

**SUMMARY INTERPRETATION OF
ARCHAEOLOGICAL FIELD WORK AT THE
FOUNTAIN OF YOUTH PARK SITE (8-SJ-31)**

1951-2002

Kathleen Deagan

**FIELD REPORT ON THE 2002 EXCAVATIONS AT
THE FOUNTAIN OF YOUTH PARK**

Alfred Woods



**Florida Museum of Natural History Miscellaneous Project Reports
in Archaeology # 56**

University of Florida, Gainesville, Florida

2004

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ACKNOWLEDGEMENTS

Major funding for the archaeological research at the Fountain of Youth Park has been supported by grants from the St. Augustine Foundation at Flagler College and the Fountain of Youth Park, Inc., as well as with historic preservation grant assistance provided by the Bureau of Historic Preservation, Florida Department of State, assisted by the Historic Preservation Advisory Council. The Florida Museum of Natural History and the Institute for Early Contact Period Studies at the University of Florida have been major supporters of this project, and we would also like to acknowledge the support of the Lastinger Family Foundation.

A great many individuals and agencies over the years have made this work both possible and productive. We would like to thank the staff of the Fountain of Youth Park, and particularly the Fraser family, for their gracious permission to work at the Park, their logistical support of the excavations in many large and small ways, and their patience and good humor over the years of research. The Fraser family also helped to provide pertinent information and photographs relating to the recent history of the property and the changes that have been made over the years. We are also grateful to Carl Halbirt and the City of St. Augustine archaeology program, for consistently providing support, assistance and invaluable advice over the years. The City has assisted us with grading excavation areas, taking overhead photography, and in sinking well points.

Dr. Eugene Lyon has devoted many hours over the course of the project to providing us with guidance, advice and invaluable new historical information. Likewise, the late Albert Manucy helped us immensely in identifying and interpreting architectural features. Dr. John Schultz contributed many days to conducting and analyzing the ground penetrating radar survey of the site, and Dr. Ryan Williams generously carried out the magnetometer survey.

Much of the work at the Fountain of Youth Park has been made possible by the people who have volunteered to provide their time, skills and energy to the project. They are too numerous to note individually here, but we greatly appreciate their help, as well as the ongoing efforts of all members of the St. Augustine Archaeological Association.

**SUMMARY INTERPRETATION OF ARCHAEOLOGICAL FIELD WORK AT THE
FOUNTAIN OF YOUTH PARK SITE (8-SJ-31), 1951-2002**

Kathleen Deagan

This report is intended to summarize and provide a general interpretation of the archaeological work carried out at the Fountain of Youth Park (8SJ31) since 1976. It also serves to place the 2002 excavations at the Fountain of Youth Park site (detailed in the following report by Alfred Woods) into the overall historical and archaeological context of the property. The 2002 excavations, supervised by Alfred Woods, were the latest in a series of investigations conducted by the University of Florida at the site since 1976. The focus of those excavations has been the low, open field bordering the water in the southeast section of the Park, where it is thought that site of the first camp and/or fort of Pedro Menéndez de Avilés was established on September 6, 1565, at the Indian village known as Seloy. The 2002 season's research was intended to locate Menéndez-era features related to a large, previously-uncovered structure that may have been part of the Seloy fort. The work was supported by a grant from the St. Augustine Foundation, Inc., at Flagler College.

Historical context

Pedro Menéndez de Aviles, generally acknowledged as the "Founder of Florida" led the first European expedition to survive in what is today the United States (Lyon 1976). He had been preceded by a number of unfortunate European expeditions that tried to settle La Florida, which then extended to north to Virginia and westward to the Mississippi. For the most part, these attempts failed primarily because of successful Indian resistance. Among them were Juan Ponce

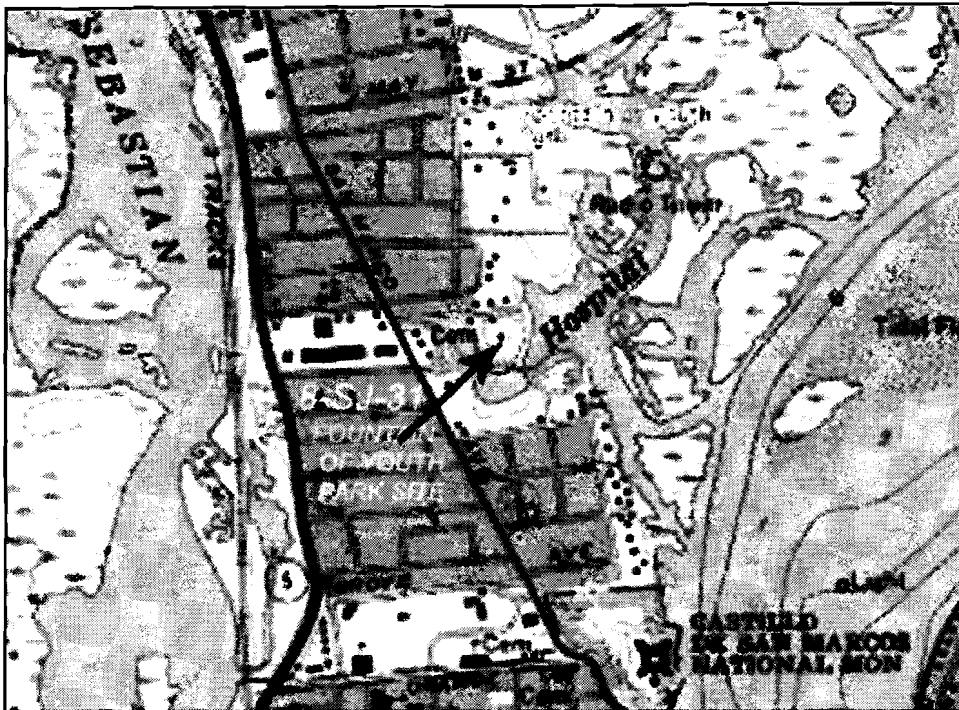


Figure 1: Location of 8-SJ-31 (Fountain of Youth Park)

de Leon (1513) who died trying to conquer Florida, Lucas Vázquez de Allyón who founded the short-lived settlement of San Miguel de Gualdape in 1523, Panfilo de Narvaez, who trekked through Florida in 1526 and lost all but 4 men; the infamous Hernando de Soto in 1540-44 , and who also died trying to claim the land, and Tristan de Luna, who tried unsuccessfully to establish a settlement at Pensacola in 1562. By the 1560's the French Huguenots were establishing their settlements at Port Royal and Fort Caroline in La Florida and this set the stage for Menéndez (on the French colonization efforts, see Laudonniere 2001; McGrath 2000).

The general outline of events surrounding the establishment of St. Augustine has been well-known through familiar sources for decades (see especially Chatelaine 1941; Lyon 1976). It was the results of new documentary research carried out by Eugene Lyon as part of this project, however, that allowed the archaeological and archival evidence to be articulated, and helped

confirm our identifications of both the Fountain of Youth Park site and the adjacent Mission of Nombre De Dios (8SJ34) as part of the original Menéndez establishment of 1565-1566. This research also provided very important new insights into the subsequent stages of St. Augustine's growth around the bay. Among these has been the verification that the second and third forts of St. Augustine were built across the bay from the original site, thus eliminating these as possible candidates for the sites at the Fountain of Youth Park and the Nombre de Dios mission (see Lyon 1997 a-b; Manucy 1997).

Menéndez was a privateer, as well as the Captain General of the Spanish fleet stationed in the West Indies to protect trade and shipping. He himself had a troubled history of tax evasion and smuggling, but the protestant French presence in Florida convinced Phillip II of Spain to enter into a joint venture with Menéndez to both settle Florida, and expel the French. A race to Florida began in 1565 between Menéndez' colonization expedition and the French relief fleet under the command of Jean Ribault sent to assist the barely-surviving French settlement at Fort Caroline (at the site of present day Jacksonville, Florida).

The two fleets arrived in Florida almost simultaneously. Menéndez decided to make landfall about 50 miles south of Fort Caroline, and came ashore to claim Florida for Spain in the vicinity of St. Augustine. More than 800 Spaniards (including 26 women) made their camp at the village of the Timucua Cassique Seloy, who, incredibly, gave Menéndez "a very large house" located at the water's edge, possibly a council house, to be converted into a fort. Menéndez's soldiers hastily fortified the structure by digging a trench around it, and throwing up a breastwork of earth and faggots (fascines):

" They went ashore and were well-received by the Indians, who gave them a very large house

of a cacique which is on the riverbank. And then Captains Patiño and San Vicente, with strong industry and diligence, ordered a ditch and moat made around the house, with a rampart of earth and fagots..." (Lyon Translation of Barcia's *Ensayo cronológico*, 1997b: 131).

