioned as water dippers. Pottery was the most common aboriginal artifact found in the well. Sixty-six percent (n=73) of these sherds were St. Johns Series wares, while 13% (n=14) were grog-tempered. Only one San Marcos sherd was found, and it was in the top 10 cm. of the well. The remaining aboriginal sherds (n=20) were mostly unnamed sand-tempered and grit-tempered types, although one Lamar-like Bold Incised sherd was found.

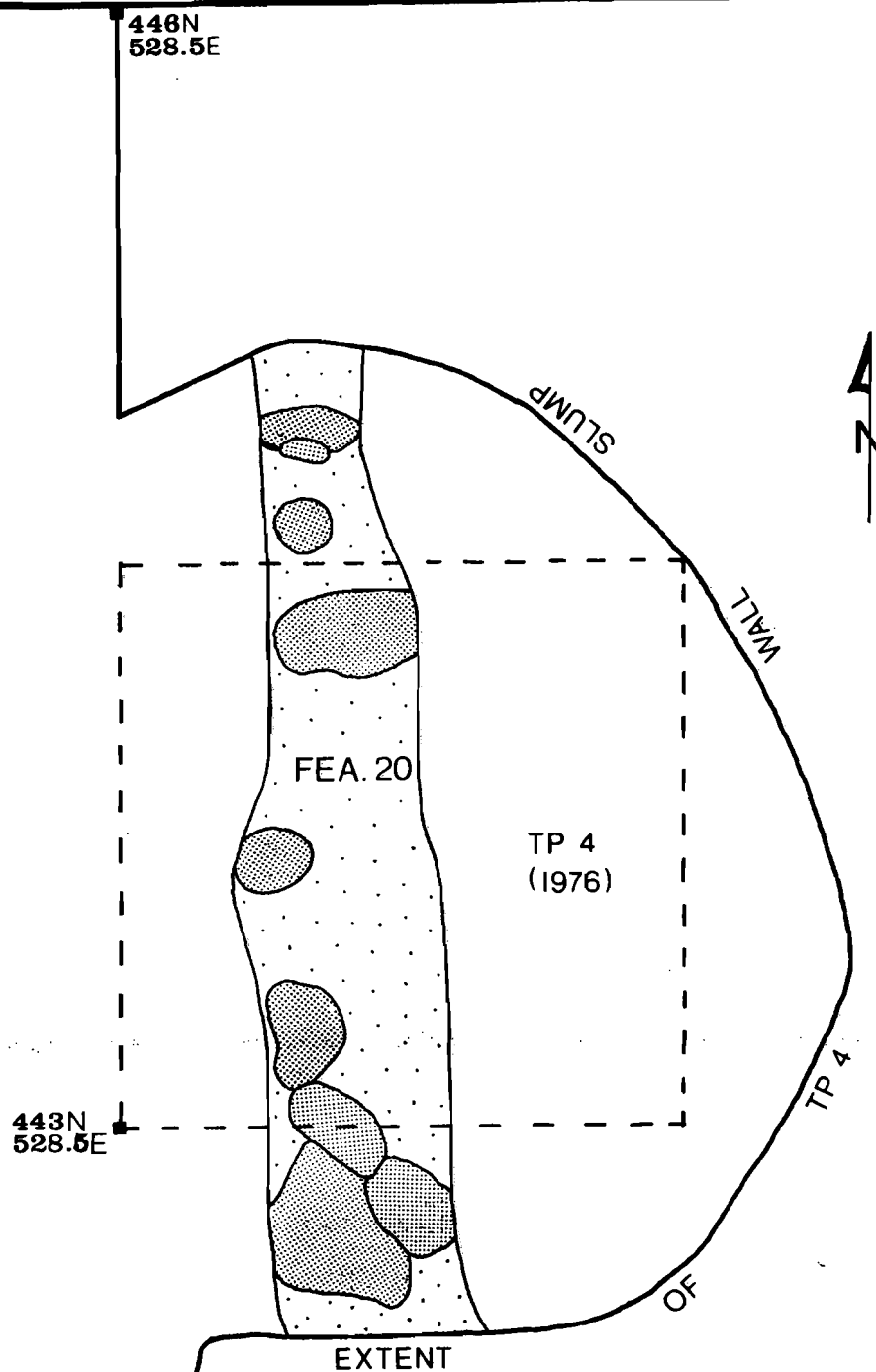
In summary, it appears that the well at 8-SJ-31 dates to the early period of Spanish settlement in St. Augustine. Several lines of evidence suggest this. First, none of the European artifacts recovered were types which must date to no

earlier than the latter part of the sixteenth century (for example, Fig Springs Polychrome or San Luis Blue on White majolicas). All of the European artifacts could have been brought to 8-SJ-31 as early as 1565. Second, the aboriginal sherds recovered from the well were distinct from those generally recovered from later sixteenth century contexts in St. Augustine. Contact period grog-tempered wares were a significant component of the aboriginal artifact assemblage from the well at 8-SJ-31, while they were virtually absent in St. Augustine (Deagan 1985). There may have been a functional reason for the Spanish disregard for grog-tempered wares, similar to their apparent preference for St. Johns check stamped pottery over plain ceramics for cooking purposes (Herron 1978). In addition, the non-local San Marcos wares were quite rare in the well, but constituted 36% of the aboriginal sherds recovered from sixteenth century contexts in St. Augustine (Deagan 1985). San Marcos ceramics were brought to St. Augustine through trade and tribute (ibid.), so 8-SJ-31 may have been occupied before this system became fully developed. Efforts to establish a tribute system began before 1570 (ibid.; Lyon 1976; Platek 1985), thus suggesting an early date for the well. Third, the well is apparently capped by a sixteenth century sheet deposit, which also contains no artifacts definitely dating to the latter part of the sixteenth century. The well must predate this sheet deposit, suggesting it was constructed very early in the Spanish settlement of St. Augustine.

Two other significant features were found in the well units. One of these, in Units #38 and #39, was a line of postmolds set into a shallow trench running in an east/west direction, which was designated as Feature 21 (see Figure 15). Olive jar sherds found in the trench date this feature to the historic period. The postmolds were fairly shallow (4-5 cm. from the top of the molds to the bottom), suggesting that they may not have been part of a substantial structure

or fortification. However, much more information on the date and extent of Feature 21 is needed before its function can be determined.

The second significant feature was a line of postmolds found in a deep trench running in a north/south direction 1.75 meters east of the well (see Figure 19). This trench, designated as Feature 20, was discovered when Test Pit #4 from Merritt's 1976 investigations was re-excavated, after the water table had been lowered in preparation for excavating the well. This feature had been previously designated as Feature 4 and Feature 5 in 1976, but was renamed in 1985 in order to more easily describe it. Merritt had continued to excavate this feature even after the unit had filled up with water (Merritt 1977:87), which was not a particularly productive undertaking. Much potential information concerning this feature and its relationship to the well was lost, but future excavations will hopefully recover some of this. Additional data was lost when the walls of Test Pit #4 slumped, apparently during backfilling in 1976. However, we can say a few things about Feature 20. It was 40 cm. to 50 cm. wide at the top, and more than 50 cm. deep. The postmolds had an amorphous, swirled, water-disturbed appearance, and the posts that formed them were probably about 20 cm. to 30 cm. in diameter. Most of them were emplaced on the western side of the trench, so they were probably rested against this wall of the trench while it was being backfilled. An olive jar sherd was found while cleaning up Feature 20 after the water table had been lowered. In addition, Merritt reported a number of European artifacts from Feature 5, so it is likely that Feature 20 dates to the historic period. The relationship of Feature 20 to the well is less certain. According to Merritt's plan map of Unit #4, the well construction pit and Feature 20 do not intersect. The profile of Feature 20 made in 1985 also supports this interpretation, although the most critical section of the feature for determining its relationship to the well had already been excavated



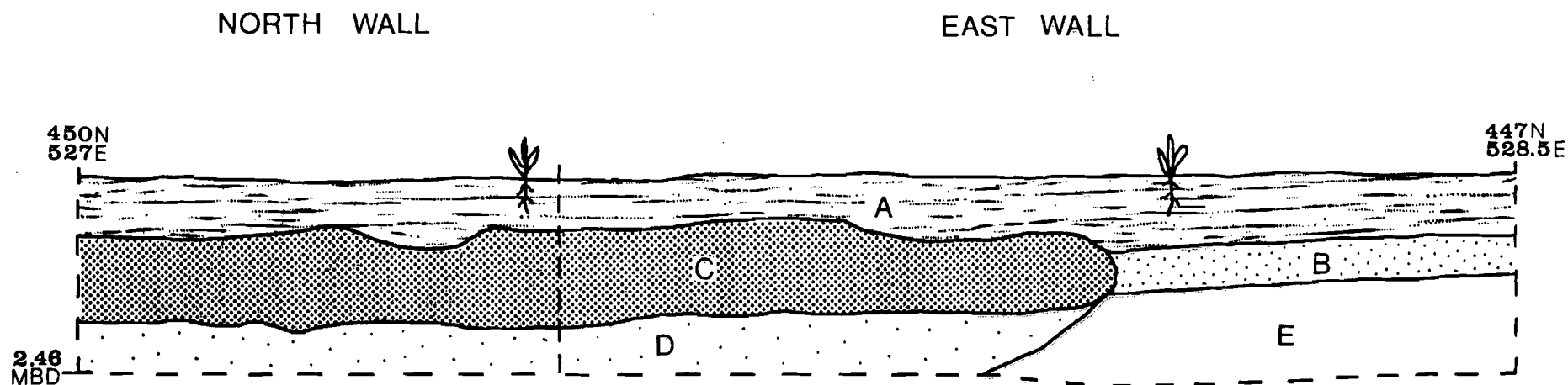
by Merritt. The construction pit was therefore severely truncated on its eastern edge, suggesting that Feature 20 was already in place before the well was built, and that the well was dug too near to the posts for the construction pit to be perfectly round. However, as with Feature 21, we do not as yet have enough information on Feature 20 to reliably interpret its function or date of construction.

A number of other proveniences were noted near the well, and several of these were excavated. One of these, Area 2 of Units #38 and #39, appeared to be associated with Feature 21 (see Figure 15). It was a shallow, irregularly shaped pit. This may have been the result of efforts to replace a post in Feature 21, or perhaps it was just an area where the trench was dug particularly deep. In Unit #37, Areas 4 and 5 and Zone 2, Level 2 were excavated. These shallow proveniences appeared to date to the sixteenth or early seventeenth centuries. The function of these proveniences was unclear, although the size of Area 5 suggested that it may have been part of a larger feature, such as a house floor. Area 1 of Unit #37 was also excavated. This was a postmold or small pit intruding into Feature 8, just west of Feature 9. It is unclear whether this provenience was associated somehow with the construction or use of the well, or if it was a later intrusion post-dating the period when the well was functioning.

### Unit #13

Immediately below the sod of Unit #13 was a layer of dark brown sandy loam containing artifacts from all the occupation periods at 8-SJ-31, as well as light amounts of shell. This layer, which was almost certainly a plowzone, was 25 cm. thick, and it was removed in 5 cm. levels (Zone 1, Levels 1-3; Zone 2, Levels 1-2), (see Figure 20). Beneath this was a thin layer of probable





- A. Plowzone
- B. 16th Century Zone
- C. Feature 7
- D. Leaching Zone
- E. Sterile Subsoil

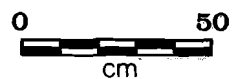
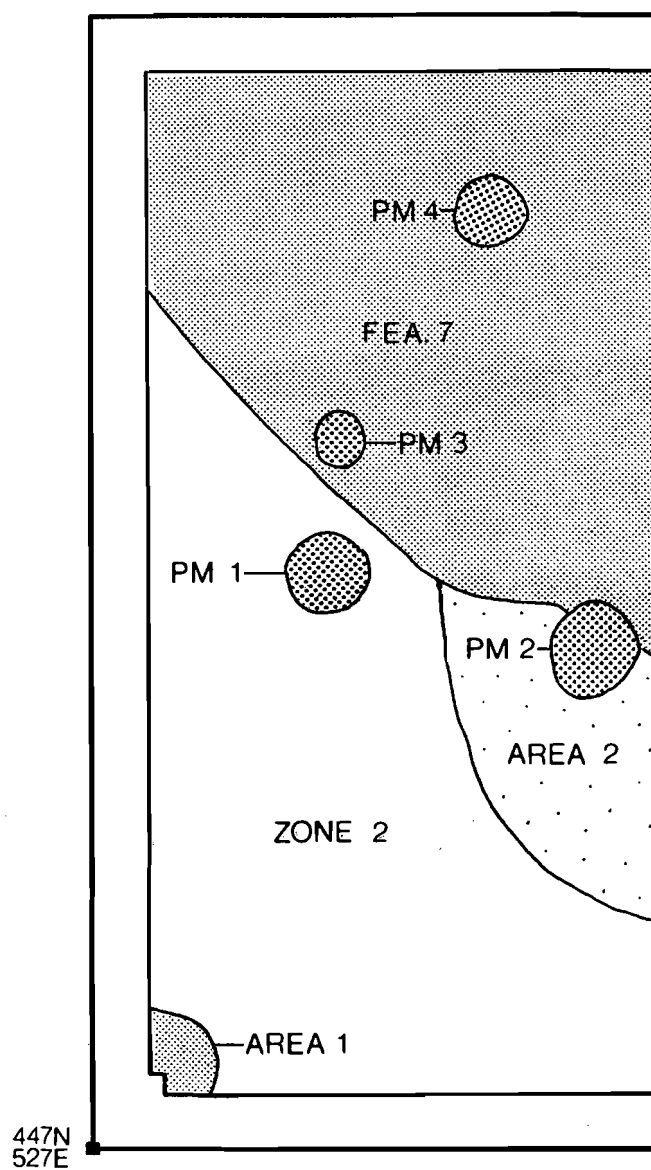


FIGURE 20

UNIT 13  
PROFILE

sixteenth century sheet deposit (Zone 2, Level 3). Several features were encountered underneath this sheet deposit (see Figure 21). The most notable of these was Feature 7, a large, round, dark brown area in the northern half of the unit. This feature contained remarkably few artifacts, but those that were found included olive jar, St. Johns Series, and grog-tempered sherds, as well as lead shot, iron fragments, and chert debitage. Charcoal flecking also occurred throughout this provenience. Feature 7 was still evident as a dark area after having been excavated down to the water table -- a depth of more than 30 cm. from the surface of the feature. However, only the top 10 cm. contained any artifacts. The remainder of this feature was most likely produced by the leaching of organic material into the sterile subsoil below, and not by any direct cultural activity. This was found to be the case for many of the proveniences excavated in 1985. Two postmolds (PM 1 and 2), each approximately 25 cm. in diameter, were uncovered on the outer edge of the feature. These initiated at the same elevation as Feature 7, and were probably associated with it. Two smaller postmolds (PM 3 and 4) initiated at a slightly lower elevation, and were located inside of the feature. It is unclear if they were directly associated with Feature 7. The presence of PMs 1 and 2, along with the shape of Feature 7 and the nature of its artifacts, suggests that this feature was the floor of a building. Such floors have been frequently encountered by other investigators working at 8-SJ-31 (Seaberg 1951; Merritt 1977). Although a round house apparently built by the Spanish in the sixteenth century was uncovered at Santa Elena (South 1980), the Fountain of Youth Park structures lack the daub and European architectural hardware that were found associated with this building, and which typify Spanish architecture in Florida (Manucy 1985). The previous discovery of a number of these apparently aboriginal housefloors has led to the conclusion that this section of 8-SJ-31 was the location of a contact



0 50  
cm

FIGURE 21

UNIT 13  
PLAN VIEW

period Timucua village (Deagan 1983:125; Merritt 1983), and the results of the 1985 fieldwork reinforce this idea. However, the lead shot found in Feature 7 suggests that it may have been occupied by the Spanish, as the Indians of Florida were not usually given access to firearms (Matter 1981). It is thus uncertain at this point if Feature 7 was an aboriginal building occupied later by the Spanish, or a Spanish-built structure constructed in direct imitation of the native architectural style.

Adjacent to Feature 7 was a patch of slightly lighter soil, designated as Area 2. This area was probably associated with the house floor in some way. To the south of Feature 7 and Area 2 was a thin layer of light sixteenth century sheet midden (Zone 2, Level 4), perhaps deposited while Feature 7 was being occupied. Beneath this was sterile subsoil. One other provenience, Area 1, was noted in Unit #13. This was a small pit or postmold in the southwest corner of the unit. It contained no artifacts and thus cannot be dated, although it did initiate at the same level as Feature 7.

#### Unit 14

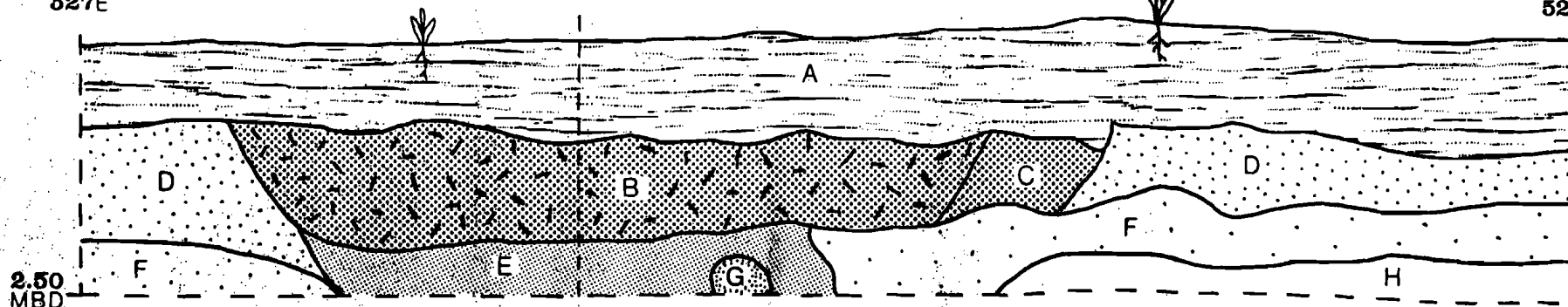
Beneath the sod in Unit #14 was a layer of dark brown sandy loam (see Figure 22). It was 19 cm. thick, and was removed in two levels (Zone 1, Levels 1-2). This layer contained artifacts from all the occupation periods at 8-SJ-31, as well as numerous shell fragments. These suggest that Zone 1 was a plowzone, and that Unit #14 had been placed in the outer edges of the southern shell midden. Beneath the plowzone in the northern half of the unit was a layer of what appeared to be undisturbed contact period sheet deposit 9 cm. thick. This was removed in two levels (Zone 2, Levels 1-2). The upper level of this strata contained a number of sixteenth century European artifacts, but the lower level had only aboriginal material. To the south of Zone 2 was an area with

NORTH WALL

EAST WALL

438N  
527E

435N  
528.5E



- A. Plowzone
- B. Feature 11
- C. Unknown
- D. Feature 12, Areas 6 and 7
- E. Leaching Zone
- F. Leaching Zone
- G. Root or Animal Hole
- H. Sterile Subsoil

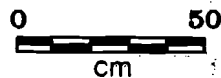


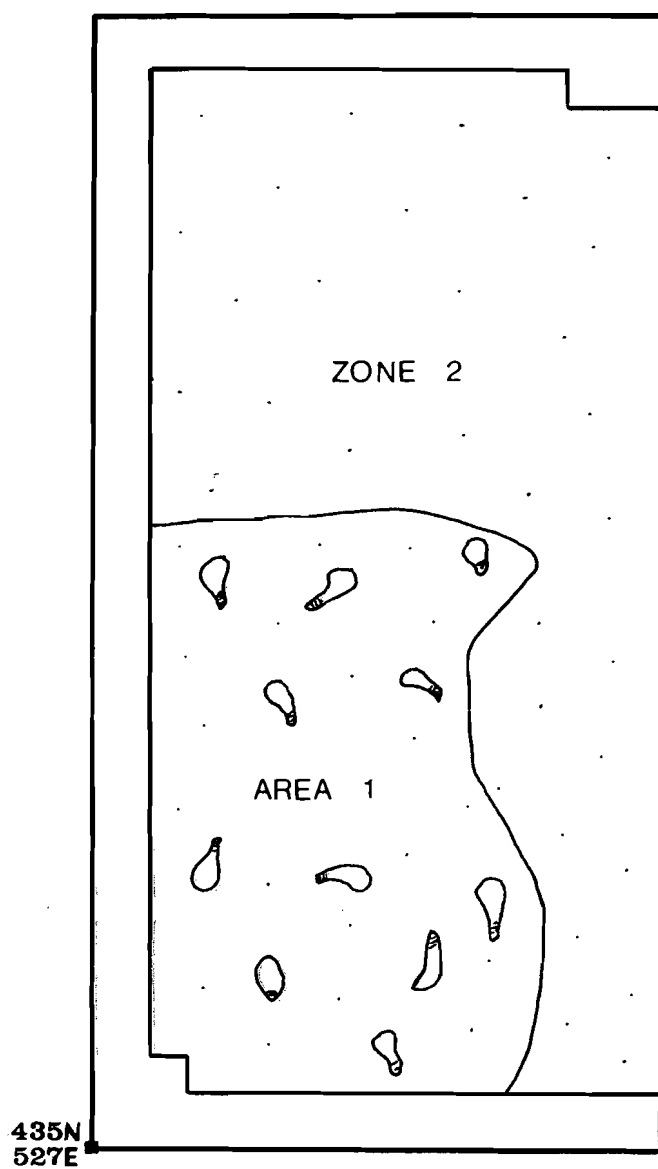
FIGURE 22

UNIT 14  
PROFILE

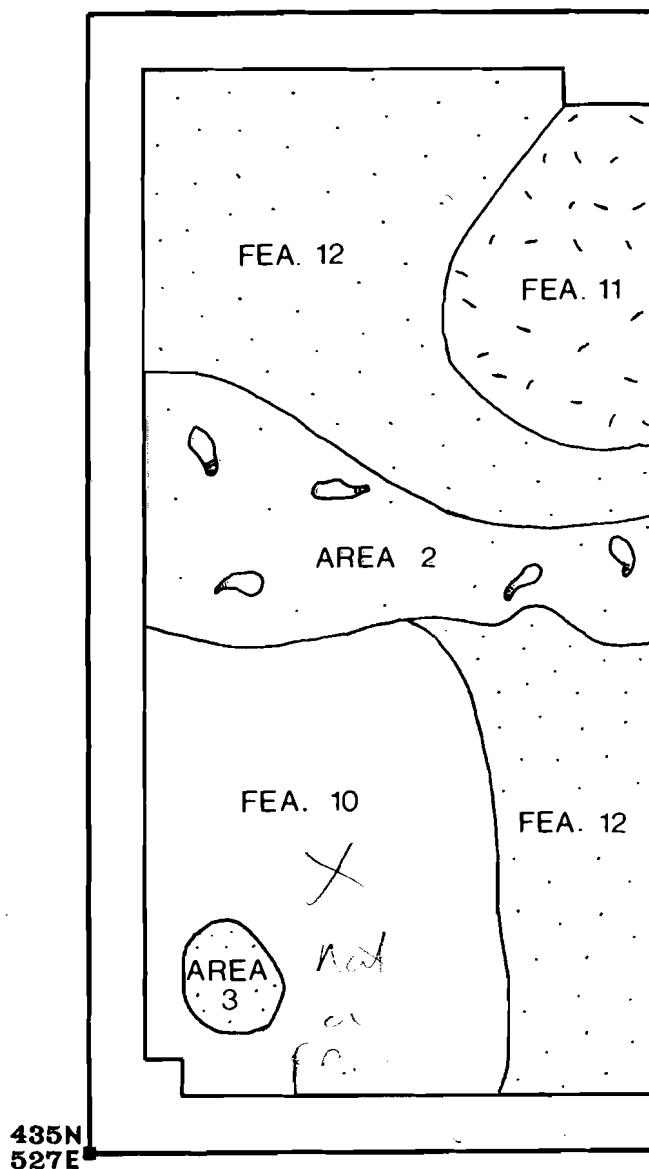
numerous whole shells, designated as Area 1 (see Figure 23). This was a thin shell lens, probably part of the shell midden which was not disturbed by plowing. The lack of European artifacts in Area 1 suggests that this may have been a prehistoric deposit. The soil beneath Area 1 was a mottled yellow-brown sandy loam. This was designated as Feature 10. The dark brown mottling in this feature was probably the result of leaching from Area 1 above. This mottling was only about 3 cm. deep. Beneath it, Feature 10 was a homogeneous yellowish-brown. A fiber-tempered sherd was found in the top 10 cm. of Feature 10, but otherwise this feature consisted of sterile subsoil. It proved not to be a cultural feature at all.