This served as the first fort in the first permanent European colony in North America. It contained a storehouse, or *casa de municiones*, as well as the lodgings of the expeditions officials. While Menéndez and most of the soldiers marched north to deal (this time successfully) with the French at Fort Caroline, the rest of his expedition established the settlement in or near the Indian town.

Menéndez's colonists included some 500 soldiers, 200 seamen, and 100 "others", comprised by civilians, clergy and the wives and children of 26 soldiers. All were from Spain. One hundred and thirty eight of these soldiers also held "office" (licence) in various crafts and trades, including 10 stonemasons, 15 carpenters, 21 tailors, 10 shoemakers, eight blacksmiths, five barbers, two surgeons, two lime makers, three swordsmiths, a gunmaker and a crossbow repairman. Other trades represented among the group included tanners, farriers, wool carders, a hatmaker, an embroiderer, a bookseller, coopers, bakers, gardeners, an apothecary, and a master brewer. Another 117 of the soldiers were also farmers, ready to settle and farm the land once the French were vanquished (Lyon 1976:92).

It is unclear how many of these people actually lived at the Selo settlement after the first few weeks of settlement in Florida. After Ft. Caroline was captured, Menéndez renamed the fort San Mateo, and left a garrison of men there. Another fort was established near the mouth of the Indian River in November of 1565, and 200 men were left there. A considerable number of soldiers and seamen furthermore accompanied Menéndez on his explorations and voyages, which took place

almost continuously for the first five months after settlement. By January of 1566 it was reported that more than 100 people had died in the Florida forts from hunger and cold (Lyon 1976:140). By that time, probably fewer than a few hundred people remained at St. Augustine, living in the Seloy *campo real*.

Among the many new details about the Menéndez era in St. Augustine learned through the documentary research done as part of this project (Lyon 1997a-b), several are particularly

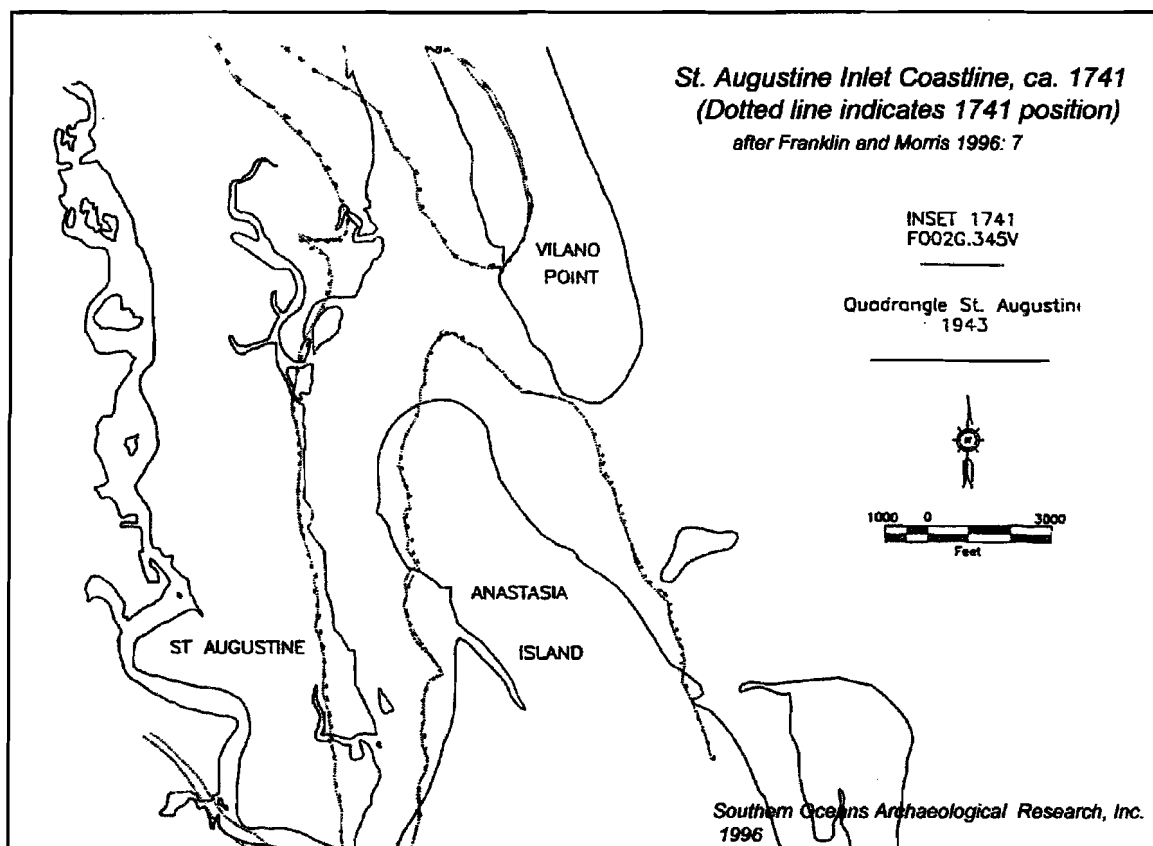


Figure 2: Coastline change in the St. Augustine

important with respect to identifying the Menéndez sites. The camp site - the *real* or *pueblo*- was established close to or perhaps around the fort, where civilians and soldiers not on duty lived in

bohios (Indian-style huts). This site has been identified at the Fountain of Youth Park (8-SJ-31 (Figure 1) (Chaney 1987; Chaney and Deagan 1987; Gordon 1992; Stuhlman 1995; Anderson 2001).

Within the enclosure comprising the fort there was a *casa de munición* (storehouse) where the supplies were kept. Witnesses recorded that corn, meat, cassava, wine, oil, garbanzos, other foodstuffs, cloth, sails, munitions and booty from the capture of Fort Caroline were contained in the *casa de munición*. The storehouse probably housed the ammunition, since it appears that there was considerable fear of fire:

"..neither by day or by night was any flame lit in the said (storehouse) unless the said Camp-master ordered it. And when a candle was lit one person had it placed in a water jar " (in Lyon 1997a:134).

Another contemporary, Bartolomé Barrientos, stated that the fort's powder house was thatched with palmetto leaves: *"they (the Indians) burned the powder magazine, which readily caught fire because it was thatched with palmetto leaves"*(Manucy translation, 1997:28).

A mutiny against Menéndez occurred in March of 1566, and its records provide additional detail about the storehouse. The rebels apparently gained easy access to the fort at midnight on March 8, and proceeded to the *casa de munición*, which had a wooden door. After pounding on it with lances and halberds, they forced the door and tied up the loyal soldiers inside.

They made their escape in a boat, leaving a rear guard to spike the fort guns. Witnesses recounted that the rebels went "down river" about a league and a half (approximately four statute miles) from the fort to the bar of St. Augustine, where they were just out of reach of the fort guns. This information, combined with recent work on the changing configurations of the St. Augustine

inlet and bar (Franklin and Morris 1996), reveals that this first fort "must have been on the west shore of the Matanzas river, at a point somewhere above an east-west line drawn through the inlet at that time" (Lyon 1997a:135) (Figure 2).

The mutiny was ultimately quelled, but the Spaniards' fears of fire were realized a month later. On April 19, the fort burned, either as a result of Indian attack or accident. In either case, relations with the Timucua in the area had deteriorated badly, and the Spaniards decided to move the fort across to the east side of the bay rather than rebuilding the burned Selay fort. This they did, building an insubstantial fortification at the (then) north end of Anastasia Island, and when the relief fleet of 17 ships under Archineaga arrived in June of 1566, they were able to build a more substantial fort. This third fort, too, was across the bay from the original Selay fort in hostile Indian territory.

The original site was not completely abandoned, however. Newly located documents make it clear that a blockhouse or watchtower was constructed at or near the site of the original Selay fort, and was manned by a sizeable contingent of soldiers. This *casa fuerte*- referred to as *San Agustín el Viejo* on the west side of the inlet- was actively in use in 1568, when the main fort and town were still on Anastasia Island across water on the east side of the bay: "*on the 20th of July of 1568, (seven suits of padded armor) were lost when a canoe was carrying thirty suits for the succor of the soldiers who were in the strong house (casa fuerte) of Old St. Augustine (San Agustín Viejo), because warlike Indians had gathered there. The said canoe turned over in the arm of the sea over which one must cross to the said strong house...*" (Lyon 1997b:140).