North of Feature 10, beneath Zone 2 Level 2, several new proveniences were noted (Figure 23). One of these, Area 2, was a narrow band of dark, shell-filled sandy loam running east/west across the unit. It was adjacent to Area 1, and may in fact have been a region of undisturbed shell midden, as Area 1 was. Area 3, a small, shallow, round intrusion into Feature 10, was also probably part of the shell midden. Adjoining to Feature 10 and Area 2 were two somewhat more significant proveniences: Feature 11 and Feature 12. Feature 11 was a round, 10 cm. deep, charcoal-filled area in the northeast corner of the unit. It was surrounded by Feature 12, a large area of dark brown sandy loam. It appears that Feature 11 was a hearth situated within Feature 12, which was probably a house floor. Feature 12 bordered against Feature 10, which was in actuality sterile subsoil. The fact that Area 1 had the same shape as Feature 10 suggests that the deposition of the shell midden began while the structure at Feature 12 was still standing, and that this trash material was piled up against the side of the building.

As Feature 12 was being excavated, various areas of different color soil appeared (designated as Areas 4-9). These were possibly associated with the



1.98 MBD



2.03 MBD

0 50  
cm



FIGURE 23

UNIT 14  
PLAN VIEWS

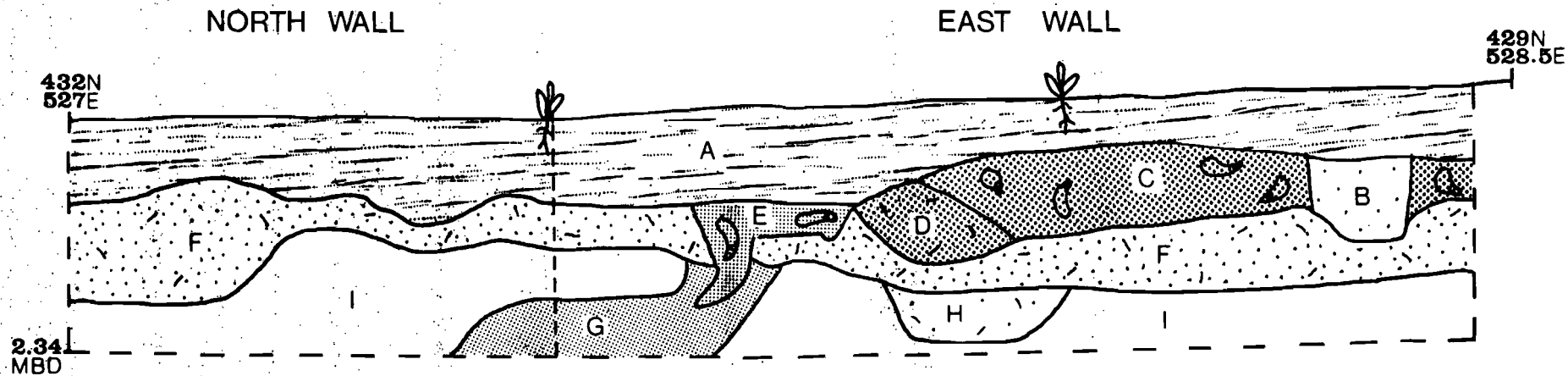
structure at Feature 12. They may have been simply regions of differential leaching of the organics in Feature 12, or they may reflect various activity foci within the structure. However, the nature of these activities cannot be determined from the evidence presented by the areas. Only the top 10 cm. of these areas contained artifacts, and none were of European origin. These proveniences remained distinct from the subsoil of Feature 10 for a considerable depth below the artifact-bearing level, though. This was probably the result of the leaching of organic material into the sterile subsoil below, as had occurred with Feature 7.

Very few artifacts were found in Feature 11 or Feature 12, and only one of these was of European manufacture -- a tiny lead shot found in Feature 12. Given that no European artifacts were found in the various areas which initiated at the same level as Features 11 and 12, or in Zone 2 Level 2 which capped all these proveniences, it could be that this shot was intrusive, and that the structure was occupied prehistorically. Small items like shot can easily migrate through sandy soil, particularly when subject to disturbances such as the plowing and flooding which have occurred at 8-SJ-31. However, at this point interpretations as to the date and ethnic identity of the inhabitants of Feature 12 are as uncertain as those for Feature 7.

#### Unit #15

Beneath the sod in Unit #15 was a layer of plowzone 25 cm. thick (Zone 1, Levels 1-2; Zone 2, Level 1), (see Figure 24). Unlike the other units excavated in 1985, no undisturbed sixteenth century sheet deposit was found beneath this plowzone. Instead, a number of features and areas were uncovered immediately beneath the plowzone (Figure 25). One of these, Feature 13, was a thin, shallow (4 cm. deep) band of dark, shell-filled loam running across the northern end of





- A. Plowzone
- B. PM 2
- C. Feature 14
- D. Unknown
- E. Root
- F. Area 1 and Zone 3
- G. Animal Burrow or Root Hole?
- H. Unknown
- I. Sterile Subsoil

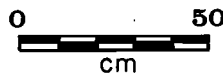
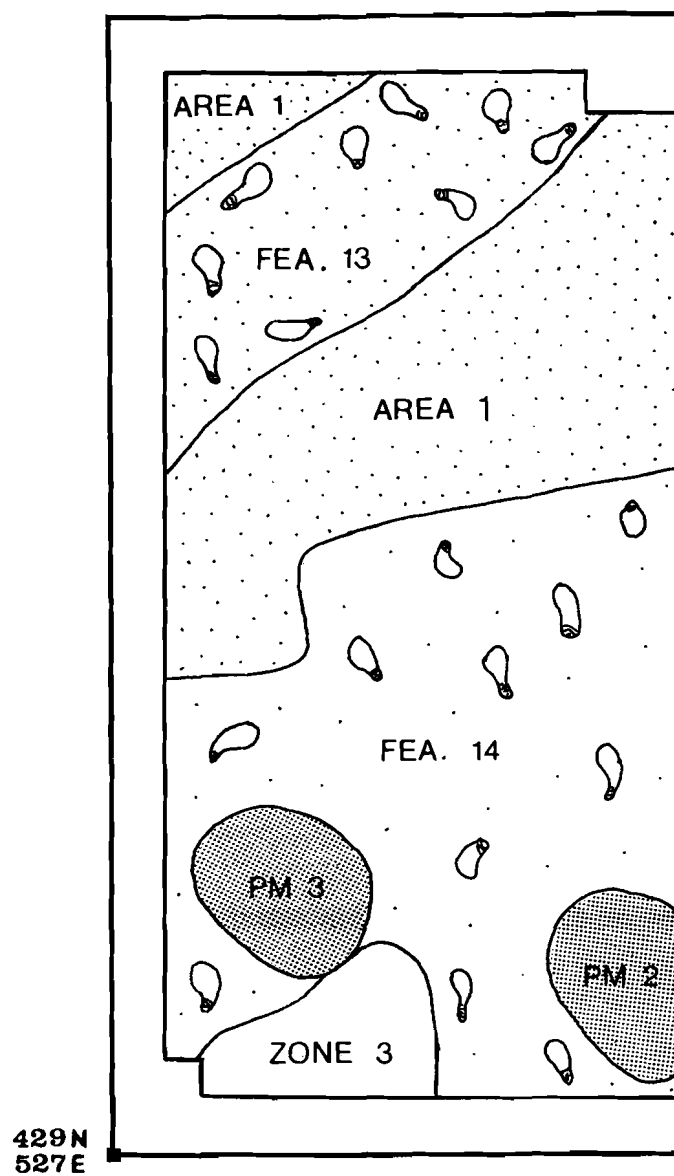


FIGURE 24  
UNIT 15  
PROFILE



0 50  
cm

FIGURE 25

UNIT 15  
PLAN VIEW

the unit. It contained a few St. Johns, San Marcos, and unnamed sand-tempered sherds. The shape and depth of this feature, and the broken up condition of the shells within it, suggests that it may have been a plowscar. In the southern half of the unit was a larger area of shell, designated as Feature 14. This was a relatively shallow (approximately 10 cm. deep) feature containing a few St. Johns and grog-tempered ceramics, as well as over 40 fiber-tempered sherds. A tooth from a domesticated pig (Sus scrofa) was found in this provenience also (E. Reitz 1986, personal communication). Pigs are not indigenous to the New World, thus this tooth must date to sometime after the arrival of Europeans. However, one cannot assume that this provenience definitely post-dates 1565. Hogs were brought to Florida by early explorers such as de Soto, and feral pigs quickly spread throughout the region (Reitz and Scarry 1985:69). Therefore, we can only assign a contact period date to this feature, without concluding that it was formed after the settlement of St. Augustine.

The shell in Feature 14 appeared to be less broken than that in the plowzone, suggesting that this feature, unlike Feature 13, was not a plow disturbance. The number of fiber-tempered sherds recovered from Feature 14 might suggest that it was an Orange period provenience. The later materials found within it would thus be intrusive. However, a more likely explanation is that the feature was a shallow contact period pit, perhaps related to the initial formation of the shell midden. This pit could have intruded into an Orange period component, thereby resulting in the accidental inclusion of fiber-tempered ceramics into the feature fill.

North of Feature 14, and extending below Feature 13, was Area 1. This area was composed of dark brown sandy loam containing a light amount of shell. Six St. Johns sherds were found in the top 10 cm. of Area 1, indicating a possible prehistoric date for this provenience. As elsewhere, the leaching of organics

into the sterile subsoil had occurred beneath Area 1. However, a San Marcos sherd was found at a depth of 35 cm. below the surface of Area 1. This was probably intrusive, as no other artifacts were encountered between the top of Area 1 and this level. It may be that Area 1 was the floor of some small prehistoric structure, but more excavation would be necessary to make certain of this.

South of Feature 14 was an area of yellowish-brown sandy loam which appeared to be sterile subsoil, and which was designated as Zone 3. However, the top 20 cm. of this zone contained over 60 fiber-tempered sherds (but no later ceramics), indicating a strong Orange period component in this part of the site. A stemmed chert projectile point was found about 5 cm. below the Orange period material in Zone 3. Although this could be a Florida Archaic Stemmed point, it more closely resembles a Columbia point, which dates to the St. Johns Ia or IIb periods (Bullen 1975), and thus would be intrusive beneath the Orange period material.

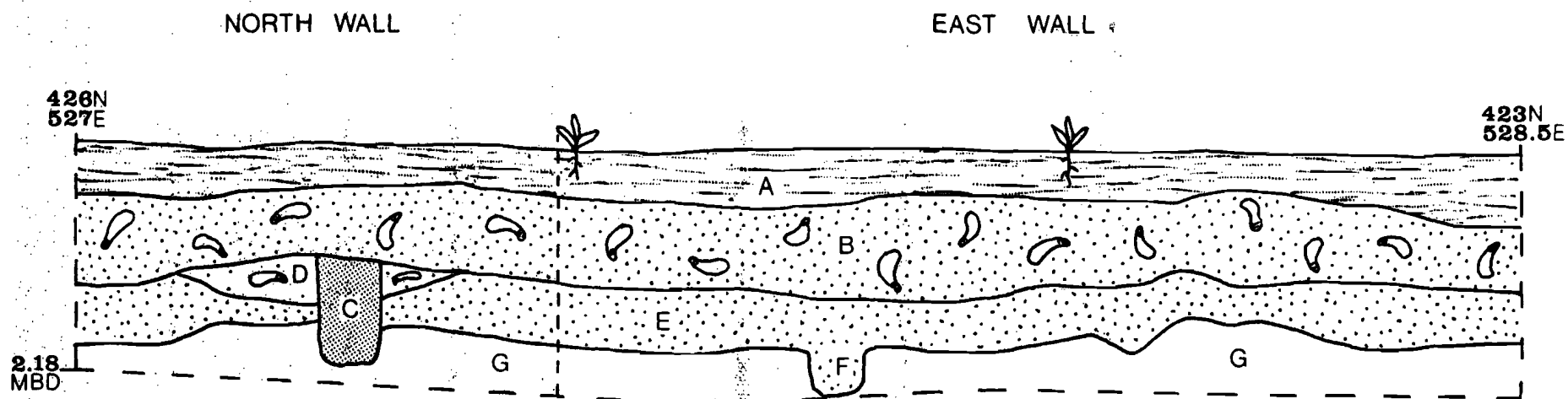
Because Feature 14, Area 1, and Zone 3 all initiated immediately below the plowzone, it is not possible to use elevations to establish a relative dating sequence for these proveniences. Zone 3, which had the appearance of sterile subsoil and contained fiber-tempered ceramics exclusively, probably was the earliest provenience, originating during the Orange period. Area 1 contained no fiber-tempered sherds, suggesting that it was a later, St. Johns period provenience. Feature 14 contained mostly fiber-tempered ceramics, but also included some late prehistoric/early historic materials. If Feature 14 is an Orange period provenience with later intrusive artifacts, then why is the adjacent Zone 3 so different in appearance? It would seem that the organic constituents of the soil had leached out from Zone 3 over time, resulting in a subsoil-like appearance (pedologically known as the A<sub>2</sub> horizon) for what was

actually an artifact-rich Orange period provenience. Why did this same leaching process not occur in Feature 14 if it too dated to the Orange period? On the other hand, if Feature 14 was a later provenience intruding into an Orange period horizon, with the fiber-tempered ceramics found in Feature 14 being redeposited from that horizon, then why were no such sherds found in or beneath Area 1? Clearly, the Orange period component in Unit #15 was not part of a broad horizon spread evenly across this portion of the site. Instead, this component exhibited strong spatial clustering. Over 100 fiber-tempered sherds were found in the southern half of Unit #15, but none were recovered in the northern half. This suggests that an Orange period feature -- no longer visually distinguishable -- was located in the southern half of the unit, and that Feature 14 later intruded into this. However, more fieldwork needs to be done in order to determine the chronological relationship of Area 1, Zone 3, and Feature 14 with greater certainty.

Two large postmolds, PM 2 and PM 3, were also uncovered beneath the plowzone in Unit #15. PM 2 contained a brown stoneware sherd, while PM 3 had a white clay pipestem in it. This indicates that these two postmolds were part of a structure that was probably erected in the eighteenth or nineteenth centuries. This structure may have been a field building associated with the agricultural activity which was conducted in the Fountain of Youth Park area at that time.

### Unit #16

Beneath the sod in Unit #16 was a 20 cm. thick layer of shell-filled dark brown sandy loam (Zone 1, Levels 1-2), (see Figure 26). This layer contained aboriginal, colonial European, and nineteenth century artifacts, and was part of the same plowzone found in the other units at 8-SJ-31. However, the plowzone in Unit #16 did differ from the others in that it contained no fiber-tempered ceramics. This probably indicates that the midden material in this part of the site had been deposited deeply enough before plowing began that the Orange period horizon which lay underneath the midden was protected from disturbance. Further support for this hypothesis can be seen in the variable depth of the shell deposits across the site. In Unit #14 -- the northernmost of those units excavated in 1985 which were found to contain an abundance of midden material -- the shell was largely confined to the plowzone. In Unit #15, just to the south of Unit #14, the shell was found throughout the plowzone, yet also extended in some areas 5 cm. to 10 cm. below the plowzone. These latter shell deposits may have been associated with the early stages of midden formation. In Unit #16 (the southernmost test square of 1985), the shell midden deposit extended 20 cm. below the plowzone across the entire unit. This suggests that the shell midden becomes thicker as one moves southward from the edges of the midden towards its center, which is as expected. However, Unit #16 was probably not at the heart of the midden. In 1976, test units were placed in an area 10 m. to 16 m. south of Unit #16. These squares revealed a plowzone approximately 20 cm. thick, as well as midden deposits which extended 30 cm. to 40 cm. below the plowzone (Merritt 1977; Lucchetti n.d.). Thus, it appears that the deepest, and therefore



- A. Plowzone
- B. Shell Midden
- C. PM 3
- D. Feature 16
- E. Area 1
- F. PM 6
- G. Sterile Subsoil

0 50  
cm

FIGURE 26  
UNIT 16  
PROFILE

possibly the oldest, parts of the midden are to be found to the south of Unit #16.

The first 5 cm. level below the plowzone in Unit #16 -- Zone 1 Level 3 -- was part of the midden, but the shell here was less broken than in the plowzone (see Figure 26). Most of the artifacts from this level were aboriginal ceramics. Twenty-two of these were St. Johns types, while one was a red-filmed sand-tempered sherd. European artifacts included a nail fragment, a polychrome glass cane bead (Kidd Type IIIn3 -- see Kidd and Kidd 1970), and a blue-on-white majolica sherd. This sherd was too small to positively identify, but the quality of its paste and glaze suggests a late seventeenth century or eighteenth century type such as San Augustin Blue-on-White or Puebla Blue-on-White. Animal bone was also abundant here, as it was in all the other shell midden proveniences. The majority of this bone appears to come from a variety of fish species (E. Reitz 1986, personal communication).

Below Zone 1 Level 3 was another 5 cm. level of shell midden, designated as Zone 1 Level 4. This was similar to Zone 1 Level 3 in that most of the artifacts recovered here were aboriginal ceramics. These included 13 St. Johns sherds, 4 San Marcos sherds, 3 grog-tempered sherds, and 3 sand-tempered or grit-tempered sherds. European artifacts included 2 nail fragments and a small tin-enamelled sherd, possibly a delftware. English or Dutch tin-enamelled ceramics could have entered the Spanish colonies as early as the sixteenth century, but in St. Augustine these types are usually found in contexts dating to the late seventeenth or eighteenth centuries, when trade with the British colonies began to become significant (Deagan 1983:35).



The bottom 10 cm. level of the midden was designated Zone 2 Level 1. The shell here was somewhat more broken than that in Zone 3 Levels 3-4. Two postmolds -- PPM 2 and PPM 3 -- intruded through this level, as did Area 1, a region of lighter colored, shell-filled soil in the southeast corner of the unit. Only aboriginal artifacts were found in Zone 2 Level 1. These included 9 St. Johns sherds, 1 San Marcos sherd, 2 sand-tempered sherds, and 3 fiber-tempered sherds, along with a fragment of a drilled shark's tooth (perhaps part of a necklace or pendant), the basal end of a chert tool, and 5 chert flakes.

In the upper, plow disturbed levels of the midden, 42% of the aboriginal ceramics recovered were St. Johns, while 49% were San Marcos. In the lower, undisturbed levels of the midden, 72% of the aboriginal ceramics were St. Johns, while only 8% were San Marcos. Similar ratios were noted by Merritt (1977) and Lucchetti (n.d.). These data provide an indication of a possible depositional sequence for the midden. The results of the 1985 fieldwork suggested that the bottom level of the midden (Zone 2 Level 1) may have been deposited during the prehistoric period, because, unlike the upper levels, it contains no European materials. It is also the only level to contain fiber-tempered ceramics, which probably came from an Orange period horizon underlying the midden. The presence of a San Marcos sherd in the bottom level may indicate that midden deposition first began in the late prehistoric period (or possibly even after contact), but this is not certain, as it could be intrusive from upper levels. The absence of European artifacts in the features beneath the midden supports the idea that midden deposition began no later than the early Historic period. Lucchetti (n.d.) also concluded that the bottom level of the midden was prehistoric, dating to the St. Johns II

period. Merritt (1977) found that the midden began prehistorically as well, but was not able to determine if this occurred during the St. Johns I or St. Johns II period.

Although the actual beginning date of the midden has not yet been ascertained, it does appear that most of the midden was deposited during the Historic period. In the two undisturbed levels above Zone 2 Level 1 in Unit #16, the great abundance of St. Johns sherds, when compared to the number of San Marcos sherds, indicates that this layer of the midden was probably deposited before the latter part of the seventeenth century, when San Marcos began to become the predominant aboriginal ceramic type in St. Augustine (Deagan 1983:117). European artifacts were rare in these two levels, but those recovered which were datable (the two tin-enamelled sherds) seem to point to a late seventeenth century or eighteenth century deposition. This date does not agree with that suggested by the aboriginal ceramics. It may be that the adoption of San Marcos pottery occurred more slowly among at least some of the aboriginal groups living outside of St. Augustine than it did among the Spanish living in town, and that St. Johns continued to be commonly used beyond the walls of St. Augustine into the eighteenth century. On the other hand, the two tin-enamelled sherds were very small, and could easily be intrusive from the later levels above. The fact that the glass bead found in Zone 1 Level 3 probably dates from before the eighteenth century (Marvin Smith 1985, personal communication), supports this latter hypothesis, and suggests that the middle levels of the midden most likely date to the late sixteenth century and seventeenth century. However, at this point it is impossible to positively determine from the artifacts when the middle levels of the midden were deposited.

The upper, plow disturbed levels of the midden were quite different from the lower levels in artifact content. In the upper levels, only 42% of the aboriginal ceramics were St. Johns, while 49% were San Marcos. Several explanations can be offered to account for the sudden change in artifact content between the upper and middle levels of the midden. It may be that there was a period of hiatus in the use of the midden lasting until the eighteenth century, during which time San Marcos became a numerically significant ceramic type in St. Augustine. On the other hand, it could be that San Marcos very rapidly replaced St. Johns as the dominant pottery at 8-SJ-31, although the archeological findings from elsewhere in St. Augustine indicate a more gradual rate of replacement. The most likely explanation is that a slow increase in the percentage of San Marcos occurred in the upper level of the midden. However, when the area was plowed in the late eighteenth or nineteenth centuries, the plowblade cut down into the earlier levels of the midden. Within the plowzone, the mixture of the later San Marcos deposits with part of the earlier St. Johns deposits took place. The transitional level at which the St. Johns was replaced by San Marcos was included within this plow disturbed zone. Thus, the sudden shift in aboriginal pottery types would appear in reality to reflect only post-depositional processes.

If we assume that the date and rate at which St. Johns pottery was replaced by San Marcos was the same at 8-SJ-31 as that in town (an assumption yet to be proved), then a model of the depositional sequence in the south midden can be suggested. It appears that the midden represents a gradual, and probably fairly steady, accumulation of material from the late prehistoric or early historic period into at least the early eighteenth century. Since the nearby mission village of Nombre de Dios --

the most likely source of this midden material -- had moved some distance away by the first quarter of the 18th century (Tepaske 1964; Chaney 1986), it seems probable that midden deposition had largely ended by that time. Of course, trash continued to be disposed of at 8-SJ-31 throughout the late eighteenth and nineteenth centuries, and artifactual evidence of this was found in the plowed midden zone in Unit #16. However, this material probably reflects agricultural field dumping or some other activity besides aboriginal midden deposition. The presence of these artifacts intermixed with earlier ones in the upper midden levels is the result of plowing.

At the bottom of the midden in Unit #16 -- beneath Zone 2 Level 1 -- a number of additional proveniences appeared (Figure 27). One of these was a shell-filled pit in the southwest corner of the unit, which was designated as Feature 17. Because only part of Feature 17 was within Unit #16, this feature could not be excavated in its entirety. However, that which was excavated revealed a pit more than 80 cm. in diameter at the top, with steeply sloping sides, a flat bottom, and a depth of 40 cm. Artifacts were rare in this feature, with only 3 St. Johns sherds, 1 sand-tempered sherd, 1 San Marcos sherd, and 1 chert flake being recovered. The presence of the San Marcos sherd would seem to date this pit to the late prehistoric or early historic period, shortly before midden deposition began. Although few artifacts were in this provenience, faunal material was very abundant. Besides the heavy concentration of shell contained within this feature, preliminary faunal analysis revealed the presence of a large amount of small fish bone, including a minimum of 95 individuals representing 25 taxa from the 1/16" sample alone (Young

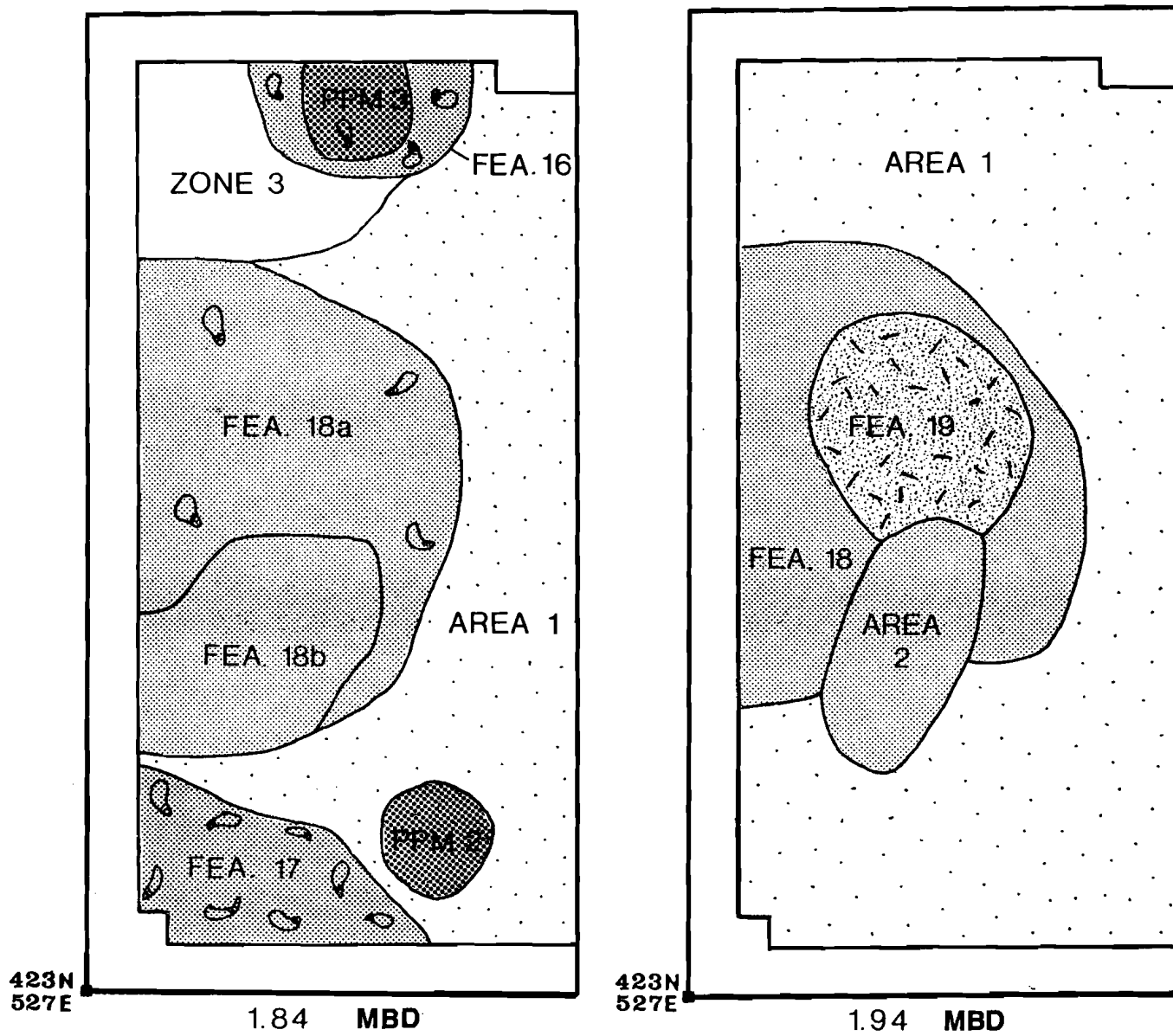


FIGURE 27

UNIT 16  
PLAN VIEWS

1987). Crab shell was also noted to be more common here than elsewhere on the site.

In the center of the north edge of the unit was another new provenience -- Feature 16. This small round feature, which was bisected by the unit wall, was filled with broken shell. It was 10 cm. deep, and contained no artifacts. Intruding through the center of Feature 16 was PPM 3. This round bottomed postmold, 20 cm. in diameter, contained no artifacts, but a large amount of charcoal was recovered from it. A heavy concentration of mostly whole shell was also noted, but it was largely confined to the upper portions of the postmold. PPM 3 extended for 14 cm. below the bottom of Feature 16, and its overall length from top to bottom was 31 cm. Because PPM 3 intruded through Zone 2 Level 1, it must post-date the beginning of midden deposition. However, since PPM 3 initiated below those levels of the midden which definitely date to the historic period, it would appear that this post was set in place not long after midden deposition began. Whether this was before or after Spanish contact is uncertain at this time. The relationship of PPM 3 to Feature 16 is also uncertain. It may be that Feature 16 was a small trash pit or shell lens, and that PPM 3 accidentally intruded through it. On the other hand, Feature 16 could be a post hole which was dug for PPM 3. Since this post was located on top of a shell midden (Zone 2 Level 1), it could not have been easily driven into place, as the shell would interfere. It would probably be necessary to dig a hole through the shell in order to erect the post. Once the bottom of the midden was reached, the post could be driven deeper into the shell-free soil below. The backdirt from the excavation of the posthole could then be returned to the hole to further stabilize the post. This excavation and backfilling could account for why

the shell in Feature 16 is broken up, and for why PPM 3 extends beneath the bottom of Feature 16. Later, after the post was removed (or perhaps burned, given the amount of charcoal in PPM 3), unbroken shell from the midden (Zone 1 Level 4) fell into the resulting hole. This would explain why the condition of the shell from PPM 3 is different from that in Feature 16. This scenario would also account for why the shell in Zone 2 Level 1 of the midden is somewhat more broken than that in the levels above it. Presumably, PPM 3 was part of a structure, or at least was associated with some activity which took place after midden deposition had begun. This activity appears to have resulted in the breakage of the shell in midden. Later, after PPM 3 had been removed, this activity apparently stopped, as the midden shell remained more nearly whole.

In the center of Unit #16 was a large, dark, circular provenience, designated as Feature 18. This feature was initially divided into two sections, A and B. Feature 18A contained a light amount of shell, while Feature 18B had virtually none. Also, the soil in Feature 18B was much more compact than that in Feature 18A. Each section contained one St. Johns sherd and one chert flake. In addition, a small piece of daub was found in Feature 18B. After the top 10 cm. level of Feature 18 was excavated, the A and B designations were dropped, and Feature 18 was treated as a single provenience. It was noted at this point that the area of compacted soil in Feature 18 (previously designated as section B) had changed in shape and had become lighter in color. Therefore, it was redesignated as Area 2. The rest of Feature 18 still basically retained its original shape and color. Another new provenience was also noted after the top 10 cm. of Feature 18 had been removed. This was designated as Feature 19. (However, when viewed in profile, it became apparent that

Feature 18 and Feature 19 had actually initiated at the same elevation -- just below the shell midden). Feature 19 was a small, round, very dark provenience in the center of Feature 18. It contained a great amount of charcoal, although this was largely confined to the top 5 cm. of the feature. However, light charcoal flecking continued on to a depth of 15 cm. Feature 19 remained distinguishable from the surrounding subsoil beyond this depth, but this was probably the result of leaching processes. The top 5 cm. level of Feature 19 contained 5 fiber-tempered sherds. This was also true for the top level of Area 2. Level 2 of Feature 18, which was at the same elevation as Feature 19 Level 1 and Area 2 Level 1, contained one fiber-tempered sherd. No artifacts were recovered from either Feature 18 or Feature 19 below this level (Area 2 was only 5 cm. deep, and ceased to exist after the first level was removed). The lack of artifacts after this level in Feature 18 and Feature 19 probably means that the continued presence of these two proveniences beyond this depth was mostly due to the leaching of organics into the sterile subsoil.

Surrounding Feature 18, and extending across the entire unit, was a slightly lighter color soil which was designated as Area 1 (Levels 2 and 3). Area 1 Level 1 had been previously noted intruding through Zone 2 Level 1 (see above), but this first level was filled with shell, whereas Levels 2 and 3 contained virtually no shell. Therefore, it may be that Level 1 of Area 1 was created through a different process or activity than that which formed Levels 2 and 3, and that these proveniences were not really associated with each other. Seven fiber-tempered sherds, two chert flakes, and a possible shell awl were recovered from Area 1 Level 2, while one chert flake was the only artifact found in Level 3. Level 2 was 14



cm. thick, thus it appears that artifacts stopped occurring in Area 1 at roughly the same depth as in features 18 and 19.

Based on the amount of charcoal it contained, it seems probable that Feature 19 was a hearth of some sort. The nature of Feature 18 is somewhat more problematic. It could have been the floor of a small structure (approximately 1.5 meters in diameter), which contained within it a hearth (Feature 19). However several factors weigh against -- but do not disprove -- this conclusion. The structure at Feature 18 would probably have been too small to serve as a house. It could have had another function: perhaps, given its proximity to Feature 17, the structure functioned in the processing or smoking of fish and meat. However, this is by no means certain. In addition, no postmolds were noted in obvious association with Feature 18. Therefore, it possibly may not have been a structure at all. Instead, Feature 18 may have simply been produced by the activity centered around the hearth (Feature 19). It would have been made darker than the surrounding Area 1 through the trampling of ash and charcoal into the soil. If this was the case, then Area 1 was the actual floor of the structure. However, if Feature 18 was simply a band of carbon-darkened soil around a hearth, it would be expected to grade gradually into the surrounding structural floor, as the amount of displaced charcoal and ash would decrease with distance from the hearth. Feature 18, on the other hand, had a sharply defined boundary. These complicating factors make it impossible at this point in time to positively ascertain the relationship between the various proveniences located beneath the shell midden in Unit #16.

The date of these proveniences is also uncertain. Features 17, 18, and 19, as well as Area 1, all initiated at the same elevation, and

therefore may have had roughly the same date of origin. However, the artifact content of these proveniences clouds the issue. Area 1, Feature 18, and Feature 19 all had similar artifact assemblages, consisting primarily of fiber-tempered ceramics, with occasional St. Johns or grit-tempered sherds in the uppermost level. This may indicate that these proveniences date to the transitional stage between the Orange and St. Johns I periods, or more likely, that they date to the Orange period, with the later material being intrusive from the shell midden above. However, Feature 17 had no fiber-tempered sherds, but it did contain St. Johns and San Marcos pottery, indicating a probable late prehistoric (St. Johns IIc) or early historic date for this feature. Since Orange period artifacts have usually been found stratigraphically below St. Johns period materials elsewhere on the site, it would be somewhat unusual to find Orange period and St. Johns IIc period features initiating at the same elevation despite an age difference of several thousand years. But if Area 1 and Features 17, 18, and 19 all date to the same period, then how do we explain their varying artifact assemblages? It could be that Area 1 is the floor of a late prehistoric structure which was situated on top of an Orange period horizon. Activity within this structure, and around the shallow hearth at Feature 18 and Feature 19, may have resulted in the displacement of some Orange period artifacts. The leaching of organics from the living floor of this structure into the Orange period horizon below possibly made it appear that Area 1 and Features 18 and 19 were deeper than they actually were, so that it seemed as if the lower levels of these proveniences were Orange period deposits. Feature 17, on the other hand, was a deeply dug pit which intruded all the way through the Orange period horizon. The Orange period soil here may have been redeposited elsewhere when the pit

was constructed, and was replaced with contemporary (late prehistoric) refuse as the pit was filled up. This explains why no Orange period artifacts were found in Feature 17. However, we cannot as yet come to any definite conclusions on the chronological and functional relationships of the proveniences found beneath the shell midden in Unit #16. The evidence at this point seems to indicate that they are all associated with a late prehistoric house structure, but this is by no means certain. Carbon dating the charcoal from Feature 19 could help clarify the situation, but funds are not presently available for this. Hopefully, future excavations here will produce a solution to this question.

#### Eastern Test Trench

The test trench was excavated in 3 m. by 1 m. sections (Figure 28). The plowzone from each section was shoveled out, and the soil was deposited next to the section. The soil was not screened. Diagnostic or unusual objects which were noticed in the plowzone were saved, but no deliberate attempt to recover artifacts from this level of the test trench was made. Once the level at which the prehistoric and early historic proveniences initiated was reached (i.e., the level of Features 7, 8, and 9 in Units #12 and #13), excavation was stopped. The floor of each test trench section was cleaned with a trowel, and all the proveniences that were noted were mapped and photographed. All of these proveniences were designated as either areas or postmolds, as the narrowness of the test trench usually made a more specific interpretation of their function potentially unreliable. However, it must be pointed out that some of these areas were probably transitional to sterile subsoil, and thus

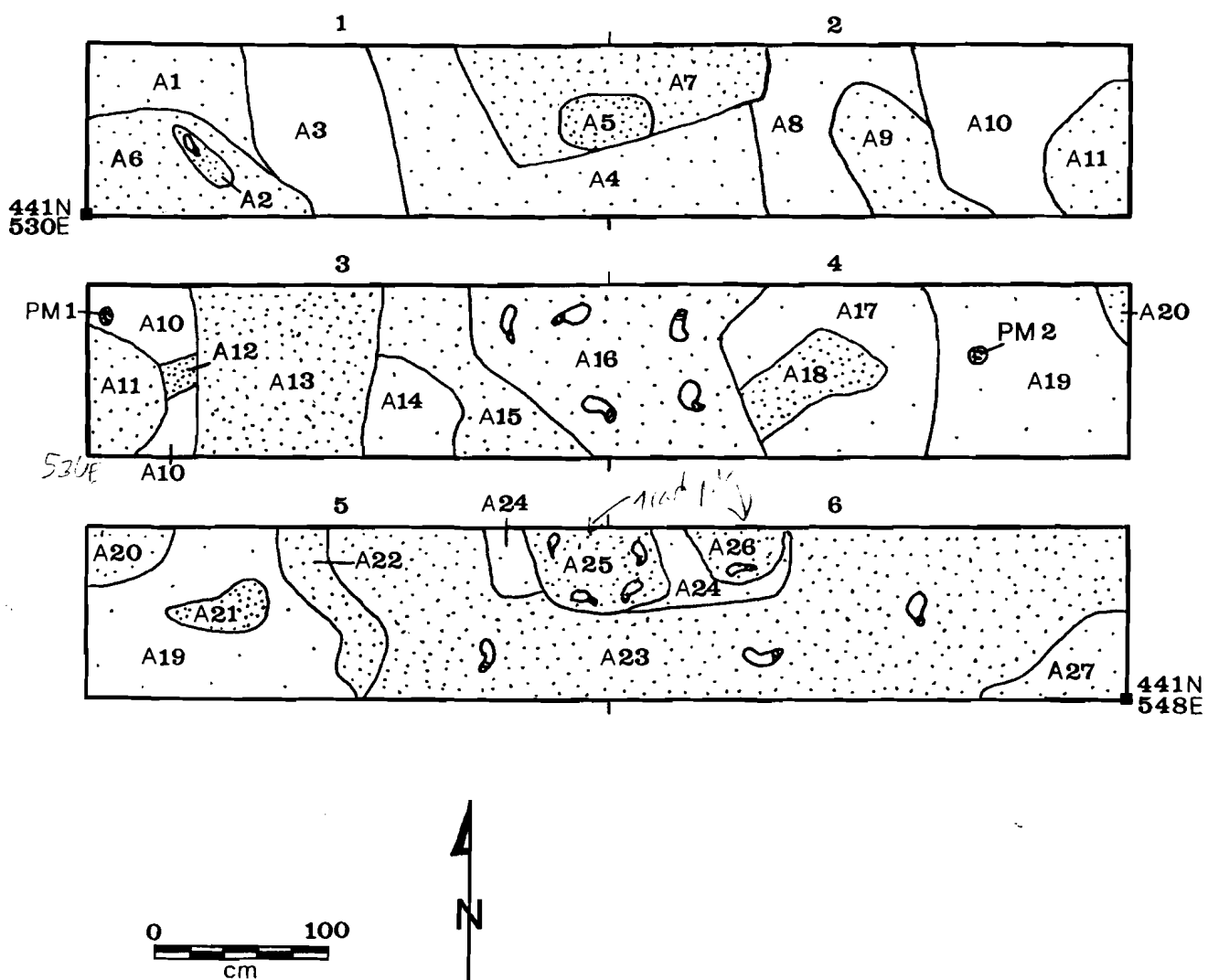


FIGURE 28

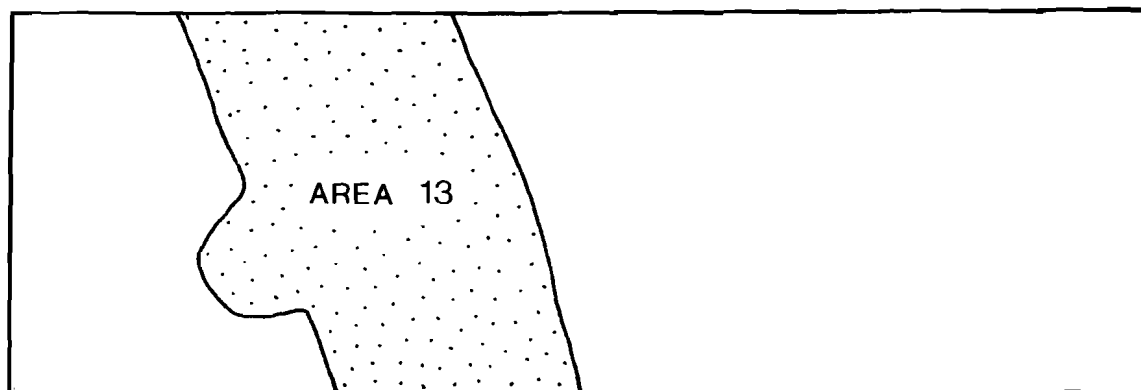
EAST TEST  
TRENCH

actually should have been given zone designations, while others would no doubt have been called features had the excavation unit been larger. The area designations proceeded sequentially across the entire test trench, so that Area 1 was found in Section #1, while Area 27 was found in Section #6.