It is not known how long the *casa fuerte* at the site of the original fort was manned after this date, but it seems clear that the second and third forts of St. Augustine, as well as the town itself, remained on Anastasia Island until 1572. In that year the town was once again relocated, this time

to the site it occupies today.

The Fountain of Youth Park site after Menéndez

After the Seloy-Menéndez fort and town were relocated to Anastasia Island in 1566, the Fountain of Youth Park remained a Timucua settlement, and relations between the Timucua and the Spanish remained largely hostile until at least the early 1570's. Conversion efforts among the Timucua in the vicinity of Seloy's town (which was by then known to the Spaniards as "Nombre de Dios") began after 1573, when the first Franciscan friars arrived in Florida (Hann 1996:70). In 1587 a Franciscan mission, "Nombre de Dios", was formally established. There is little doubt that the Indian burials and accompanying occupation area in the southeastern part of the Park were associated with this mission. The post-Menéndez Timucua occupation was most pronounced during the late sixteenth and early seventeenth centuries in the southwestern and southeastern quadrants of the Park

Archaeological data indicate that this historic period Indian village occupation did not continue much beyond the mid-seventeenth century, when the mission village of Nombre de Dios seems to have moved a short distance southward, to the site of the present-day Mission of Nombre de Dios. No other activity in this area is documented during the First Spanish period of St. Augustine, however it may have been used intermittently for farming.

During the British period in St. Augustine (1764-1780) the area was part of a farm owned by Governor James Grant, and used for experimental farming of vegetables, provision crops and exotic plants for the Governor's "own amusement" (Schaefer 2000:8-13). After 1768, the areas was divided into small tracts and sub-let to a succession of farmers, many of them Minorcans (ibid).

Agricultural activity subsequently continued at what is today the Fountain of Youth Park through the Civil War years, until the property was purchased by H.H. Williams, a florist who cultivated flowers and fruit there (Adams et. al 1980; Corse 1933; Lawson 1956; Reynolds 1937). Williams opened his gardens to the public in 1874 as the "Paradise Grove and Rose Gardens". The property was purchased in 1900 by Louella Day McConnell, who developed the Park as the supposed site of Ponce de Leon's landing place, and the Fountain of Youth (ibid). The site has remained a tourist attraction on that basis, since passing into the ownership of the Fraser family in the 1920's.

Twentieth century alterations to the site

The agricultural activities that took place on the property over the past four centuries were minimally damaging to the archaeological resources when compared to development activities in other parts of St. Augustine. They did, however, impact the upper 20-25 centimeters of soil by cultivation with hoe and plow. This in effect homogenized approximately the upper 20-30 centimeters of the site deposits, which rarely exceed 50 centimeters in depth. Although disturbance to this depth left the bases of sixteenth century and pre-contact features intact, it obscured the initiation point of these remains, and perturbed much of the sheet deposit associated with the features. Because of this, there are few areas of undisturbed de facto sheet midden remaining at the site.

The area of the Park associated with the Menéndez site - that is, the open field in the southeastern corner- has been left largely undisturbed by construction. Exceptions include roadways placed there in the 1950's or earlier. According to a 1961 St. Augustine Plat map made for tax purposes, two roadways were present in the southeastern quadrant of the Park (Figure 3). Remnants of these remain visible on the site, except for the north-south extension of "Ponce de

Leon Boulevard” which extended through the site from approximately 430N to 500N, along grid line 500E. The periphery roadway, called “Matanzas Boulevard” ran along the marsh around the

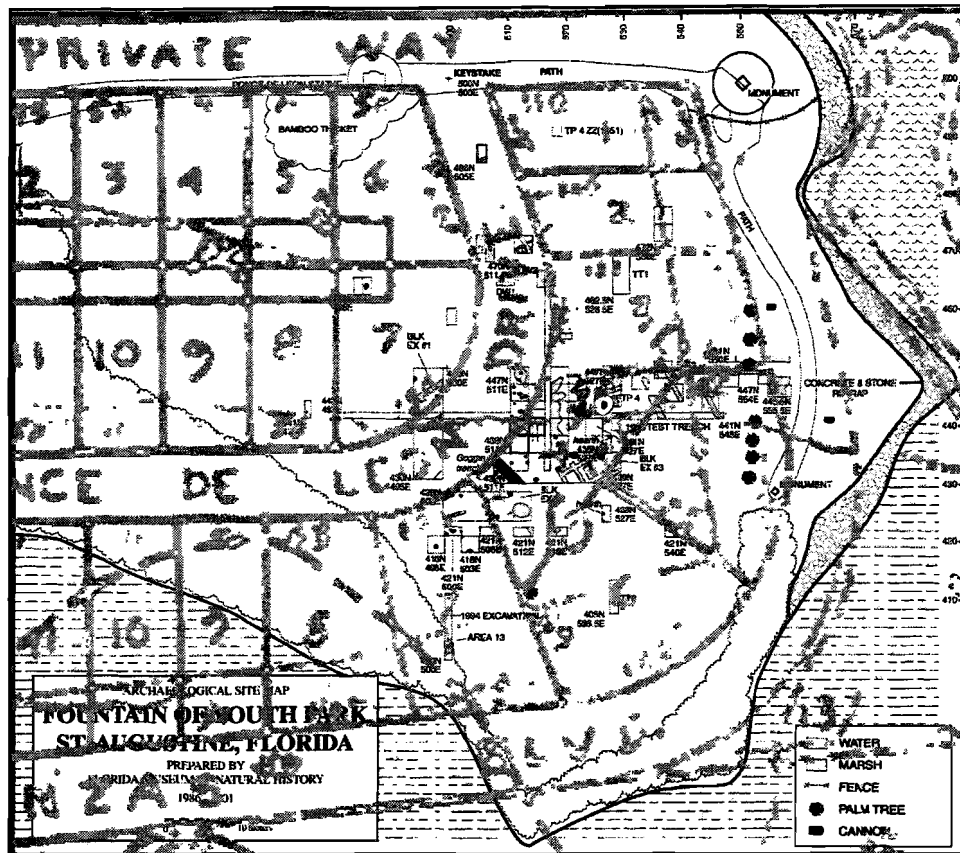


Figure 3. 1950's Plat map overlaid on archaeological basemap

southeastern edge of the site, and was surfaced with gravel and asphalt (Stuhlman 1994:13). Part of this corresponded to the raised pathways present in these locations today, and which are clearly filled in to provide a raised roadbed. It is possible that soil from the low-lying center of the site may have been impacted or even used in these filling activities.

Twentieth century refuse disposal has also impacted isolated areas in the southeastern corner of the site. At least two large holes excavated for trash disposal have been located; one near the top

of the high rise at the southeast corner (approximately at grid coordinate 4034N, 520E) and one just west of the easternmost path along the water (at approximately grid coordinate 470N 540E). Remains from the pits indicate a date in the 1940's and 1950's.

Site deposits of the Menéndez era have also been compromised by water activity. The open field at the southeast corner of the site is extremely low-lying and is inundated regularly at times of high tide or rain. The topography of this area is, in fact, like that of a bowl, with the highest elevations around the eastern, northern and southern edges of the field along the marsh, sloping inward toward the lowest elevation at the center of the field (where the Menéndez period remains are located).

Storms severely exacerbate water inundation, and over the centuries it has been inevitable that the sandy soil eroded from the surface through storm activity. The direction of erosion appears to have been primarily (at least in recent years) toward the marsh along the southern edge of the property. Periodic inundation of the site, both from below (as tides rose) and from above, (as rain and storm surges washed over the area) has also created a long-term water percolation effect on the soils, leaching much of the organic material from the sub-surface cultural features, in some cases nearly erasing them.