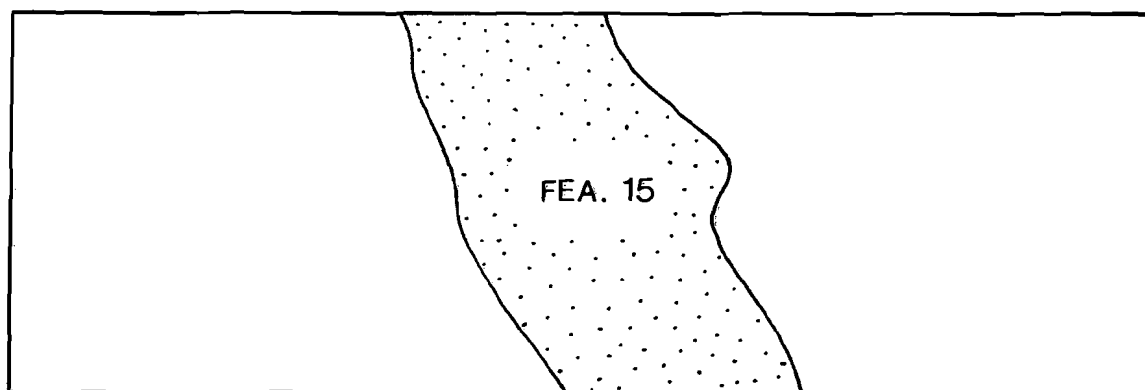
Most of the areas uncovered in the test trench were not excavated after being exposed, so it was impossible to date them. The functions of these proveniences were also largely unknown, although the shapes and colors of several areas did suggest certain provenience types. Areas 3 and 10 appeared to be the top of sterile subsoil. Areas 8, 14, 17, 19, and 24 may also have been transitional to sterile subsoil, but that is less certain at this point. Areas 25 and 26 were demonstrated through later excavation to be trash pits, and by analogy it can be suggested that the similarly-shaped Areas 9, 11, 18, and 20 may also have been pits of some sort. However, this proposition needs to be tested through excavation. The square sides of Area 7 suggest that it may be the floor of some structure, but this also needs to be tested. The functions of the other areas in the test trench cannot even be guessed at with any confidence.

Several areas in the eastern test trench were excavated. One of these was Area 13 (see Figure 29). This provenience was tested because it corresponded in location to an anomaly revealed by the EM31 Conductivity Meter. Area 13 was a linear feature oriented north to south, and was approximately 1 m. wide at its top. However, after the upper 2-3 cm. of Area 13 was removed, it became apparent that this this feature was a trench roughly 60-70 cm. wide, running northwest to southeast. The area was 17 cm. in depth, and was removed in four levels. The artifacts from

## SECTION 3



## SECTION 6



546.3

548

0 50



FIGURE 29

EAST TEST  
TRENCH  
F15, A13

this area were mixed, and included 25 fiber-tempered sherds, 12 St. Johns sherds, 4 sand-tempered sherds, numerous iron fragments, a piece of copper sheet, and a small lead shot. Bone was also common in Area 13. The artifacts suggest that Area 13 probably originated in the Historic period, and that it intruded through an Orange period component. It was originally thought that Area 13 may have been part of a palisade trench, but no postmolds were evident in this provenience. Therefore, no conclusions about the function of Area 13 can be made until further excavations reveal more about the size and shape of this feature.

Two apparent trash pits -- designated Area 25 and Area 26 -- were excavated in Section #6 of the test trench (see Figure 28). These two features extended only partly into the test trench, and thus were not entirely excavated. Area 25 was approximately 80 cm. in diameter and 32 cm. deep. It was not excavated in levels, but rather was removed as a single provenience (as was Area 26). Area 25 contained 13 St. Johns sherds, 22 grog-tempered sherds (7 of which were cob-marked), 1 sand-tempered sherd, and one possible shell awl. Bone and shell was also abundant. The presence of an iron spike, iron fragments, and a small amount of mortar suggests that Area 25 was formed during the Historic period. Area 26 was adjacent to Area 25, and was smaller in size (approximately 50 cm. in diameter and 17 cm. deep). It also contained fewer artifacts and shell than Area 25, but it did have more bone. Two St. Johns sherds and a small amount of mortar were recovered from Area 26, which seems to suggest an Historic period origin for this feature. The absence of diagnostic European artifacts from these two areas makes assigning to them a more specific date impossible, but analogy to other

proveniences from the site suggests that they are possibly of sixteenth century origin.

In the southeast corner of test trench Section #6 was part of an irregularly-shaped provenience designated as Area 27. This was excavated to a depth of 20 cm. It was still distinguishable from the surrounding matrix at that point, but time did not permit further excavation. Little cultural material was recovered from the lower portions of Area 27. Artifacts that were found in this provenience included one sherd each of Columbia Plain majolica and olive jar, iron fragments, 2 sherds of St. Johns, 1 grog-tempered sherd, chert flakes, and some bone and shell. These suggest a sixteenth century date for Area 27, but determination of its function would require further excavation.

Areas 25, 26, and 27 all appeared to intrude into Area 23. This large, dark provenience in Sections #5 and #6 was approximately 5 cm. thick. It contained a number of European and aboriginal artifacts, along with a fairly large amount of shell and bone. The European artifacts (Columbia Plain majolica, olive jar, lead shot, etc.) point toward a sixteenth century date for Area 23. The aboriginal artifacts (mostly St. Johns and grog-tempered types, along with a few San Marcos sherds) also suggest a contact period origin. However, the function of Area 23 remains unknown.

Beneath Area 23 a number of additional areas and postmolds appeared. One of these was a dark, trench-like feature running northwest-southeast across the test trench. This was designated as Feature 15 (see Figure 29). It was approximately 60 cm. wide, and 15 cm. deep. Feature 15 contained a fairly large amount of shell and bone. Aboriginal artifacts recovered there included a number of St. Johns, grog-tempered, and



sand-tempered sherds, along with one San Marcos sherd. A bone bead and a silver bead were also found. European artifacts such as olive jar, redware, lead shot, mortar, and iron fragments suggest a post-contact origin for this feature. Given its position beneath Area 23, Feature 15 probably dates to early in the Historic period. No postmolds were noted in Feature 15, so, as with the similar Area 13, the function of this feature remains unknown.

#### Western Test Trench

The western test trench (see Figure 30) was excavated in the same manner as the eastern test trench. None of the areas revealed in the western test trench were excavated, so dating those proveniences is impossible at this point, as is reliably assigning a function or provenience type to them. However, a number of areas that appear worthy of further investigation were uncovered. Two of these -- Area 10 and Area 20 -- were very large, dark areas which corresponded to patches of distinctive vegetation that had been noted before excavation began. The weeds growing over Area 10 and Area 20 were different from those which surrounded them. Area 10 was approximately 7.5 m. wide and roughly rectangular in shape, but the larger (10 m. wide) Area 20 was more irregular, as revealed both on the surface (by the vegetation) and beneath the plowzone in the test trench. Probes with a soil corer indicated that Area 10 was a deep feature. The surface and subsurface evidence suggests that Area 10 could possibly have been a large structure of some sort (a bulio or casa fuerte perhaps?), and one goal of future excavations at 8-SJ-31 will be to determine the actual nature of this feature.

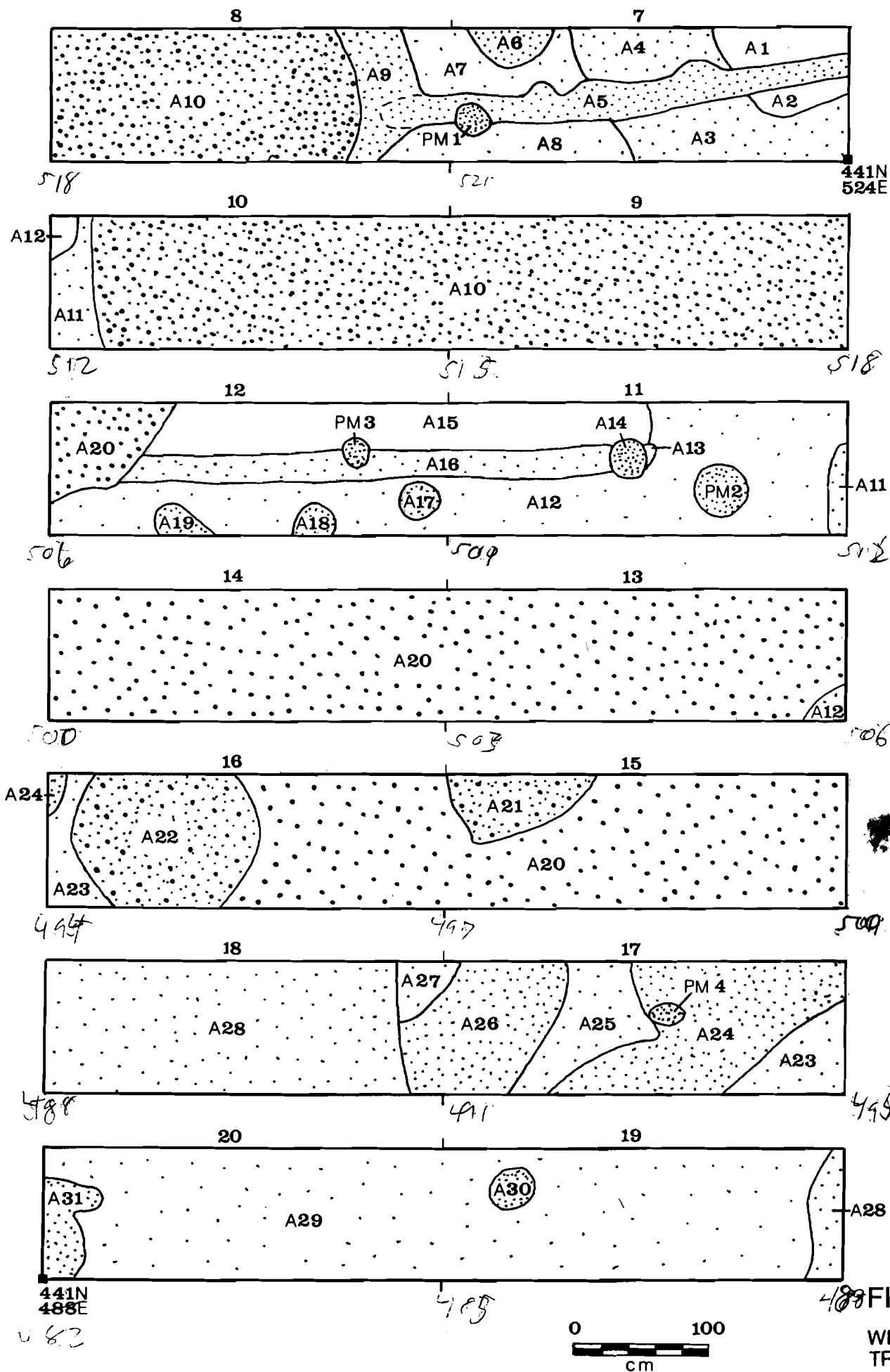


FIGURE 30  
WEST TEST  
TRENCH

One other notable provenience in the western test trench was Area 5/Area 15 (see Figure 30). This narrow (approximately 20 cm. wide) linear feature ran roughly east-west through the center of the test trench. A number of possible postmolds were noticed in this provenience, suggesting that it may have been a fence line of some sort. Area 5 was the designation given to this feature on the eastern side of Area 10, where it was about 3 m. long (extending beyond the eastern end of the test trench). It appeared to run to the edge of, but not through, Area 10. Area 15 began about 1.5 m. to the west of Area 10, and continued on for roughly 3 m. before stopping at the edge of Area 20. It may be that Area 10 and Area 20 intruded through Area 5/Area 15, but at this point the relationship between these proveniences is not completely clear. Future excavations at 8-SJ-31 will investigate these and the other features uncovered in the test trenches, in an effort to make clear their dates and functions.

#### EM 31

The EM31 Non-Contacting Terrain Conductivity Meter is a geological remote sensing device which has been found to have archeological applications (Bevan 1983). Use of the EM31 was made at 8-SJ-31 in 1985 in an attempt to locate subsurface features. Readings were taken with the machine at two meter grid intervals in that area of the site which has been most heavily tested archeologically. The results from this were somewhat inconclusive. The two shell middens show up well as areas of relatively uniform conductivity readings (see Figure 14), although the absolute value of the conductivity readings differs greatly between the

two middens. A portion of the village area between the two middens also shows up as a conductivity anomaly. However, none of the EM31 contour lines can be directly correlated with any of the features uncovered so far at the site. For example, the locations of neither the barrel well nor Merritt's 1976 test units are readily apparent from the EM31 data, despite the fact that they are relatively large and deep features. Therefore, until we have a better understanding of the EM31 signatures of various types of archeological features, the most that can be done with the Fountain of Youth Park data is to point out general areas of interest, as indicated by the presence of anomalous readings. These general areas can then be tested archeologically. For example, the EM31 data suggests that the area of interest in the village location between the two shell middens is larger than that which has been tested so far. The area around 475N 535E appears to be of interest, as is the area of relatively straight EM31 contour lines to the west of the southern shell midden. Additional surveying with the EM31 in these areas, along with further excavation, should help refine the techniques by which interpretation of conductivity data from St. Augustine is made. (The areas of extremely high conductivity readings in the northern portion of the EM31 survey area at 8-SJ-31 are produced by the presence of buried metal water pipes).

## CONCLUSIONS

The results of the 1985 excavations at the Fountain of Youth Park, when combined with those from previous investigations at the site, have helped to increase our understanding of the history of occupation at 8-SJ-31. It appears that significant occupation began during the Orange period, with activity then being most heavily concentrated in the area of the two later shell middens at the eastern end of the site. However, the nature of this Orange period occupation is still unclear, as few distinct features dating to this time have been found as yet. Most of the Orange pottery recovered so far has been found in what otherwise appears to be sterile subsoil. In addition, no Orange period shell middens, which are characteristic of coastal sites from that period, have been found at 8-SJ-31. Therefore, we still have much to learn about the Orange period component at this site.

The archeological evidence suggests that the next significant occupation at the eastern end of the Fountain of Youth Park occurred during the St. Johns II period. During this time, a village was established. Trash discarded to the north of this village accumulated into a large midden during the prehistoric period. Another midden, this one to the south of the village, may have begun building during this time. The village itself may have shifted slightly in location through time. It is possible that burials from the village may have been interred in an area to the west, near where the later mission cemetery was, but this is far from certain. Also uncertain is the date at which this village was abandoned. However, the recovery of European artifacts within structures that appear to be of aboriginal construction (such as Feature 7), suggests that the village continued to be occupied for at least a short while after the arrival of the Spanish.

The 1985 excavations did not greatly change the picture of prehistoric life at 8-SJ-31 which has emerged from previous investigations. However, our view of the post-contact period occupation at the site was significantly altered by the 1985 fieldwork. There is now evidence of a pre-1580 (possibly pre-1571) Spanish occupation at the eastern end of 8-SJ-31, which is apparently separate from the sixteenth century settlement which occurred at the mission of Nombre de Dios, in the southwest corner of the Fountain of Youth Park. Evidence for the Spanish occupation at eastern end of the site includes both European features, such as the well, and the presence of a large number of apparently early European artifacts. The high ratio of European to aboriginal artifacts in these historic features, along with the relative absence of non-local pottery types (such as San Marcos) among the aboriginal artifacts which were recovered in the historic features, further suggests that an early Spanish occupation occurred at 8-SJ-31. The nature of this occupation is at yet unclear. Given that an aboriginal village was located here, it is tempting to suggest that this is the site of Seloy's village and that therefore the Spanish occupation was part of the initial settlement of St. Augustine. However, until evidence of fortification is found at 8-SJ-31, along with evidence of a more extensive Spanish settlement than that which has been uncovered so far, it cannot be concluded that this is the site of the first Spanish occupation in St. Augustine.

In order to begin to answer the questions about the Spanish occupation at 8-SJ-31, along with those concerning the prehistoric components of the site, more excavation needs to be undertaken. For example, Features 20 and 21 need to be further investigated in order to determine if either could be part of a sixteenth century palisade. Area 13 and Feature 15 in the eastern test trench, along with Areas 5, 10, 15, and 20 in the western test trench, also appear to be worthy of further investigation. More work needs to be done on Feature 7 to

determine if it was indeed an aboriginal structure occupied after contact, or if it was instead built by the Spanish. On a more general level, a goal of further research at 8-SJ-31 should be to expose large areas, in order to better understand spatial patterns in both the prehistoric village and in the Spanish settlement. Another focus of research should be to examine in greater detail the three shell middens at the site. These middens appear to have formed at different dates, therefore they could help in the understanding of aboriginal culture change through time as a result of contact with Europeans. Basic questions concerning the site itself remain to be answered. For example, almost no work has been done at the western end of the field where excavations were conducted in 1976 and 1985. This part of the site, between the village area and the cemetery area, could be the key to understanding the post-contact occupation at 8-SJ-31. Hopefully, research will continue in the future at the Fountain of Youth Park, as it is clearly a site with rich potential for addressing issues in the study of cultures in contact.

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FIGURE 1  
Site Location

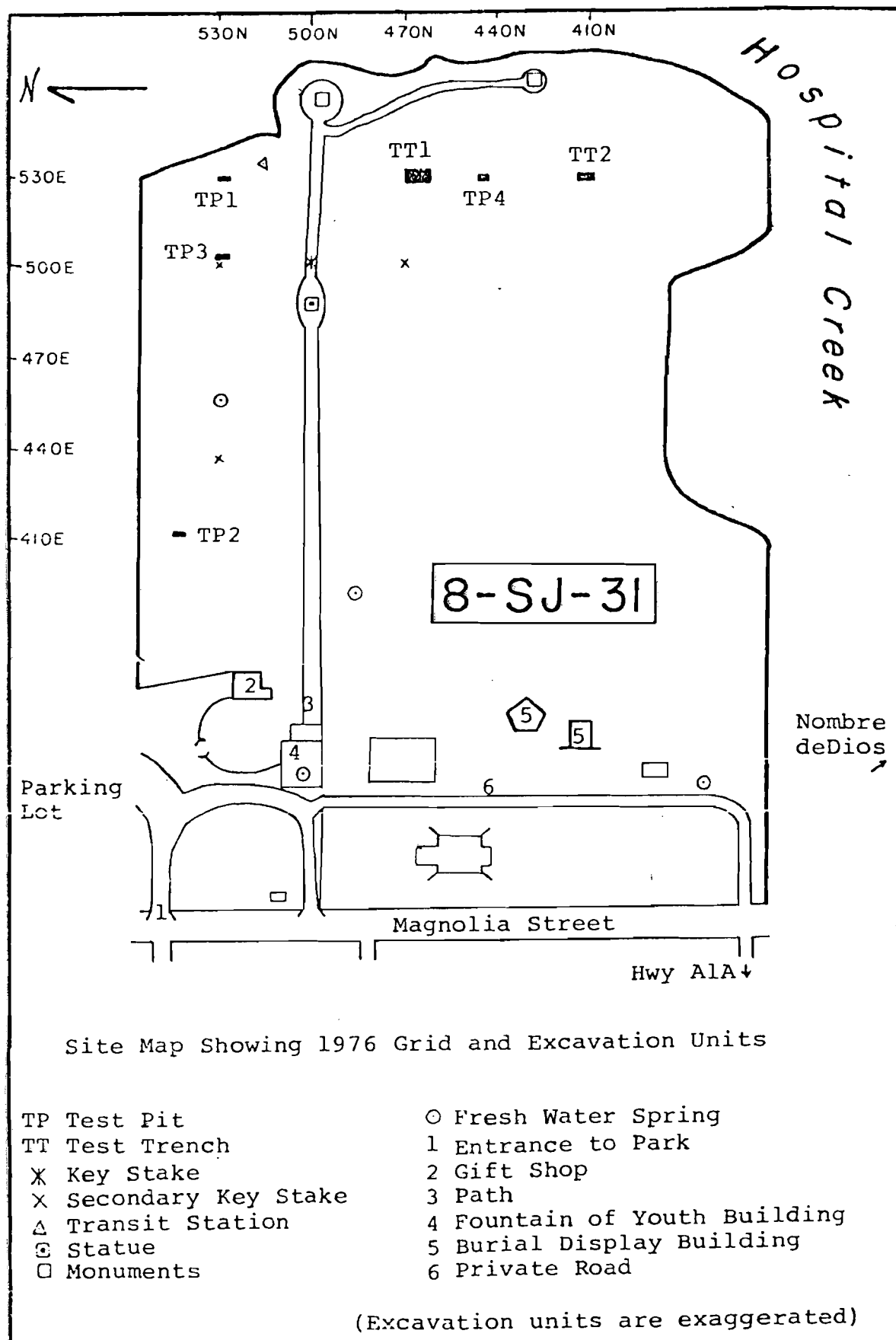


FIGURE 2  
 1976 Site Map  
 (from Merritt 1977)



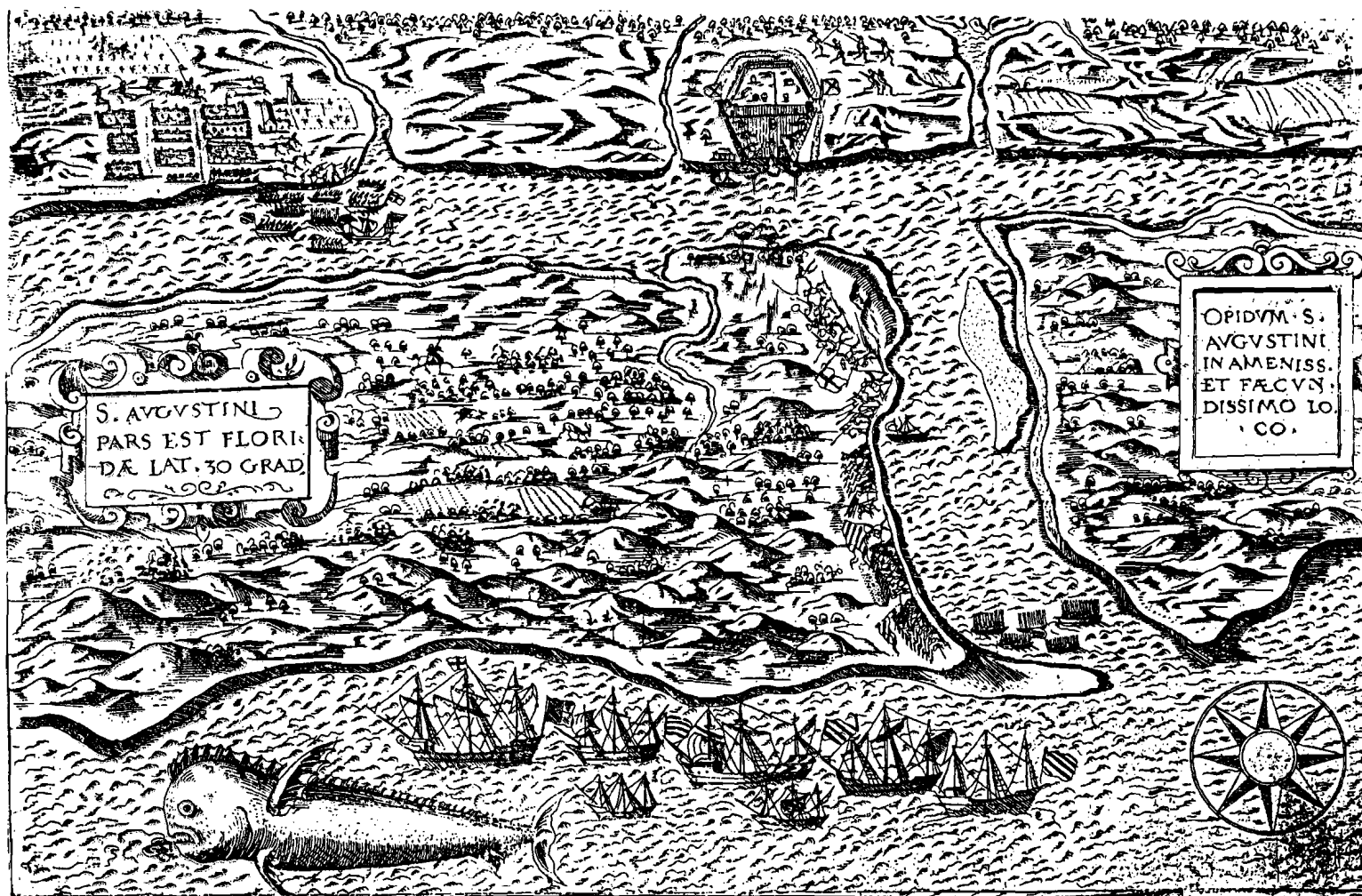


FIGURE 5

Boazio Map of St. Augustine, 1586.

Note location of town and fort.

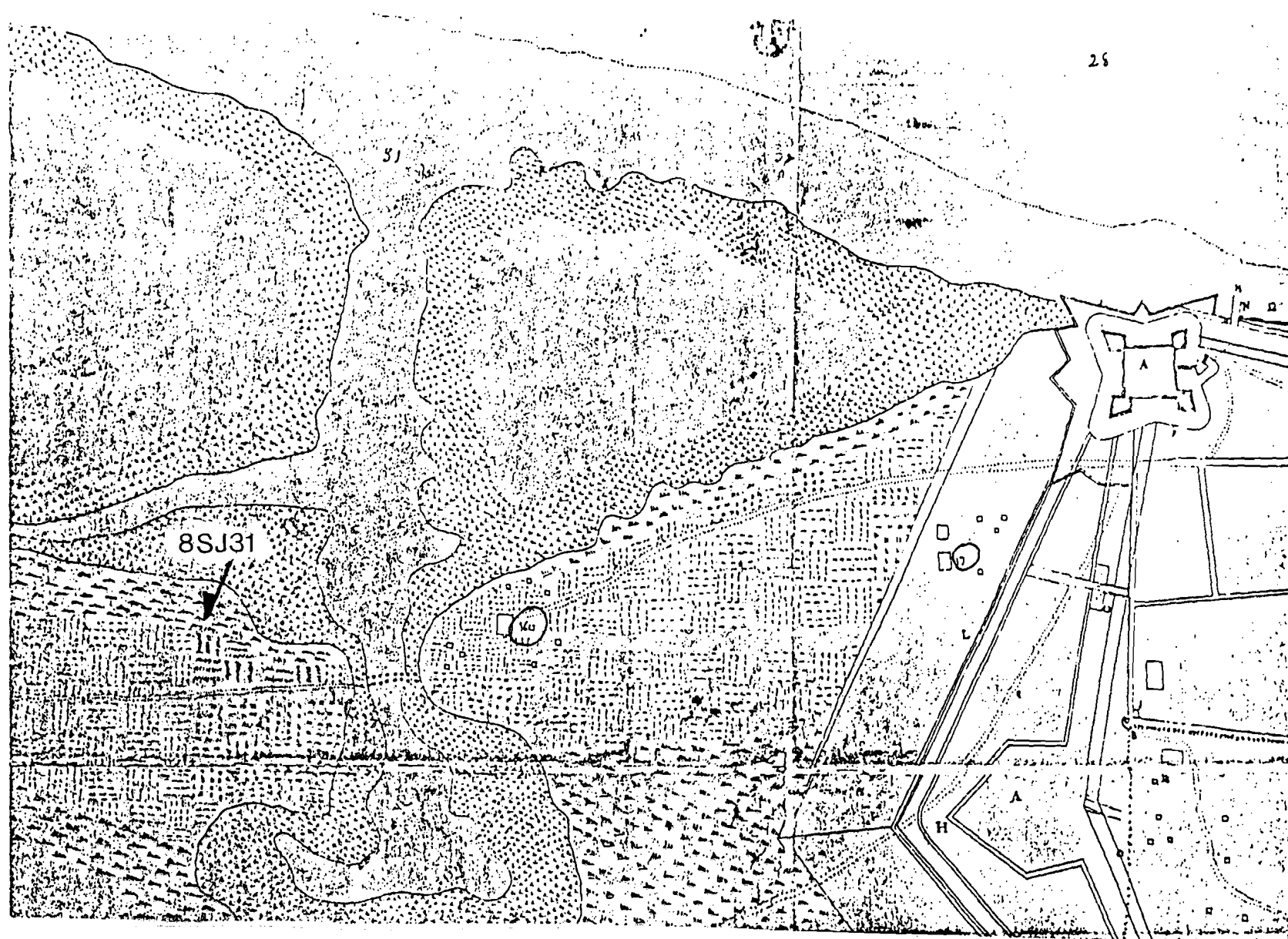


FIGURE 6  
Arredondo Map of St. Augustine, 1737.



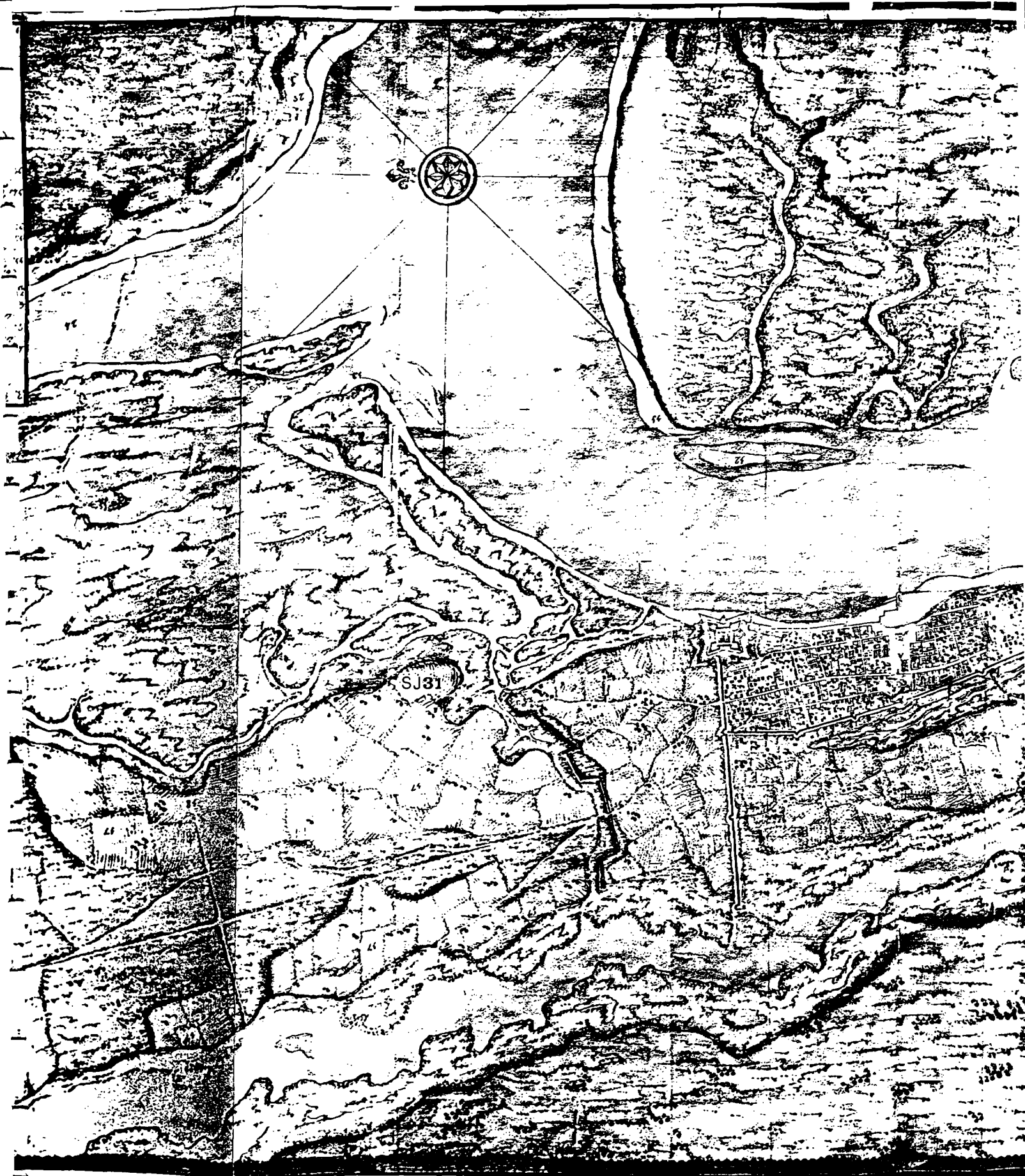


FIGURE 7

Castello Map of St. Augustine, 1764.  
Note site location.



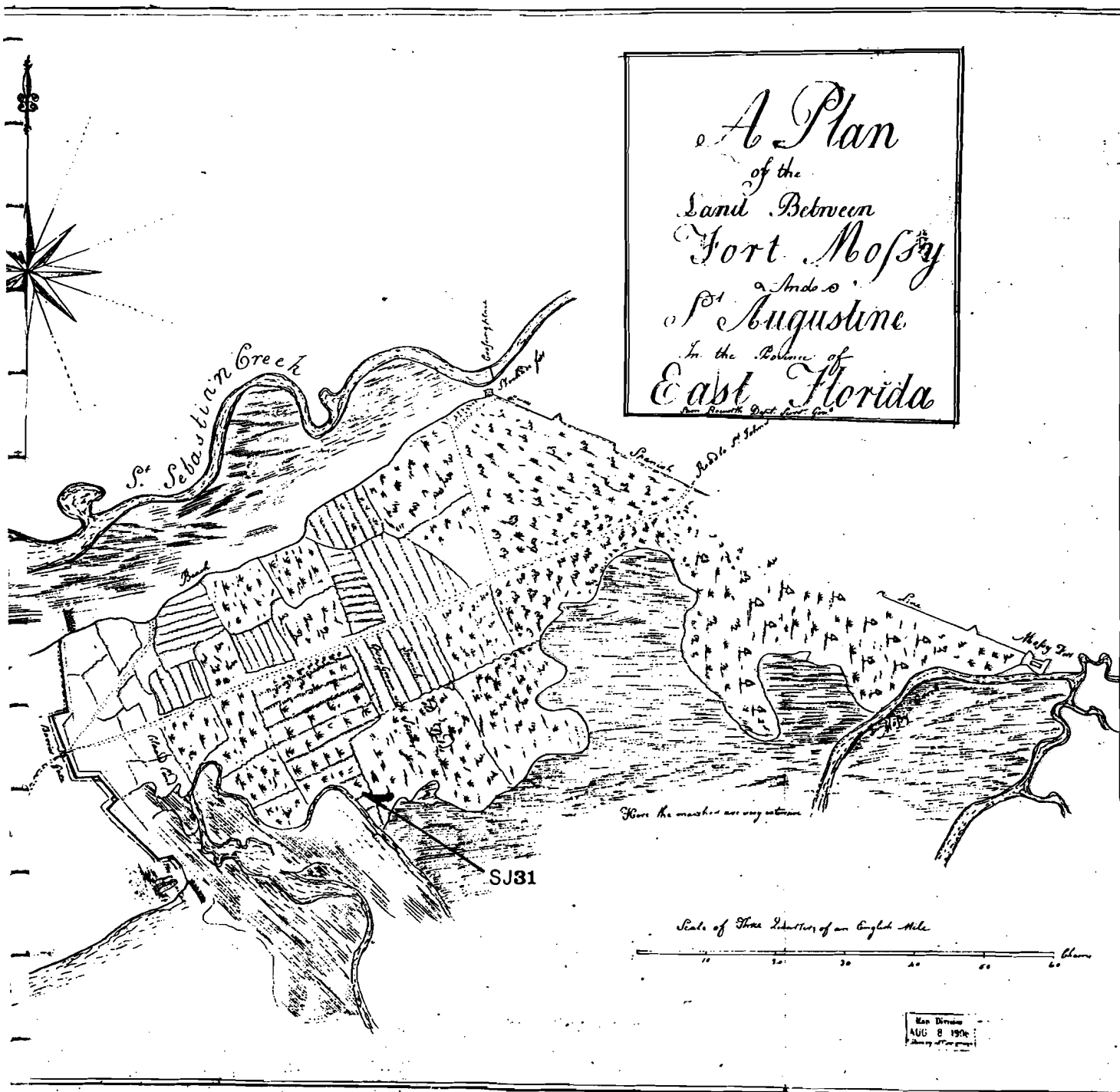


FIGURE 9

Roworth Map of St. Augustine, 1765-1775?

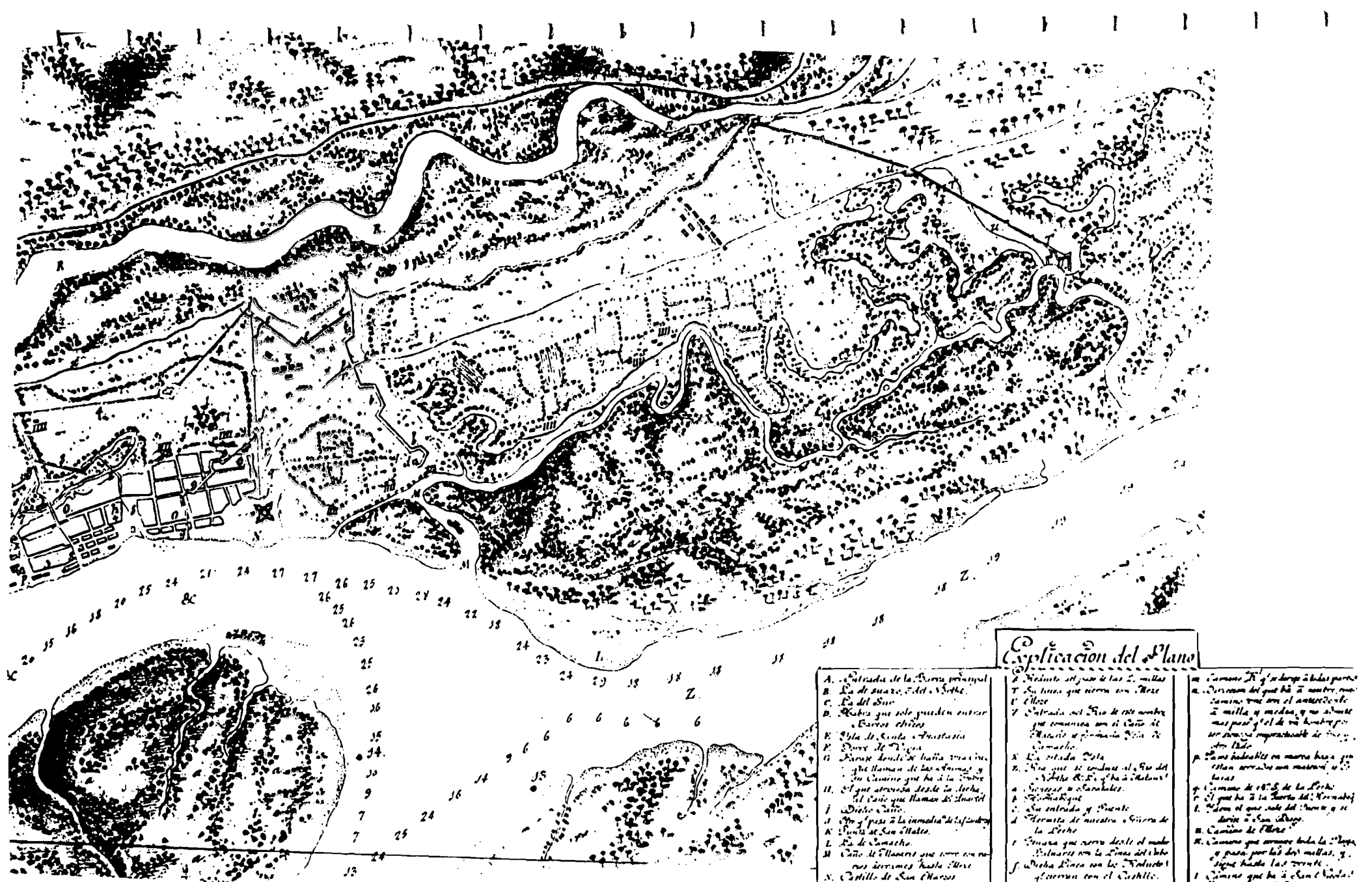


FIGURE 10

Rocque Map of St. Augustine, 1791.

24. La configuración del Reducto para la defensa de la Barranca, está en los mismos términos que los de San Juan, y Santa Clara.  
 25. Este Plano se manifiesta en marina llena bajando esta de 3. 2. 6. pies; La configuración de las Barrancas, y sus Puercos, es la misma que se marie en las Operaciones para el efecto en 24. de Agosto de 1791, variando estas según los tiempos, y movimiento de las aguas por sus corrientes. Los números del Reducto son Vitis.

### Explicación del Plano

- |   |  |  |
|---|--|--|
| <p>A. Entrada de la Barranca principal<br/>         B. La de suar, y del Norte.<br/>         C. La del Sur.<br/>         D. Barranca que solo pueden entrar<br/>         "Barros chicos"<br/>         E. Pila de Canto a Puercos<br/>         F. Puercos de Puercos<br/>         G. Puercos donde se halla mas agua<br/>         que llaman de las Barrancas y<br/>         su Camino que ha a la Barranca<br/>         H. El que atraviesa desde la Barranca<br/>         del Puercos que llaman de San Juan<br/>         I. El que pasa a la inmedia de la Barranca<br/>         J. Puercos de San Juan<br/>         K. La de San Juan<br/>         L. La de San Juan<br/>         M. Camino de San Juan que corre con<br/>         raras barrancas hasta el Puercos<br/>         N. Castillo de San Juan<br/>         O. Ciudad<br/>         P. Puercos, y Puercos<br/>         Q. Camino y Puercos de la Tierra<br/>         R. Casas del Rio de San Sebastian,<br/>         y de la Tierra</p> | <p>1. Reducto del paso de las 2. millas<br/>         2. Su linea que corre con el Rio<br/>         3. El Rio<br/>         4. Entradas del Rio de este nombre<br/>         que comienza con el Canto de<br/>         "Barros" y forma de Pila de<br/>         "Barros"<br/>         5. La entrada de la<br/>         6. Rio que se encuentra al Rio del<br/>         "Barros" y forma de Pila de<br/>         "Barros"<br/>         7. Barranca y Barranca<br/>         8. Barranca y Barranca<br/>         9. Barranca y Barranca<br/>         10. Barranca y Barranca<br/>         11. Barranca y Barranca<br/>         12. Barranca y Barranca<br/>         13. Barranca y Barranca<br/>         14. Barranca y Barranca<br/>         15. Barranca y Barranca<br/>         16. Barranca y Barranca<br/>         17. Barranca y Barranca<br/>         18. Barranca y Barranca<br/>         19. Barranca y Barranca<br/>         20. Barranca y Barranca<br/>         21. Barranca y Barranca<br/>         22. Barranca y Barranca<br/>         23. Barranca y Barranca<br/>         24. Barranca y Barranca<br/>         25. Barranca y Barranca<br/>         26. Barranca y Barranca<br/>         27. Barranca y Barranca<br/>         28. Barranca y Barranca<br/>         29. Barranca y Barranca<br/>         30. Barranca y Barranca<br/>         31. Barranca y Barranca<br/>         32. Barranca y Barranca<br/>         33. Barranca y Barranca<br/>         34. Barranca y Barranca<br/>         35. Barranca y Barranca<br/>         36. Barranca y Barranca</p> | <p>37. Barranca y Barranca<br/>         38. Barranca y Barranca<br/>         39. Barranca y Barranca<br/>         40. Barranca y Barranca<br/>         41. Barranca y Barranca<br/>         42. Barranca y Barranca<br/>         43. Barranca y Barranca<br/>         44. Barranca y Barranca<br/>         45. Barranca y Barranca<br/>         46. Barranca y Barranca<br/>         47. Barranca y Barranca<br/>         48. Barranca y Barranca<br/>         49. Barranca y Barranca<br/>         50. Barranca y Barranca<br/>         51. Barranca y Barranca<br/>         52. Barranca y Barranca<br/>         53. Barranca y Barranca<br/>         54. Barranca y Barranca<br/>         55. Barranca y Barranca<br/>         56. Barranca y Barranca<br/>         57. Barranca y Barranca<br/>         58. Barranca y Barranca<br/>         59. Barranca y Barranca<br/>         60. Barranca y Barranca<br/>         61. Barranca y Barranca<br/>         62. Barranca y Barranca<br/>         63. Barranca y Barranca<br/>         64. Barranca y Barranca<br/>         65. Barranca y Barranca<br/>         66. Barranca y Barranca<br/>         67. Barranca y Barranca<br/>         68. Barranca y Barranca<br/>         69. Barranca y Barranca<br/>         70. Barranca y Barranca<br/>         71. Barranca y Barranca<br/>         72. Barranca y Barranca<br/>         73. Barranca y Barranca<br/>         74. Barranca y Barranca<br/>         75. Barranca y Barranca<br/>         76. Barranca y Barranca<br/>         77. Barranca y Barranca<br/>         78. Barranca y Barranca<br/>         79. Barranca y Barranca<br/>         80. Barranca y Barranca<br/>         81. Barranca y Barranca<br/>         82. Barranca y Barranca<br/>         83. Barranca y Barranca<br/>         84. Barranca y Barranca<br/>         85. Barranca y Barranca<br/>         86. Barranca y Barranca<br/>         87. Barranca y Barranca<br/>         88. Barranca y Barranca<br/>         89. Barranca y Barranca<br/>         90. Barranca y Barranca<br/>         91. Barranca y Barranca<br/>         92. Barranca y Barranca<br/>         93. Barranca y Barranca<br/>         94. Barranca y Barranca<br/>         95. Barranca y Barranca<br/>         96. Barranca y Barranca<br/>         97. Barranca y Barranca<br/>         98. Barranca y Barranca<br/>         99. Barranca y Barranca<br/>         100. Barranca y Barranca</p> |
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### Explicación de la Defensa