Because of these water-generated problems, there has been intermittent but significant filling activity around the southern and eastern peripheries of the property both to provide maintenance vehicle access,

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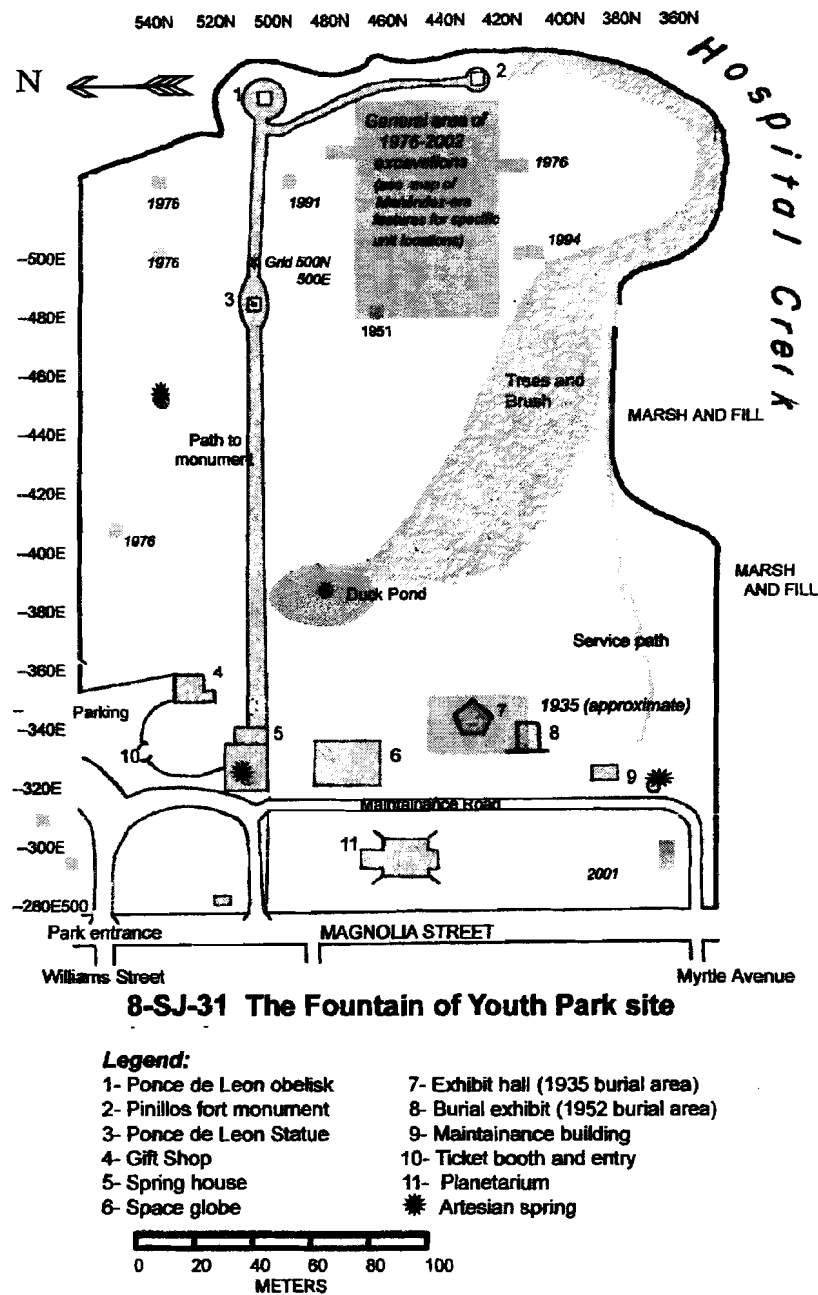


Figure 4: Topographic features and major excavations, 8-SJ-31 (Solid grey rectangles indicate excavated areas)

and to protect the area from flooding. In recent years, the open field at the southeastern corner of the property has necessitated extensive filling (above the 1991 ground surface) to prevent standing water.

Archaeological Research at the Fountain of Youth Park

Archaeologists have worked at the Fountain of Youth Park site since the 1930's, when one of the first historical archaeological projects in the United States was carried out there by archaeologists Ray Dickson, Vernon Lamme, and Matthew Stirling (for a synthesis of the excavation history at the Fountain of Youth Park, see Anderson and Deagan 2002). The first of these projects was carried out in 1934 by Ray Dickson of the Dickson Mound Museum in Illinois, after Walter B. Fraser discovered Indian burials while planting trees in the Park. Dickson excavated a large block of 40 by 90 feet in the vicinity of the exhibit buildings currently housing the Park's interpretive exhibits (Figure 4). More than 100 burials were excavated, along with a number of pits and posts (these are reported in Seaberg 1951 and Merritt 1977:36-45).

State Archaeologist Vernon Lamme subsequently conducted excavations in the southwestern portion of the Park, in the village midden associated with the burials. The precise location of these excavations is unknown, and no field records or report have survived.

More excavations were carried out in 1951 and 1953 under the direction of John Goggin of the University of Florida (Seaberg 1951; see also Merritt 1976; Cheney 1987; and Deagan 1992). The Spring 1951 season was supervised by Paul Hahn and Lillian Seaberg, who placed tests throughout the Park (Figure 4). These are reported by Lillian Seaberg (1951). Additional and apparently quite extensive tests were done in the summer of 1951 by University of Florida students Richard Cooper and Marguerite Porter, however these remain unreported (see Seaberg 1951:34). No field maps or notes have been located for these excavations, although some were apparently in the southeastern quadrant of the park. Excavations in 2001-2002 uncovered several former excavation units from this project, and this has permitted approximate identification of several others (Anderson 2001) (Figure 4).

The current archaeological program began in 1976, and has been largely carried out through the Florida State University and University of Florida field schools directed by Kathleen Deagan. This work has focused on the Menéndez-era occupation at the Park (Figure 5). Excavations took place during

1976, 1985, 1987, 1991-92; 1994, 2000, 2001 and 2002, and details of these excavation projects can be found in the field reports by Merritt (1977), Cheney (1987), Gordon (1992), Stuhlman (1994), White (2000); Anderson (2001); Woods and Schultz (2002) and Woods (following).

Although these excavations have been concentrated in southeastern quadrant of the Park (the location of the Menéndez period occupation), it should be noted that a number of areas outside the assumed Menéndez-era site area have also been tested. These included posthole surveys and test excavations in the northeastern and northwestern quadrants of the property (Jones 1976; Merritt 1976; Beck 1994; Lewis 2001; Braden 2001), revealing that the northern half of the Park was occupied exclusively by either Native Americans during the late prehistoric St. Johns II occupation; or by post-Spanish (British period or later) activities. No evidence for sixteenth century occupation has been located in the northern or southwestern area of the Park.

Extensive testing in the southwestern portion of the Park, adjacent to Magnolia Street, was carried out in 2001 and 2002, under the supervision of Gifford Waters. This work documented the