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| <p>1. Campamento de la primera División<br/>         2. Campamento de la segunda División<br/>         3. Campamento de la tercera División<br/>         4. Campamento de la cuarta División<br/>         5. Campamento de la quinta División<br/>         6. Campamento de la sexta División<br/>         7. Campamento de la séptima División<br/>         8. Campamento de la octava División<br/>         9. Campamento de la novena División<br/>         10. Campamento de la décima División<br/>         11. Campamento de la undécima División<br/>         12. Campamento de la duodécima División<br/>         13. Campamento de la trece División<br/>         14. Campamento de la catorce División<br/>         15. Campamento de la quince División<br/>         16. Campamento de la dieciséis División<br/>         17. Campamento de la diecisiete División<br/>         18. Campamento de la dieciocho División<br/>         19. Campamento de la diecinueve División<br/>         20. 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Barranca y Barranca<br/>         39. Barranca y Barranca<br/>         40. Barranca y Barranca<br/>         41. Barranca y Barranca<br/>         42. Barranca y Barranca<br/>         43. Barranca y Barranca<br/>         44. Barranca y Barranca<br/>         45. Barranca y Barranca<br/>         46. Barranca y Barranca<br/>         47. Barranca y Barranca<br/>         48. Barranca y Barranca<br/>         49. Barranca y Barranca<br/>         50. Barranca y Barranca</p> |
|--|--|--|

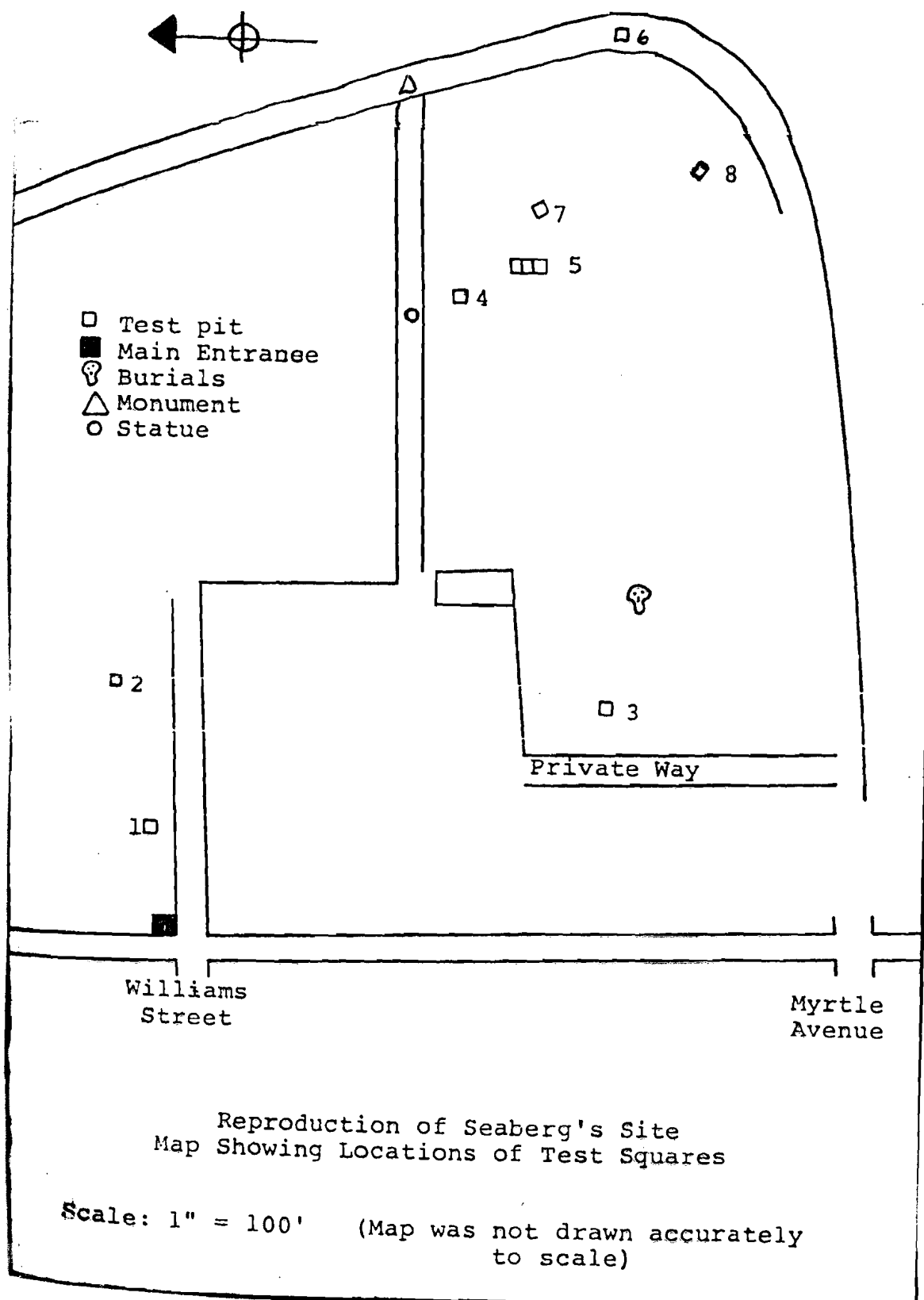


FIGURE 11

1951 Site Map  
 (from Merritt 1977)

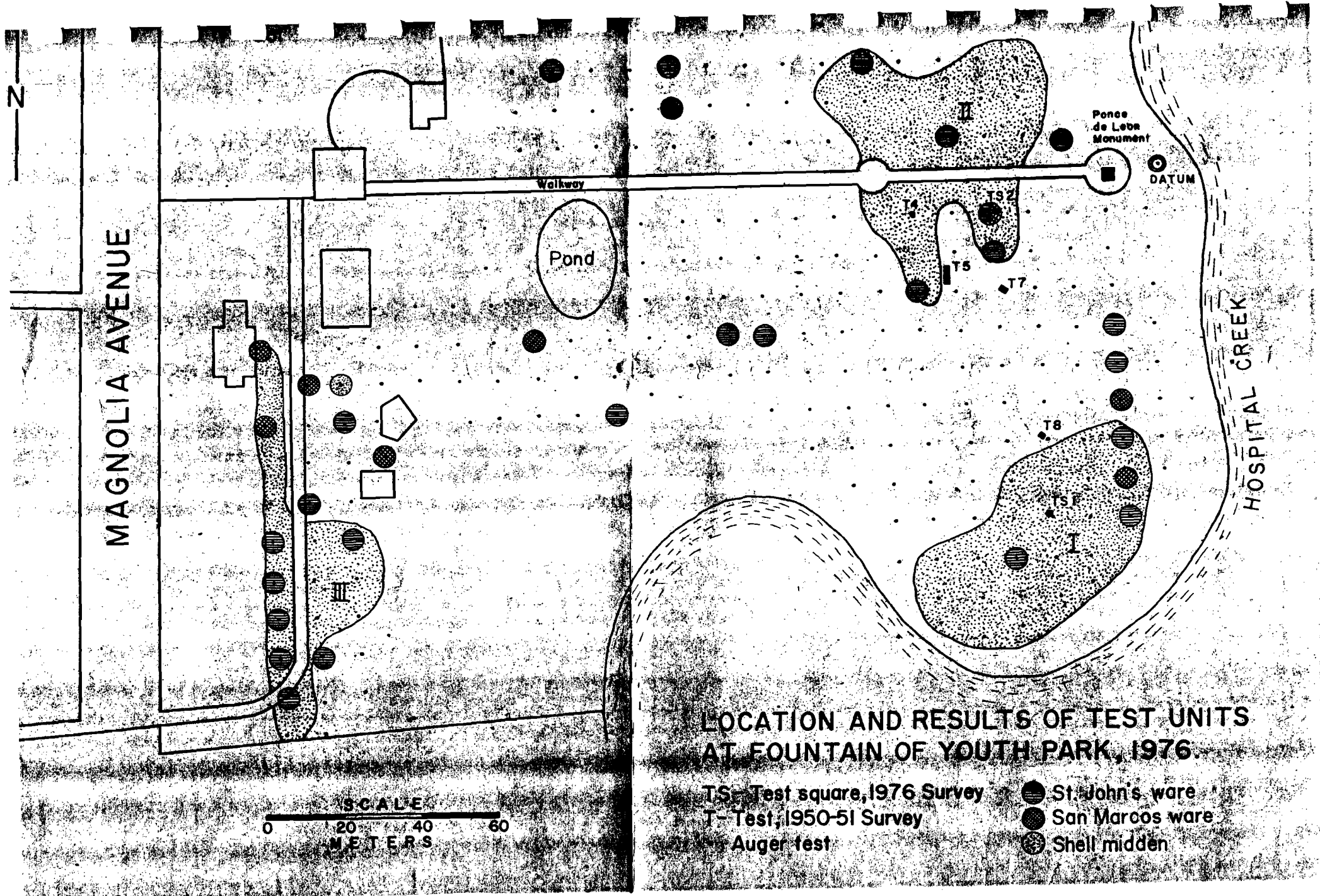
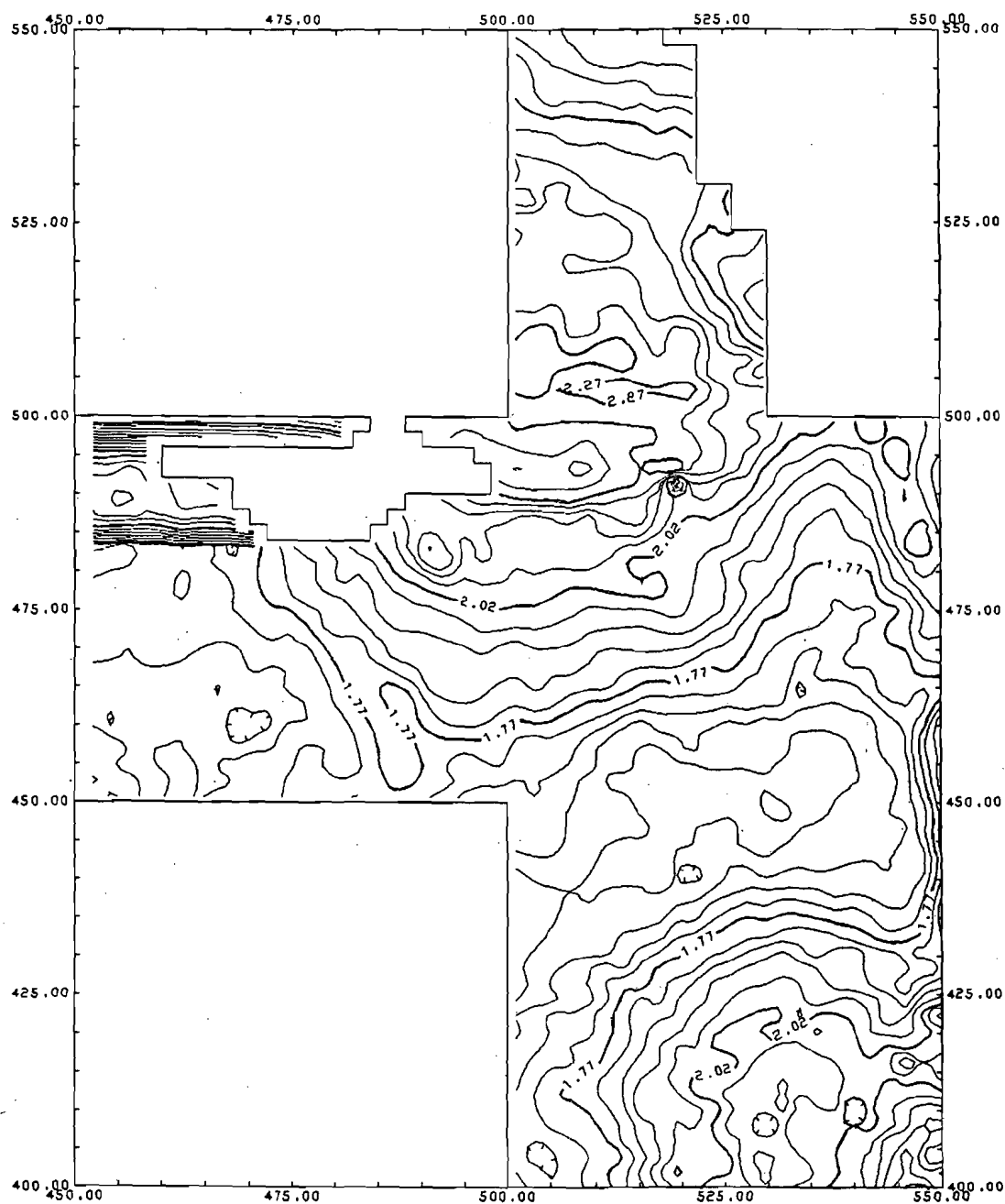


FIGURE 12

1976 Auger Survey Map  
 Note shell midden locations.  
 (from Lucchetti n.d.)



410 N  
543 E

FIGURE 13

8-SJ-31 Topographic Map

5 cm. contour interval.

Numbers at sides are grid coordinates.

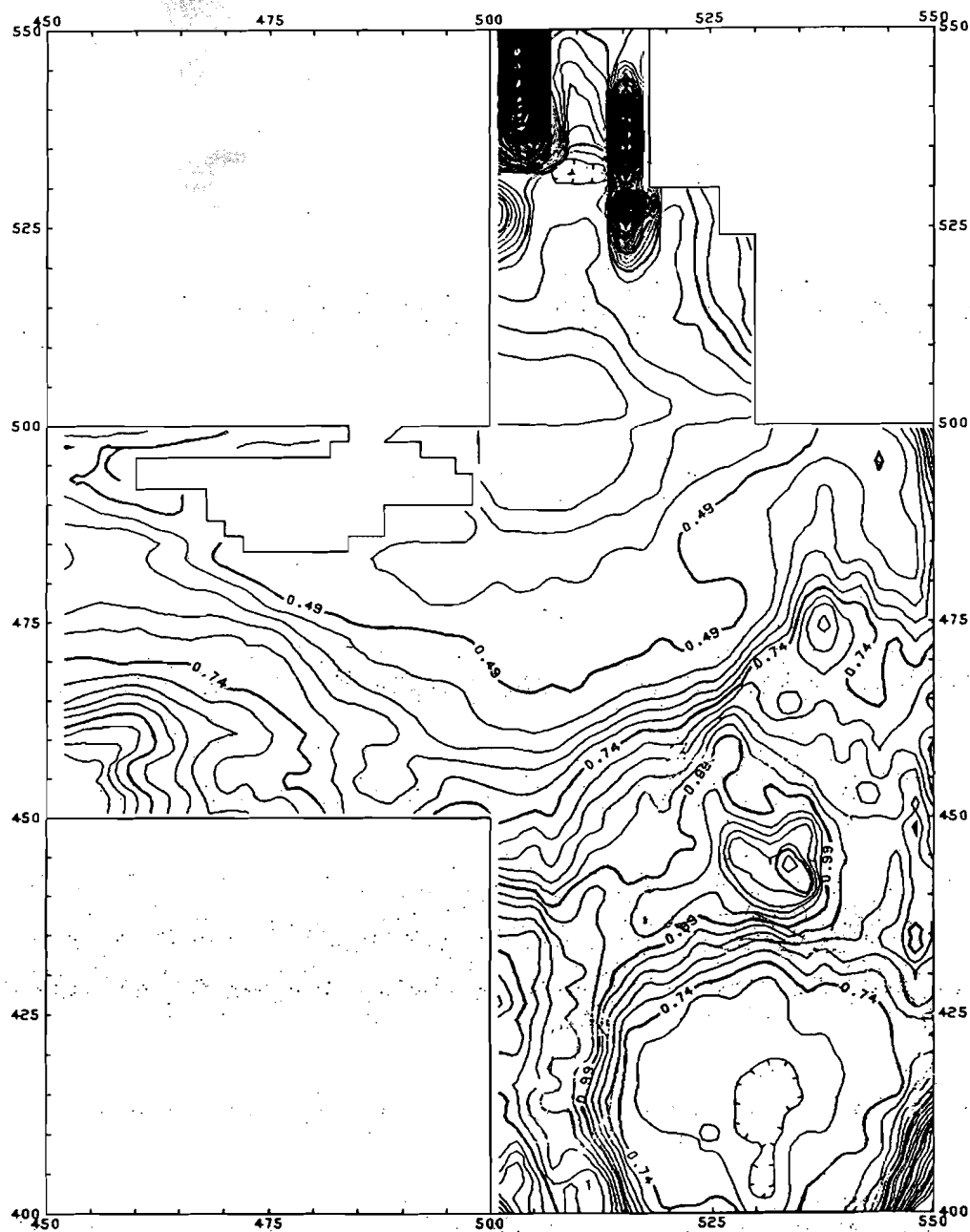


FIGURE 14

EM31 Data Map

Numbers at sides are grid coordinates.



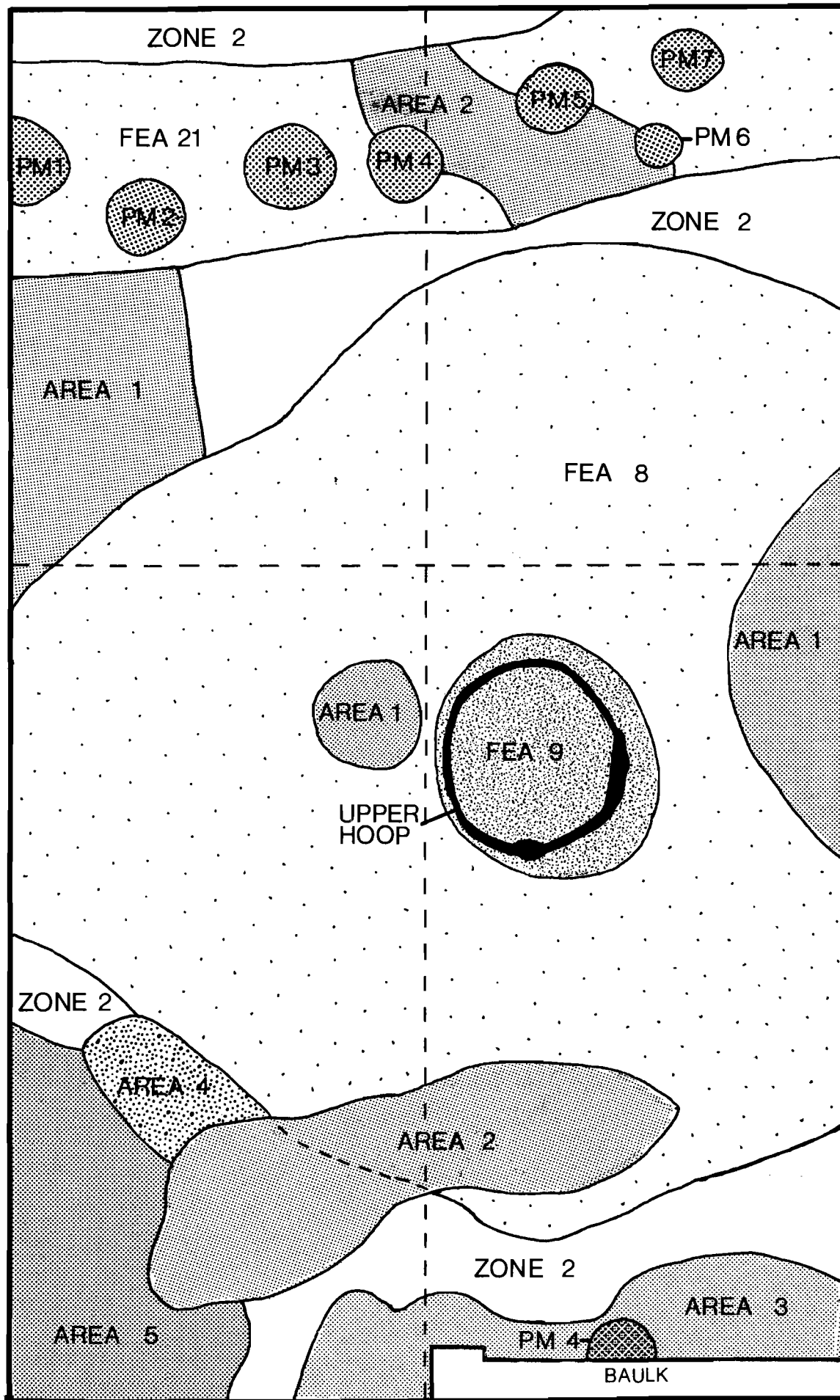


FIGURE 15

UNITS 12, 37, 38, 39  
PLAN VIEW

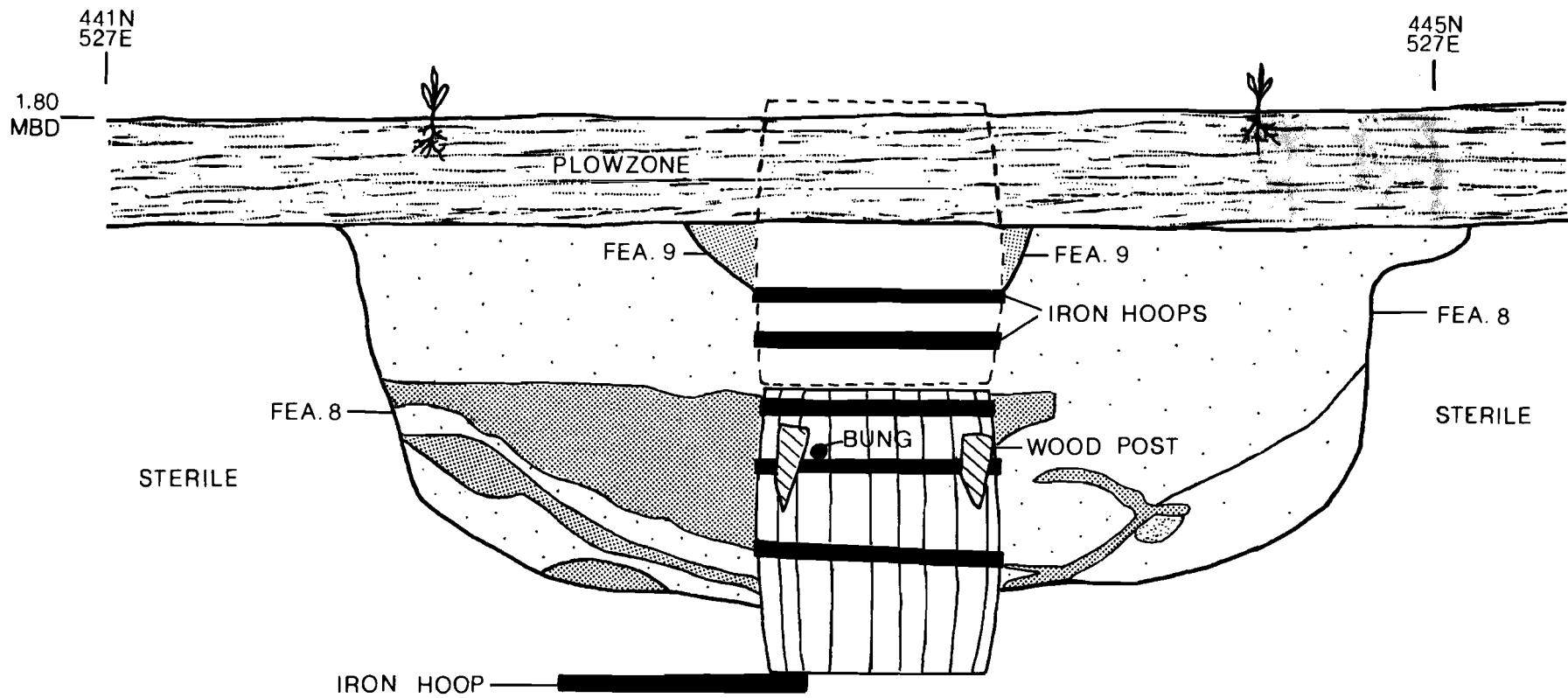
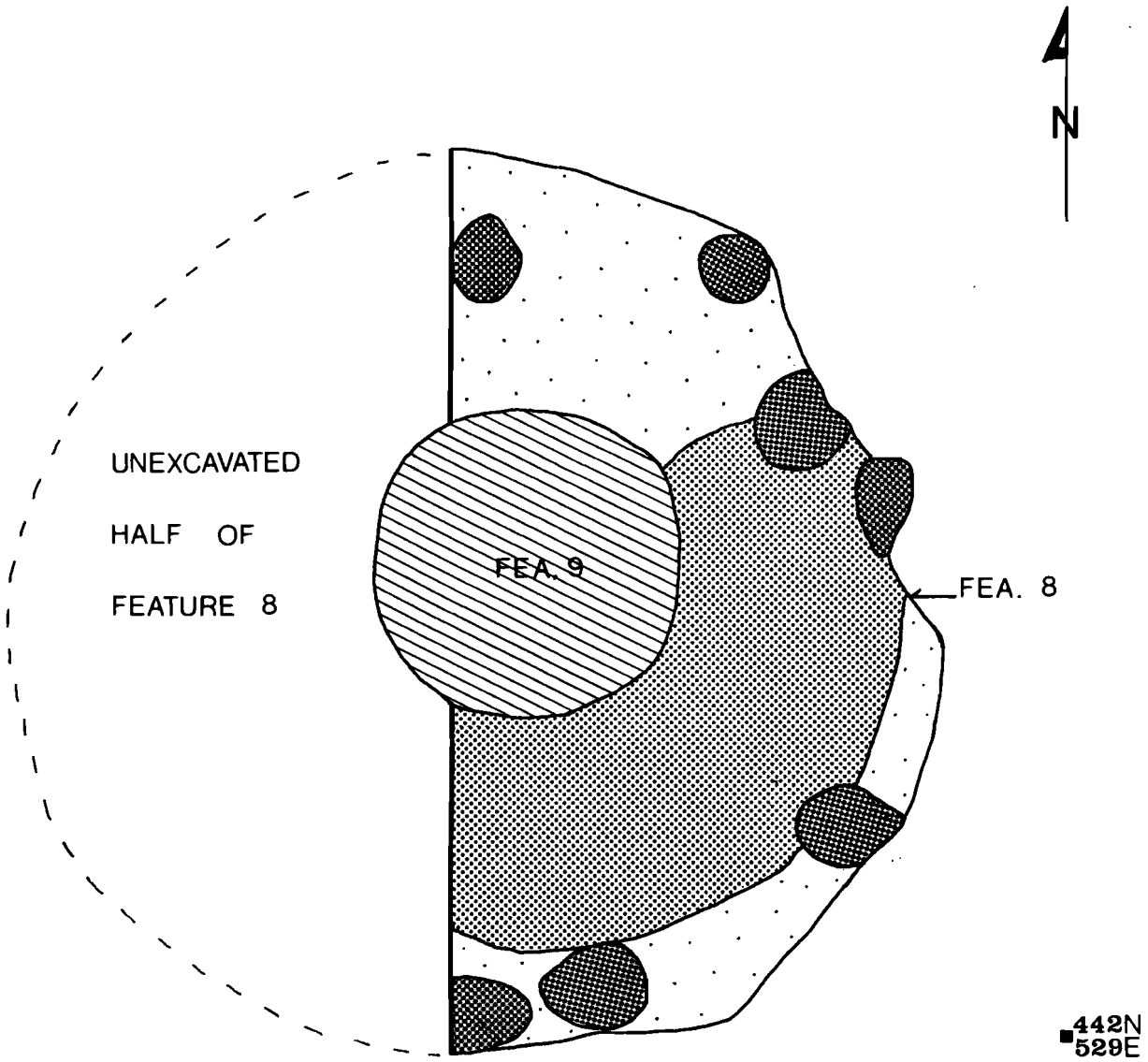


FIGURE 16  
WELL PROFILE



0 50  
cm




-  POSTMOLDS
-  DARK SOIL
-  LIGHT SOIL

FIGURE 17  
WELL POSTS

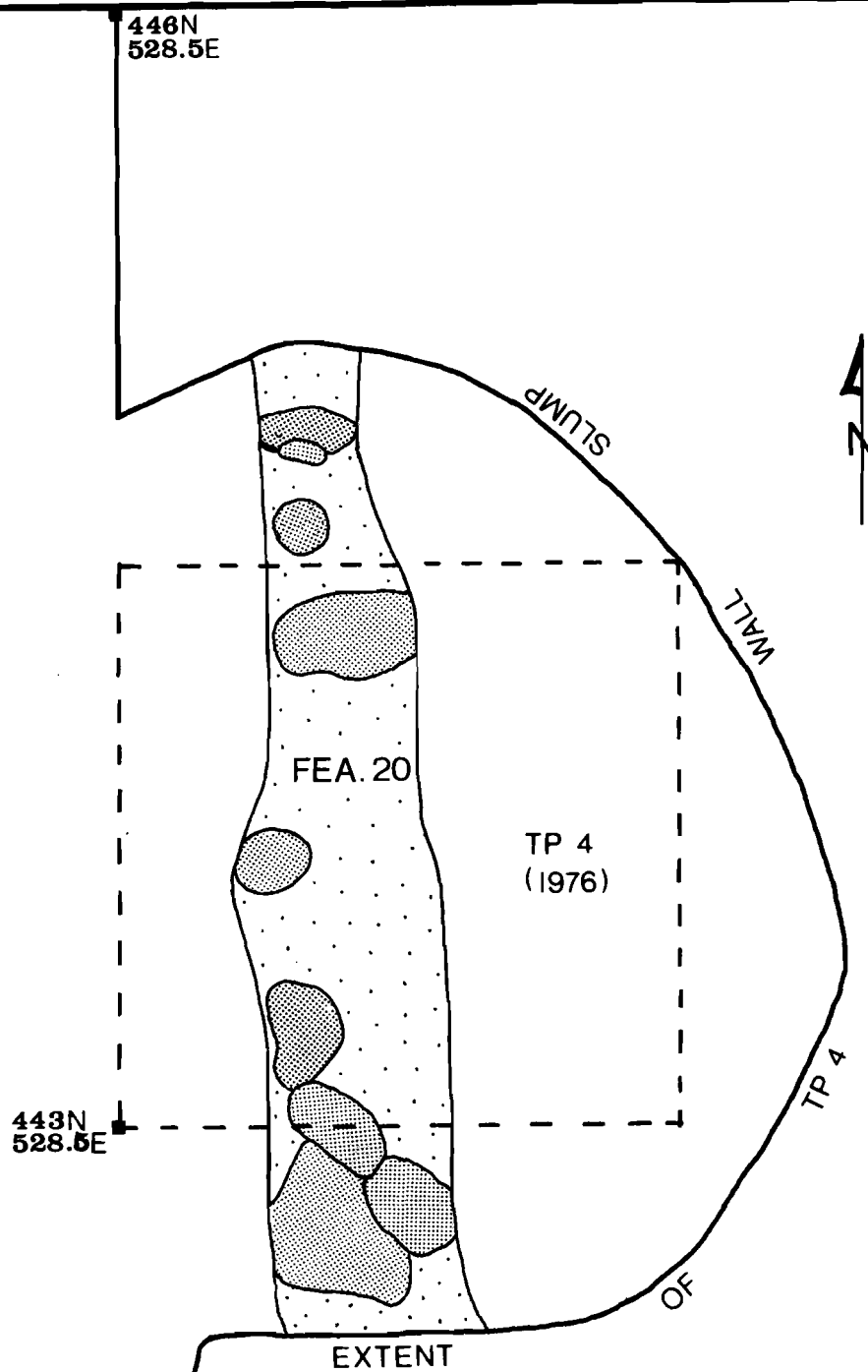
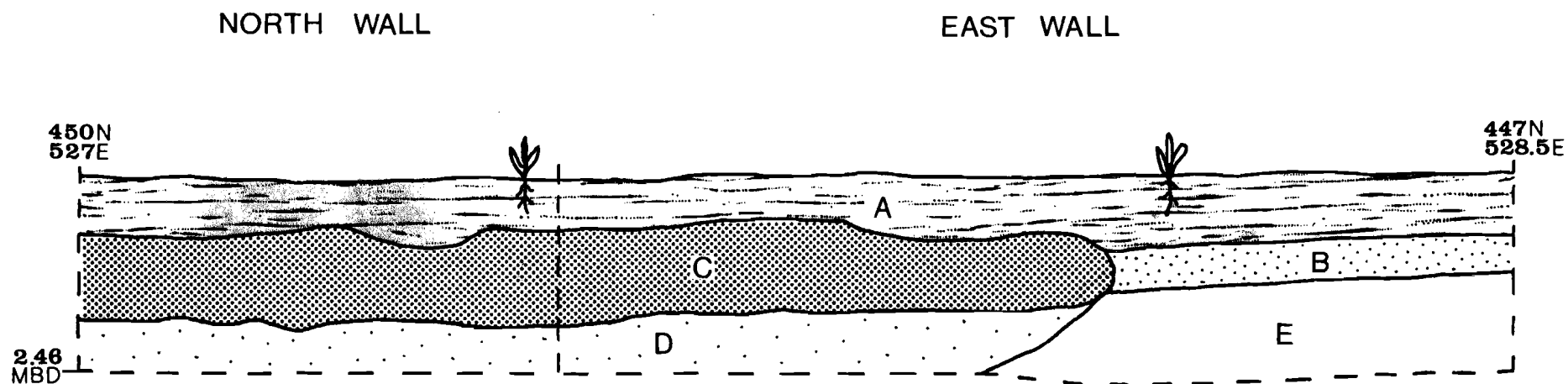


FIGURE 19  
TEST UNIT 4



- A. Plowzone
- B. 16th Century Zone
- C. Feature 7
- D. Leaching Zone
- E. Sterile Subsoil

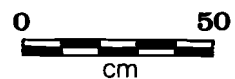
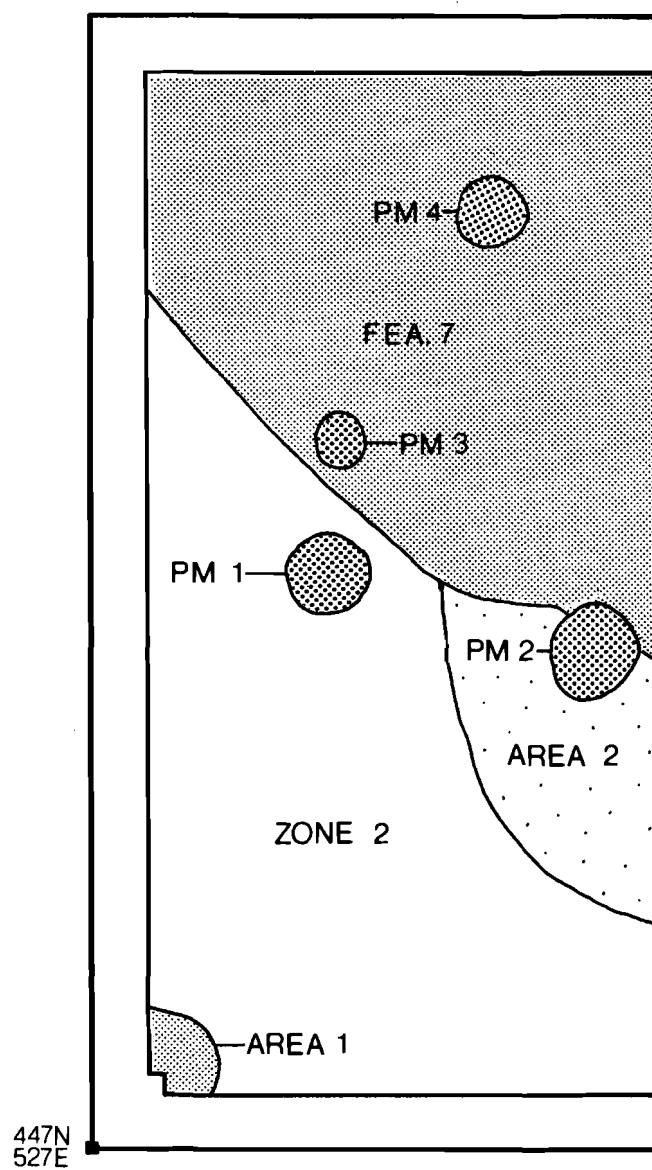


FIGURE 20

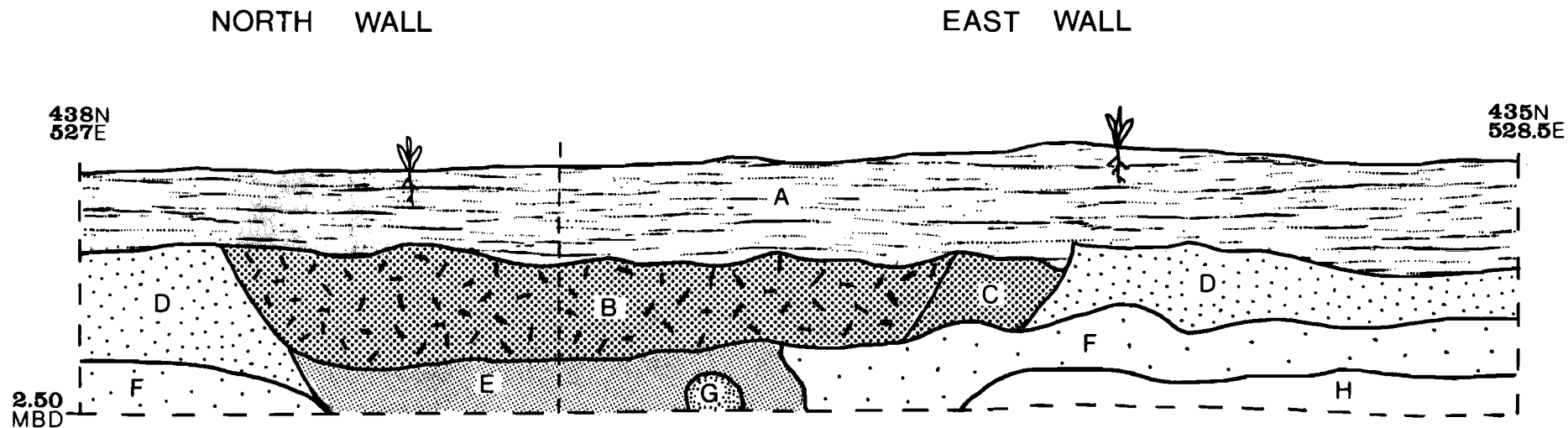
UNIT 13  
PROFILE



0 50  
cm

FIGURE 21

UNIT 13  
PLAN VIEW

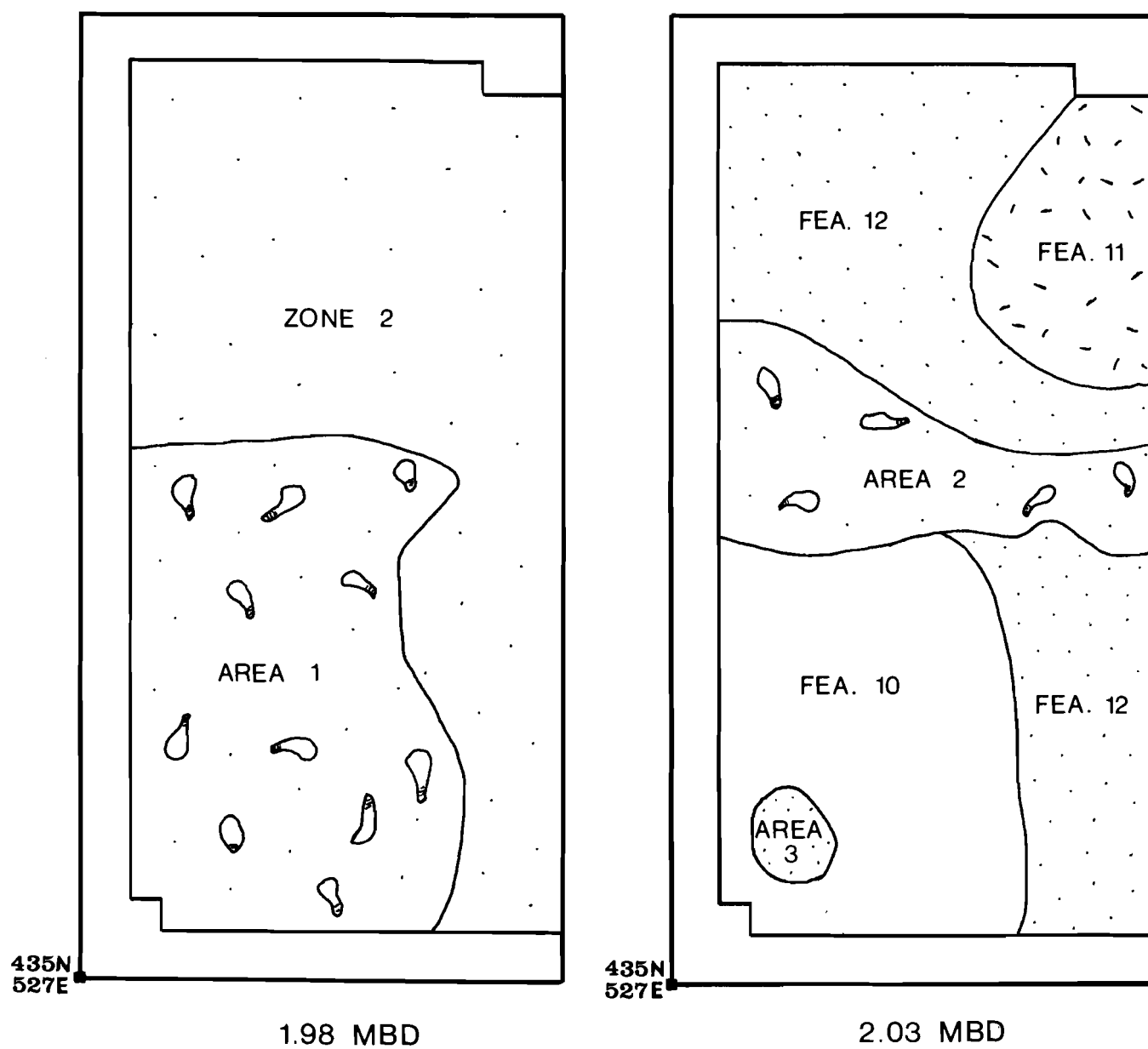


- A. Plowzone
- B. Feature 11
- C. Unknown
- D. Feature 12, Areas 6 and 7
- E. Leaching Zone
- F. Leaching Zone
- G. Root or Animal Hole
- H. Sterile Subsoil