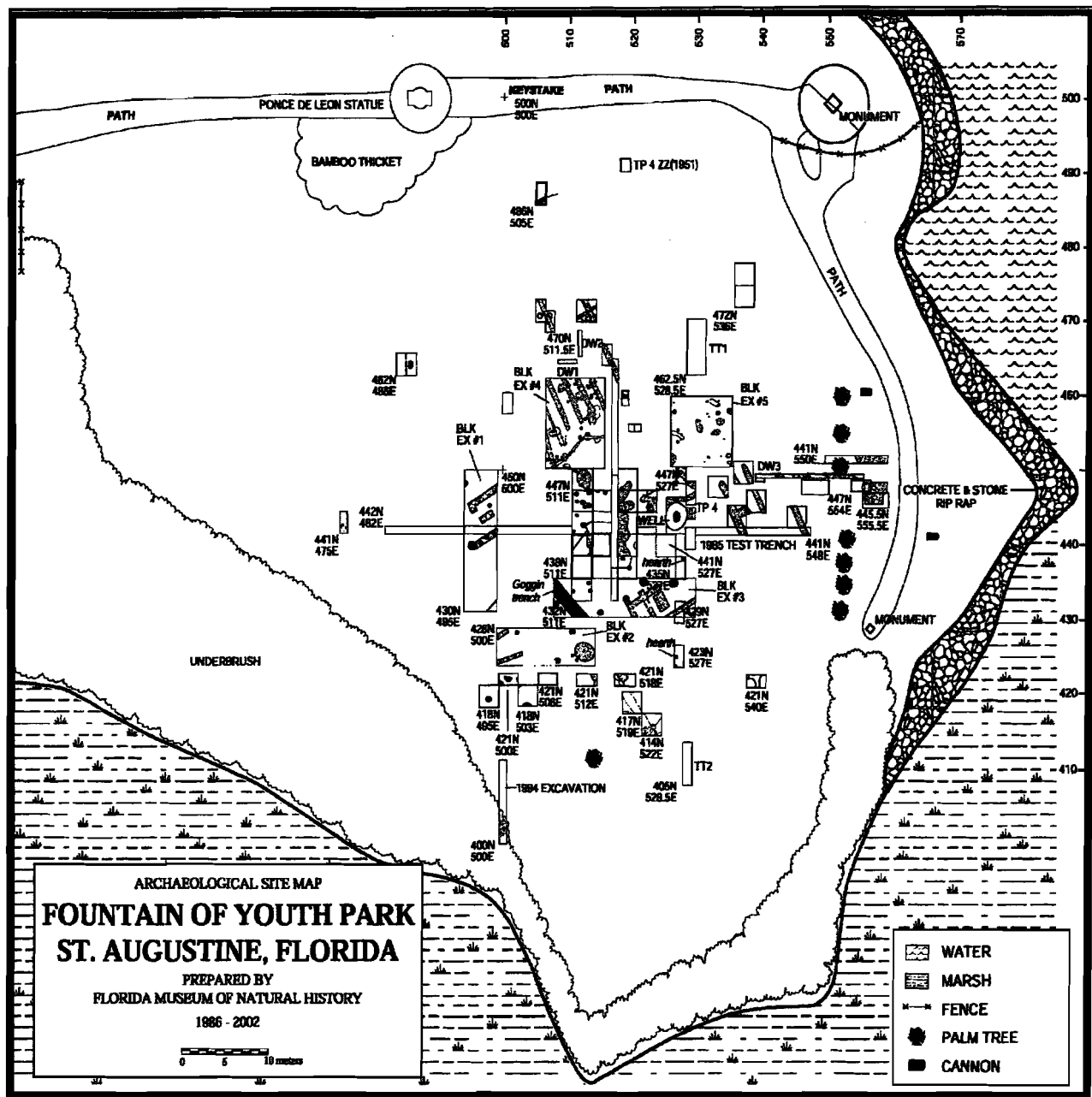


Figure 5: Excavations in Menéndez Occupation Area, 1976-2004

seventeenth century mission period occupation of the site, and also revealed no indication of Menéndez-era occupation. The field report is pending.

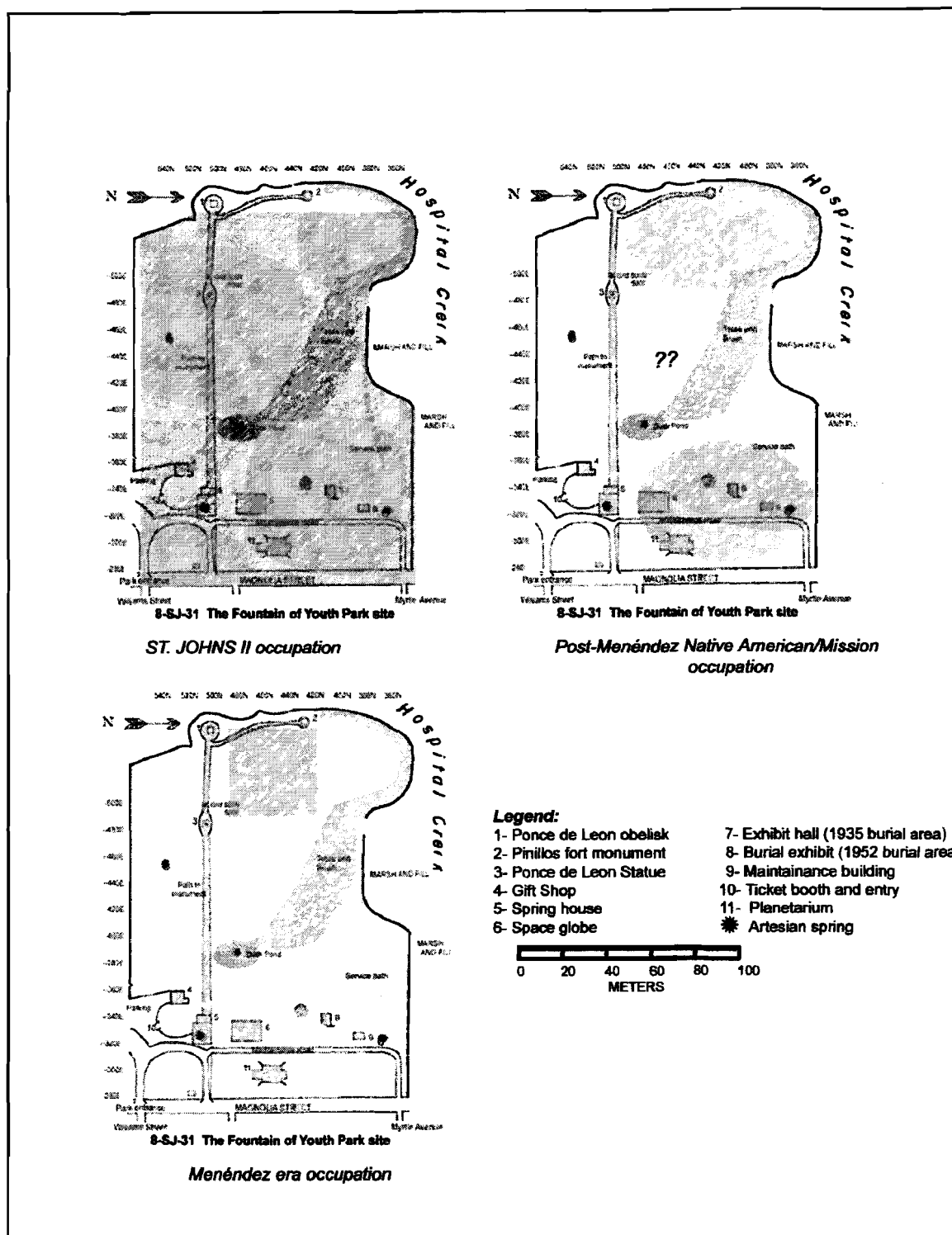


Figure 6: General locations of cultural occupations within Park

SUMMARY OF RESULTS, 1950-2002

Cultural Occupations at the Fountain of Youth Park

The results of the projects discussed above indicate that there have been six significant cultural occupation phases in the Park, each with distinct physical distributions (Figure 6). They include:

1. The Pre-Columbian Orange Period (ca. 1500BC- ca. 500BC).

This is a very ephemeral occupation, represented nearly exclusively by isolated fragments of pottery only, and is concentrated along the eastern margins of the Marsh and Hospital Creek.

2. The Pre-Columbian St. Johns II Period (ca. AD 750-AD 1580)

This is the most extensive occupation at the Park, represented both by domestic features and by artifacts. Evidence for this occupation is found in all areas of the Park that have been tested, and it is historically identified as the town of the Timucua cassique Seloy.

3. The Menéndez Occupation, 1565-1566

Archaeological evidence for this occupation - both features and artifacts- are found exclusively in the open field bordered by Hospital Creek, at the southeastern corner of the Park.

4. The Post-Columbian Timucua Occupation, ca. 1566-1650

Except for the initial few years, this occupation is associated with the largely Christian Indian village of Nombre de Dios, and its associated Franciscan mission. Archaeological evidence for mission activity is concentrated in the southwestern portion of the site, while evidence for historic-era Indian village occupation is present throughout the south half of the Park property.

5. The Agricultural Period, ca. 1750-1875

No occupational features dating to this era have been uncovered through excavations, however some evidence for agricultural planting ditches may date to this period (discussed below). A large

number of items (primarily ceramics, glass fragments and metal flakes) dating to the British and second Spanish periods were found in the plow zone deposits throughout the site, suggesting that either some domestic activity, or trash disposal took place on the property during this time.

Agricultural activity is thought to have extended throughout the Park area, and is archaeologically significant primarily for the occasional disturbance the farming activities did to earlier archaeological remains.

6. The Tourism Period, ca. 1875-present

This period, which includes the Williams, McConnell and Fraser occupations, has not been studied archaeologically. Several significant buildings serving tourism functions have been erected in the western portion of the Park property during this time, and the complex is in itself historically and culturally significant. It is not yet known if, and to what extent the activities of this period may have affected earlier archaeological resources, however such impact would have been largely be restricted to the western 1/3 of the Park property.

The following discussion summarizes the information learned through excavations about the three major archaeological occupations at the site, with emphasis on the Menéndez occupation.

Prehistoric Occupation

The earliest use of the Park appears to have been during the Orange Period, ca. BC- AD 200 (Dates for the pre-Columbian occupations follow Milanich 1994). This was a hunting, gathering and fishing society that concentrated on coastal estuarine resources. The pottery typical of the later part of the Orange Period, known as Orange Fiber Tempered ware, has been found along the entire area of the Park bordering Hospital Creek. This is part of an extensive region of Orange Period occupation that is documented to have extended along the intracoastal waterway from several

miles north of St. Augustine, southward to below Matanzas inlet (Goggin 1952; Russo 1992:111-13). The Orange Period occupation at the site is represented exclusively by Orange Fiber-tempered pottery, and such features as pits, postmolds or other human-created depositions have not been found.

Archaeological evidence suggests that the Park was not intensively used during the subsequent cultural period, known as St. Johns I (ca. AD 200-AD 750). The best-defined archaeological marker for the St. Johns I culture is the presence of exclusively plain St. Johns pottery, along with trade pottery imported from other regions, such as Deptford, Swift Creek and Weeden Island ceramics (see Milanich 1994:246-48). There are very few contexts at the Fountain of Youth Park site that contain St. Johns Plain pottery unaccompanied by the St. Johns Check Stamped wares that mark the beginning of the St. Johns II period at about AD 750 (ibid).

The presence of Deptford trade wares (ca. 500 BC - AD 200), in some of the lower levels of the excavations suggests that there was probably intermittent occupation of the area during the St. Johns I period at the site. No features have been identified as belonging to the St. Johns I period, however, and it is clear that the most intensive pre-Columbian use of the site took place during the St. Johns II era, after AD 750 and extending to the end of the sixteenth century. The later end of this occupation span was the period of the Timucua chief Seloy's occupation.

The entire area included in the Park was occupied during the St. Johns II period. Survey and excavation outside of the Park property (Chaney 1986:34-38; Smith and Bond 1980:27-36, Carl Halbirt, personal communication, St. Augustine 2001) indicate that the St. Johns II component at 8-SJ31 is part of a larger Timucua village, or occupation zone that extends to the north, and slightly west of the Park. This occupation is most concentrated roughly between Ocean Avenue

on the south, May Street on the north, and some point between Magnolia Avenue and Estey Street on the west.

Several Timucua structures dating to the St. Johns II period have been located in the Park. Possibly the most complete was a circular post structure located by Ray Dickson during his 1935 excavation of the northern group of mission period burials in the southwest part of the Park. The structure (as well as some 25 burials) was located south of the main burial concentration, in the area that is today between the northern exhibit hall and the southern burial building. Some burials, in fact, intruded into the postmolds for the structure. Dickson recorded ten postmolds of approximately 9 inches (20 centimeters) in diameter, comprising part of a circular structure of roughly 12 feet in diameter (Merritt 1977:42; Seaberg 1951).

Many of the internments located in this area by Dickson were bundle burials or flexed burials, while others were extended burials. The bundle and flexed burials suggest that this area also served as a non-Christian cemetery, although the available data are insufficient to assess either the dates for these burials, or whether the associated extended burials were Christian.

Excavations in the northern half of the Park in 1976 and 1977 documented the presence of a St. Johns II occupation without significant evidence of any later historic occupation. (Luccetti 1976, Jones 1976, Merritt 1977). Late St. Johns II period occupation was also concentrated in the open field at the southeastern corner of the Park (where the Menéndez period occupation is located), however the deposits in this area are overlaid by, intruded upon by, or mixed with early historic period Spanish deposits. The shell midden in the southeastern corner of the Park (creating a roughly circular raised area at the southern end of this section) dates from the St. Johns II period through the mid-seventeenth century. Only the lowest approximately 10-15 centimeters of the

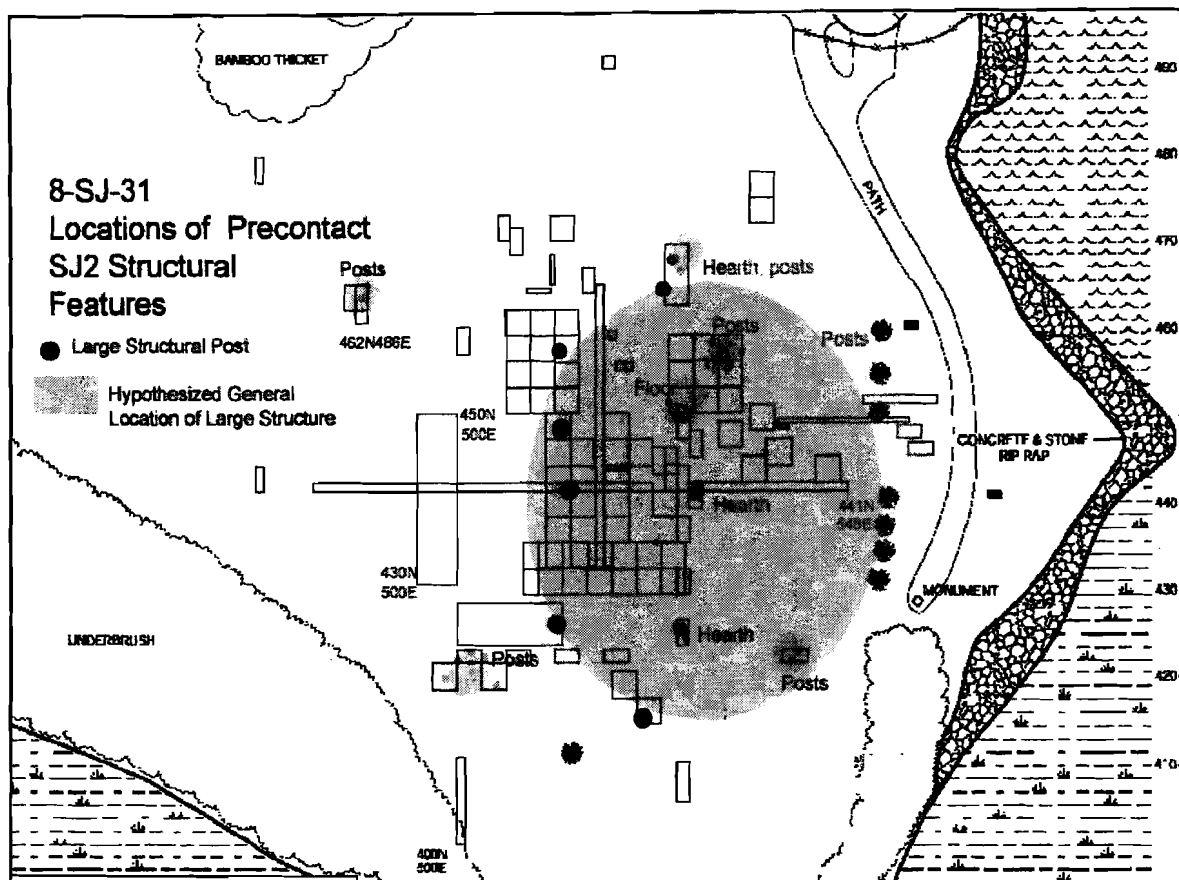


Figure 7: St. Johns II Structural Features

midden, however, dates to the pre-contact Timucua occupation period. Beneath the midden are posts possibly describing a structure, trash pits, and several clusters of small posts that reflect St. Johns II occupation.

The postmolds and hearths from several Timucua circular pole and thatch structures have been located in this southeastern section of the Park area. These are about three to four meters (10-13 feet) in diameter, and have associated hearths and trash pits. The posts are consistently about 20 centimeters in diameter (see Chaney 1987:52-53; Lucchetti n.d.:50; Merritt 1976:51; 80; 86). A portion of what appears to have been a somewhat larger post structure is suggested at the northwest edge of the shell midden, in the area between the Spanish occupation area and the

midden itself (Features 50, 51, 52, 54, 56; White 2000:13-16) (Figure 8). It has larger posts, some 30-40 cm. in diameter, and a floor diameter of as many as five meters. A very large structure has been located in this area (discussed below), and is thought to have been part of the Chief Seloy's "very large house" used by the Spaniards as a fort. If it is indeed part of such a structure, it was obviously part of the St. Johns II village occupation, and continued in use during the Spanish occupation of 1565-66 (see Figure 8).

Additional details on these features can be found in the field reports cited above.

The Mission Period (ca. 1575-1650)

Two areas of post-Menéndez Native American occupation have been identified in the Park. At the west end of the Park, extending from approximately Magnolia Avenue eastward to the west side of the duck pond, there is evidence for what was probably a mission Indian settlement and church. Burials associated with this occupation are Christian, and date primarily to the late 16th through the early 17th century (Goggin 1968:65; Seaberg 1951).

More than 100 burials were located by J. Ray Dickson in 1934, and some 67 were excavated and recorded. A small sample was studied by Matthew Stirling of the Smithsonian Institution. Additional excavation in the associated mission village was done in 1935 by State Archaeologist Vernon Lamme, and the burial and village areas were studied from 1951-1953 under the direction of John Goggin of the University of Florida. Ten more burials were excavated by Goggin student Paul Hahn in 1953, in preparation for a second burial display area (Seaberg 1951). This excavation was in the vicinity of the Park's smaller, southern exhibit structure

There is some suggestion that the Indian burial area was used as a cemetery during both prehistoric times and the mission era. Three "clusters" of burials were located and recorded. The

largest group (approximately 90 individuals) were nearly all interred in a traditional Christian pattern, extended with their faces toward the east. This was in the area covered today by the circular, larger and northernmost of the two extant exhibit structures in the Park.