0 50  
cm

FIGURE 22

UNIT 14  
PROFILE



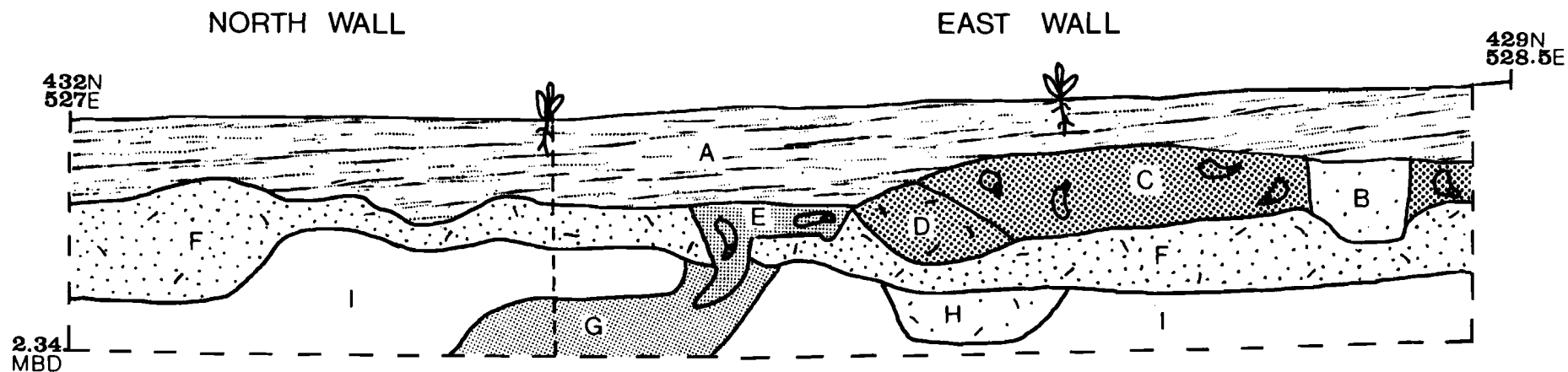
0 50  
cm



FIGURE 23

UNIT 14  
PLAN VIEWS





- A. Plowzone
- B. PM 2
- C. Feature 14
- D. Unknown
- E. Root
- F. Area 1 and Zone 3
- G. Animal Burrow or Root Hole?
- H. Unknown
- I. Sterile Subsoil

0 50  
cm

FIGURE 24  
UNIT 15  
PROFILE

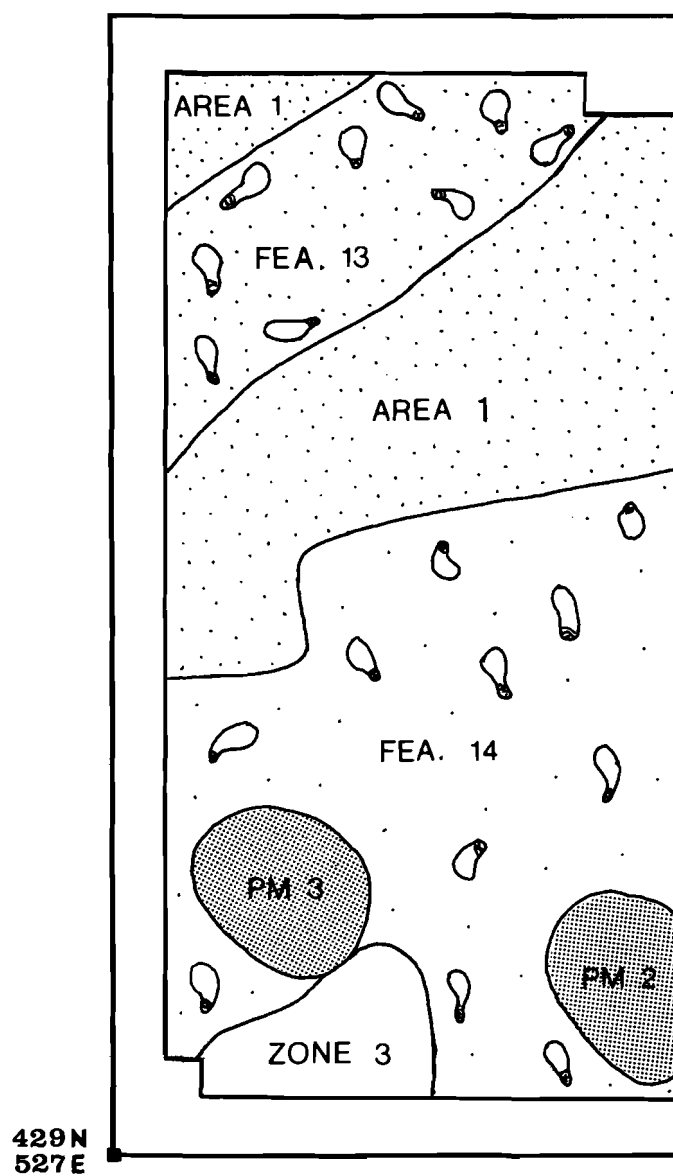
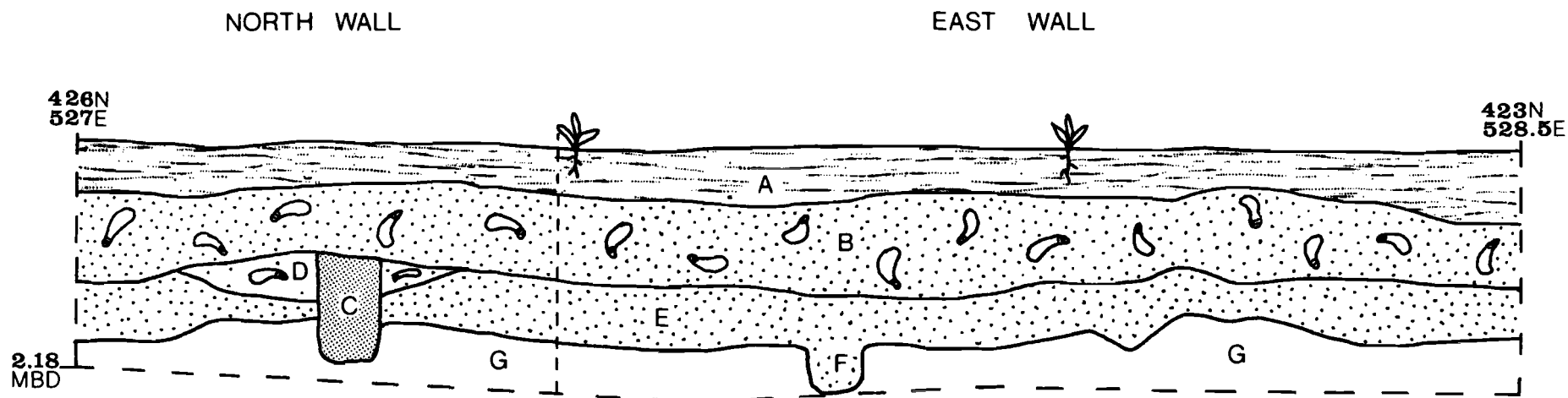


FIGURE 25

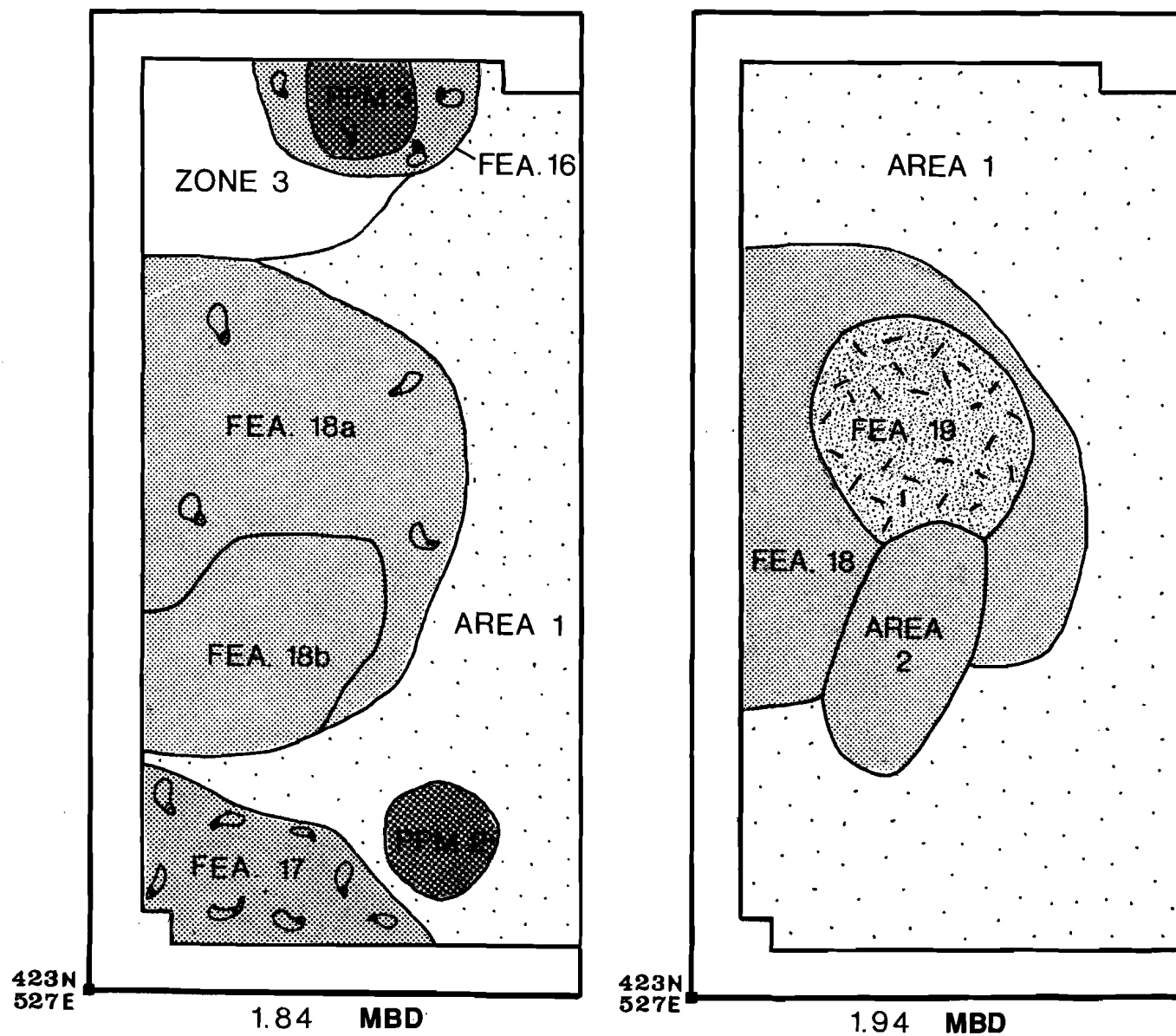
UNIT 15  
PLAN VIEW



- A. Plowzone
- B. Shell Midden
- C. PM 3
- D. Feature 16
- E. Area 1
- F. PM 6
- G. Sterile Subsoil

0 50  
cm

FIGURE 26  
UNIT 16  
PROFILE



0 50  
cm



FIGURE 27

UNIT 16  
PLAN VIEWS

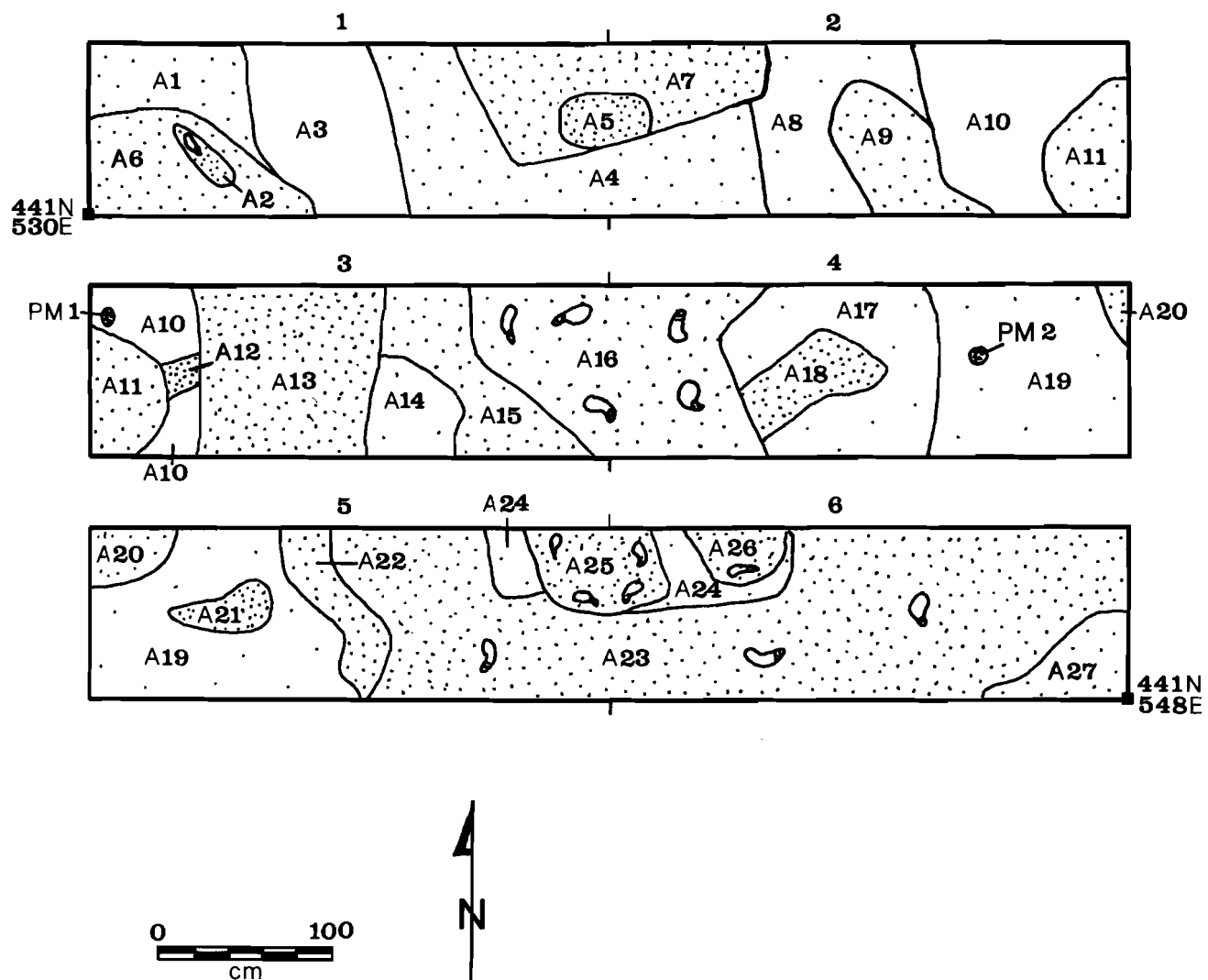
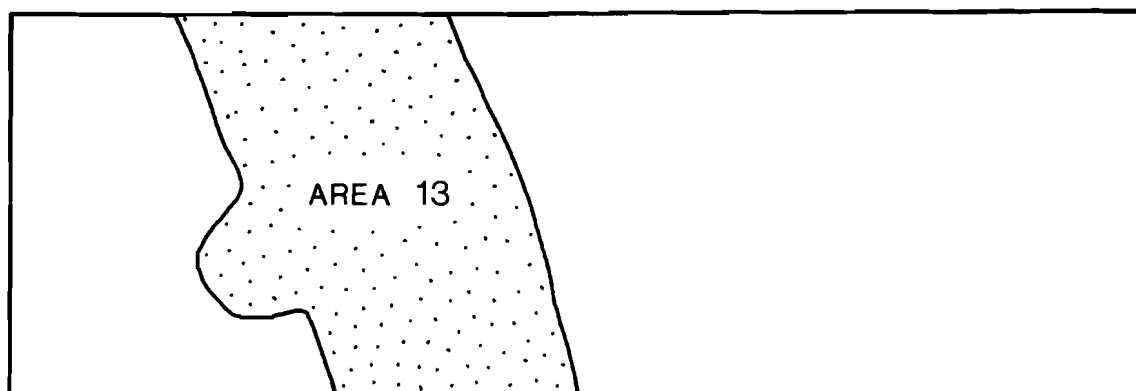


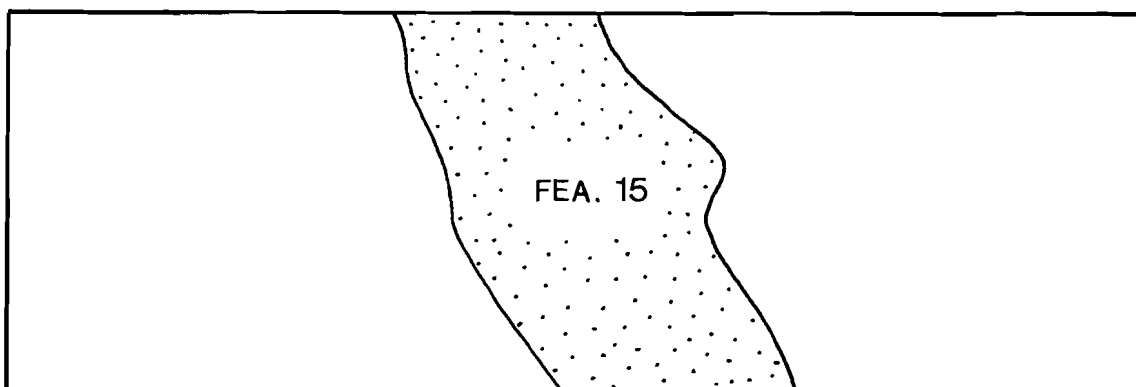
FIGURE 28

EAST TEST  
TRENCH

## SECTION 3



## SECTION 6



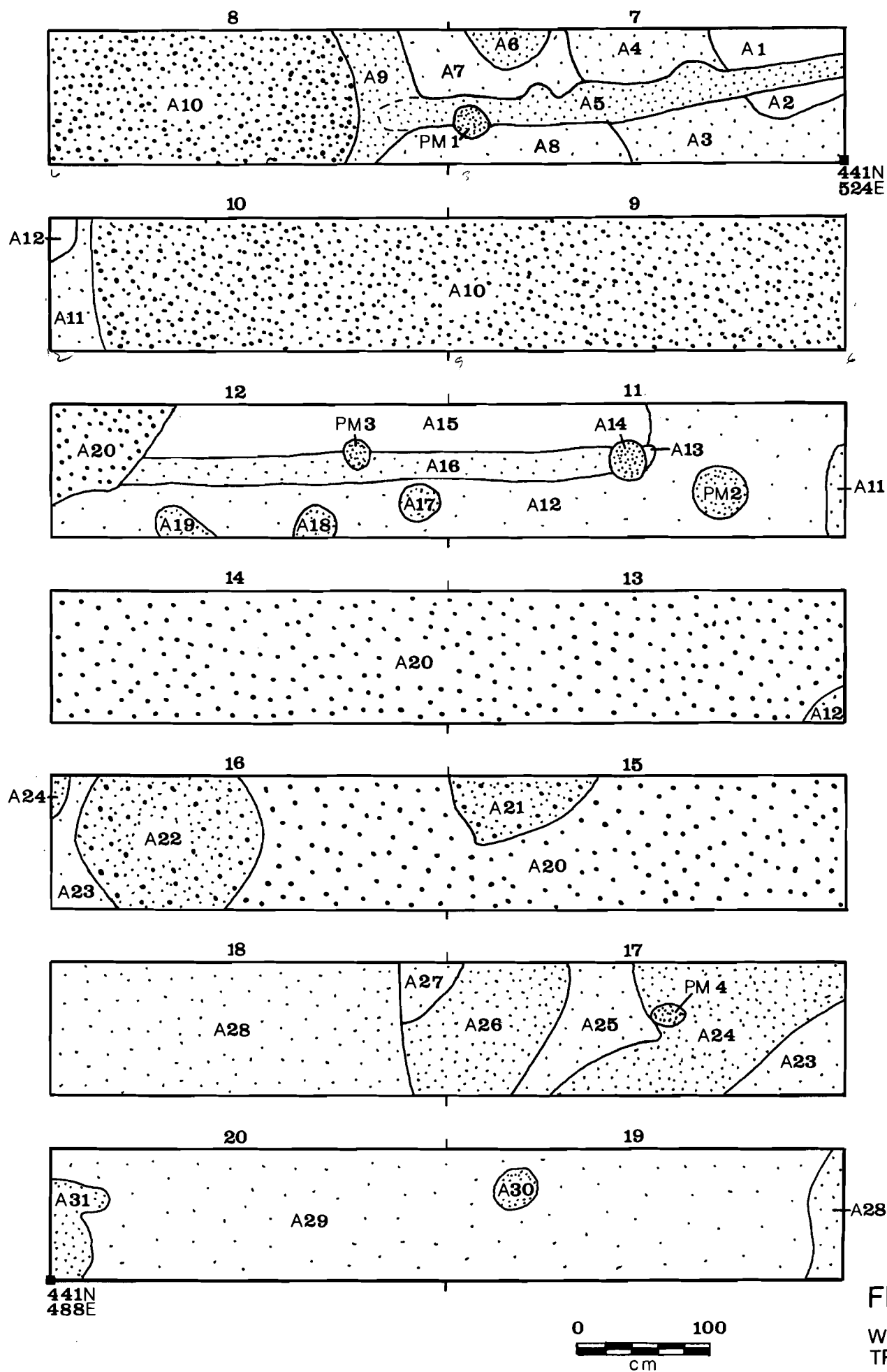
0 50

A horizontal scale bar with alternating black and white segments, indicating a length of 50 units.



FIGURE 29

EAST TEST  
TRENCH  
F15, A13



**FIGURE 30**  
WEST TEST  
TRENCH