These burials appear to have been associated with a church of the late sixteenth to the early 17th century, given their tightly compacted arrangement, the presence of burial intrusion on earlier historic-period burials, the presence of structural evidence (posts, clay flooring) around the burials, and their highly consistent orientations. This was probably an early site of the mission of Nombre de Dios, established in the later 16th century (Hann 1990:426; Gannon 1965:27).

There were three bundle burials and two flexed burials interspersed with the group of burials thought to be inside the church. They were all located in the same excavation unit, and were somewhat deeper than the majority of extended burials, suggesting the possibility that these predated the Christian burials. A second group of some 25 burials was also located by Dickson at about 40 yards south of the first group. Many of these were bundle burials or flexed burials interred along with some extended burials, suggesting that this was an area of non-Christian burials (data are insufficient to assess the dates for these burials, or whether the extended burials were Christian).

A third group of burials was uncovered by University of Florida student Paul Hahn in 1953, located between the two groups discussed above, at about 20 meters to the south of the northernmost burial structure (This is today the location of the smaller burial structure, and the site of the burials reinterred and blessed in 1991). The 10 burials excavated by Hahn appear to have been Christian interments, however they were buried facing north, unlike the northern group of Christian burials excavated by Dickson, which were facing east.

The presence of two early historic period, adjacent Christian burial areas with different burial orientations is unusual. The normal practice in Catholic burial was to place burials with their feet toward the altar of the church (that is, with faces looking toward the altar). If the eastward-facing burials excavated by Dickson were, in fact, inside the church, it might indicate that the burials excavated by Hahn (and reinterred in 1991) may have been in a cemetery outside and south of the church, buried with their feet toward the church to the north (faces looking north toward the church). Alternatively, this phenomena could also reflect the movement and rebuilding of the mission church in a different position during the seventeenth century.

A mission-period village occupation has been documented to the west of the burial areas (and east of Magnolia Avenue). State Archaeologist Vernon Lamme tested this area during his 1935 excavations in the village midden to the west of the present burial structures. Excavations since the 1950's have demonstrated that the Native American mission period village occupation occurred predominantly in the south half of the Park property. Two areas of such occupation have been well-documented. One is to the west of the burials, between Magnolia Avenue and the present service road, revealed through excavations supervised by Gifford Waters in 2000 and 2001. This seems to be the area of most intensive seventeenth century occupation.

There was also a historic-era Native American occupation in the southeast corner of the Park, in the area thought to have been the Menéndez settlement. The shell midden at the southeastern tip of the property appears to be largely of late sixteenth and early seventeenth century origin, overlying Menéndez-era deposits. Mission period features also occasionally appear as disturbances to earlier historic-period remains.

At some time near the middle of the seventeenth century, the mission church of Nombre de Dios

was moved to its present location on the south bank of Hospital Creek, where the Shrine of Nuestra Senora de La Leche is located today (Site 8-SJ-34). There is extensive archaeological evidence at this site for the presence of an Indian settlement during the seventeenth and eighteenth centuries (Chaney 1986, 1987; Luccetti 1977; Morris 1994; Waters 1997).

The Menéndez Era (1565-1566)

As noted, the low-lying, open field bordering the water in the southeast section of the Park is so far the only the location in which archaeological remains dating to the Menéndez era have been found. The Spanish occupation area is bounded by Hospital Creek on the east and south, the east-west Park pathway on the north, and on the west by the low-lying field adjacent to the duck pond and drainage ditch. It covers an area of roughly 6,800 square meters, or nearly two acres. Approximately 720 square meters of the Menéndez era occupation area has been excavated to date, which represents about 11 percent of the site (See Figure 5).

All of the University of Florida excavations since 1976 (including those in 2002) took place in this area. The location was initially selected on the basis of results from a sub-surface survey done in 1976, which indicated that 16th century Spanish and Indian materials were present in this part of the Park (Luccetti 1977; Chaney 1986). Excavations were subsequently undertaken to investigate Timucua lifeways and acculturation patterns during this very early historic era. The initial excavations, like those of the 1950's, located what have been interpreted as Indian structures in this location (Merritt 1977).

When the University of Florida returned in 1985, however, it quickly became apparent that the area also contained very early European features, including a barrel well, and what appeared to be rectangular structures made with cut timbers and iron nails (Chaney 1987). The artifact assemblage

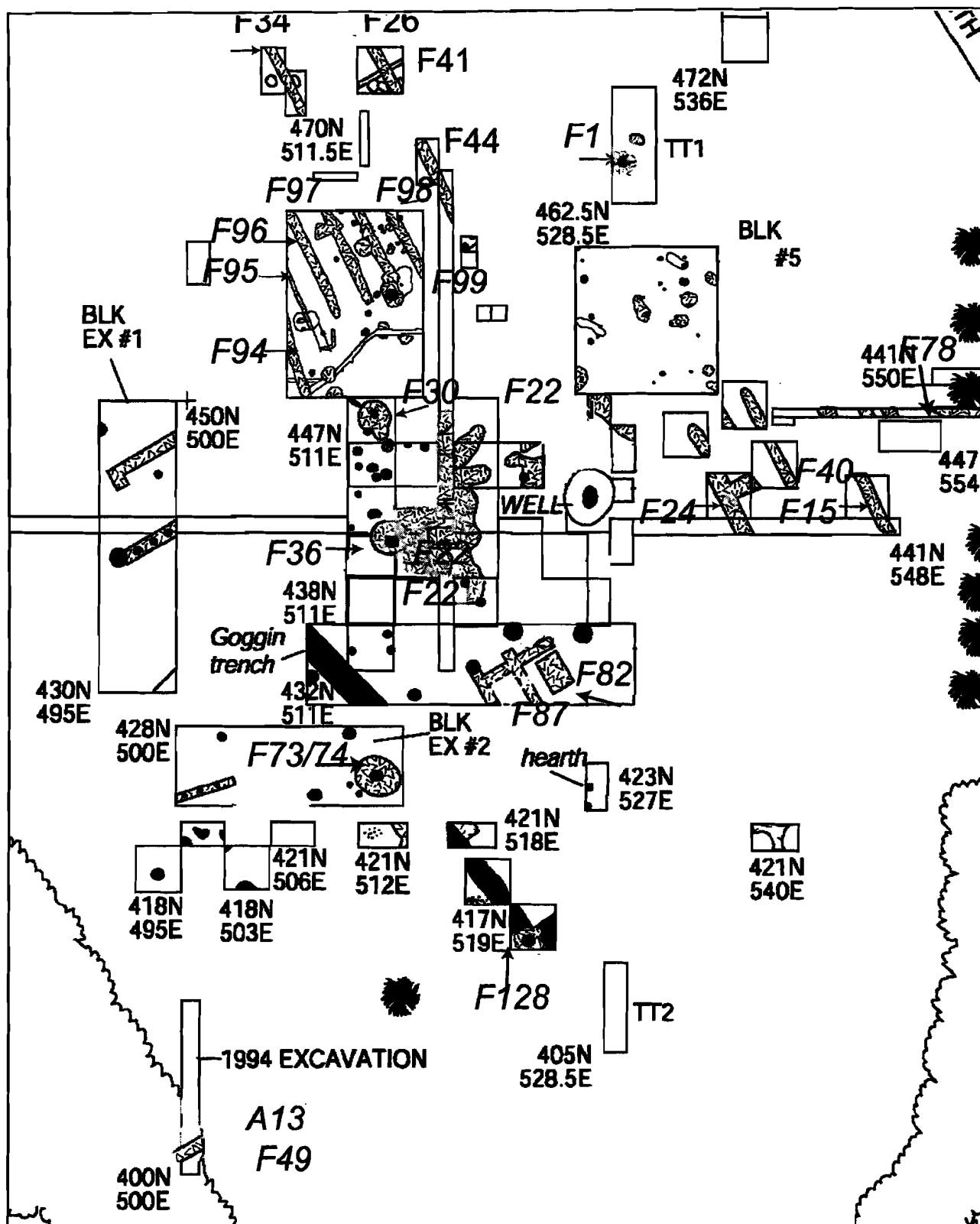


Figure 8: 8-SJ31 Central Area Excavations and Major Features

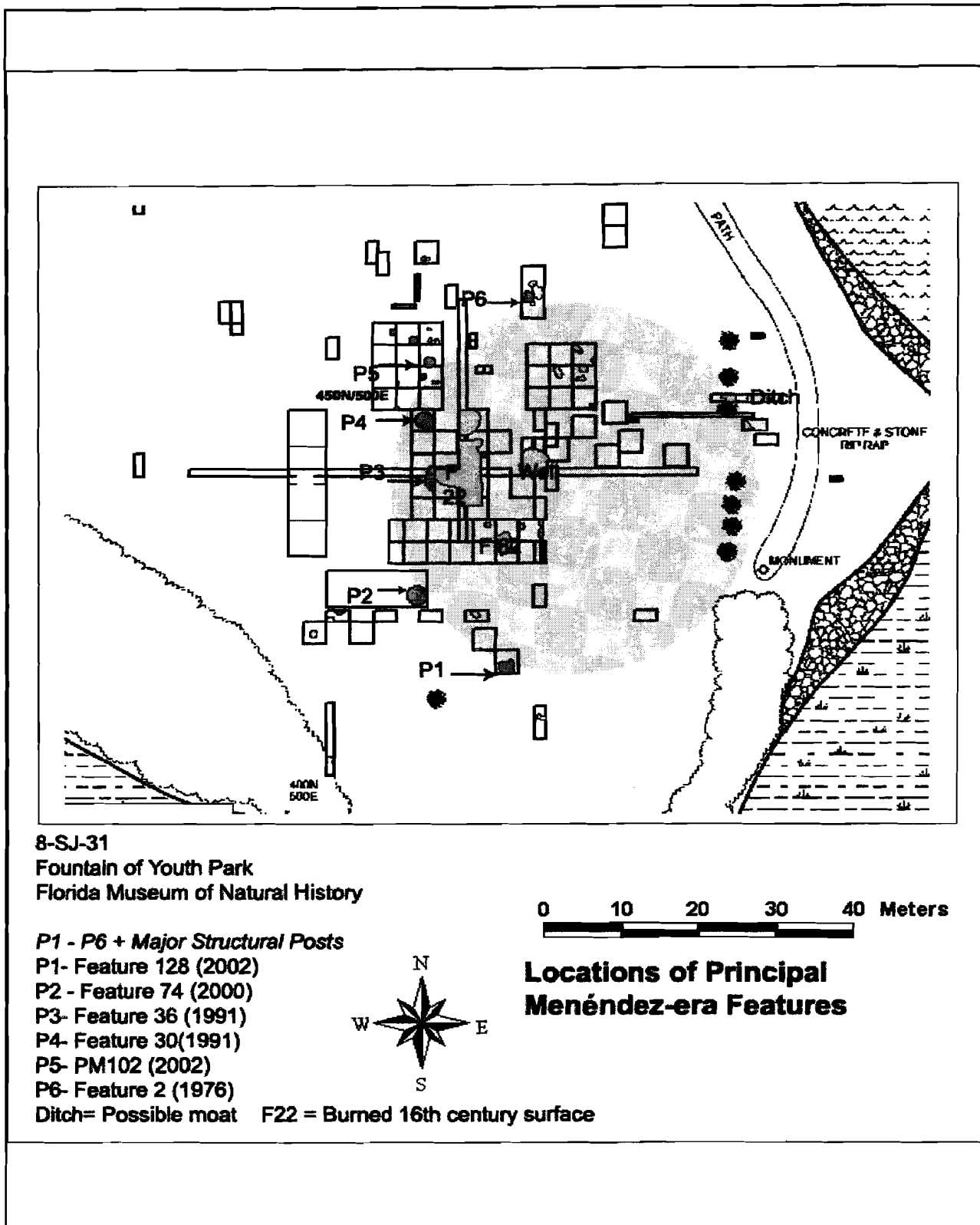


Figure 9: 8-SJ-31 Menéndez-era features and hypothetical location of Selay fort

also reflected a strongly European occupation, and included quantities of artifacts that are not normally found in historic Indian towns (lead shot, pins, metal buttons and ornaments). Table 1 shows the distribution of items excavated in the Menéndez site area.

Major Menéndez-era features

Figures 8-9 shows the locations of features thought to date from the Menéndez occupation of 1565-66.

The barrel well

Excavated in 1985, the well designated as Features 8 (the construction pit) and 9 (the well itself) is a traditional Spanish-style barrel well, using white oak barrels with metal hoops (Figure 10). Because of the low-lying location, one entire barrel was preserved below the water line. When it was filled in (presumably after 1566), it was with materials exclusively of the mid-sixteenth century, most of them Spanish (Table 2).

The well is in the approximate center of the Menéndez occupation area, within the possible large structure discussed below. The presence of a well here is notable because there are four above-ground artesian springs within a few hundred yards of the well itself. This implies that the well may have been placed inside the area used as a defensive compound to ensure a secure water supply.

Large Central Structure

Portions of a large and enigmatic historic period structure are evident near the center of the excavation area. The most prominent evidence for this structure is a series of large posts. These posts extend along grid line 511-513 E from approximately 425 N to 450 north - that is, for about

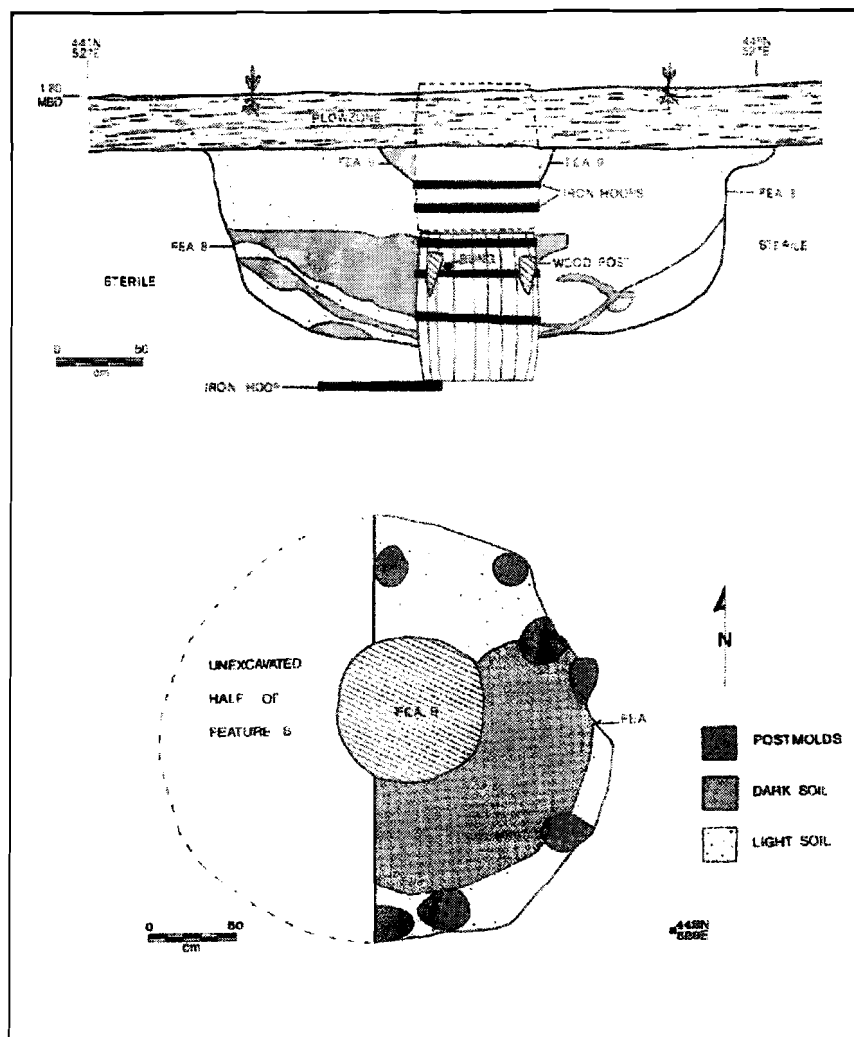


Figure 10: Menéndez-era Barrel Well (Features 8-9)
(From Chaney 1987:48-49)

25 meters north to south through the center of the open field (which is also approximately the western end of the Spanish occupation area). They include (north to south) Features 100, 30, 28, 30, 36, 74, and 128 (Figures 8-9). It is also possible that Feature 1 (1976) may also be part of this structure. Numerous smaller posts are associated with these large posts, sometimes appearing to encircle the larger posts. Smaller postmolds are also located at irregular intervals around the presumed edges of the building. These features provide the strongest evidence so far of what might

be the the “very large chief’s house” used by Menéndez as the first fort. Alternatively, they could represent a defensive wall around the compound.

Unlike the posts used typically throughout the site for houses, which are approximately 15-20 centimeters in diameter, these large posts measured about 30 centimeters in diameter, and were

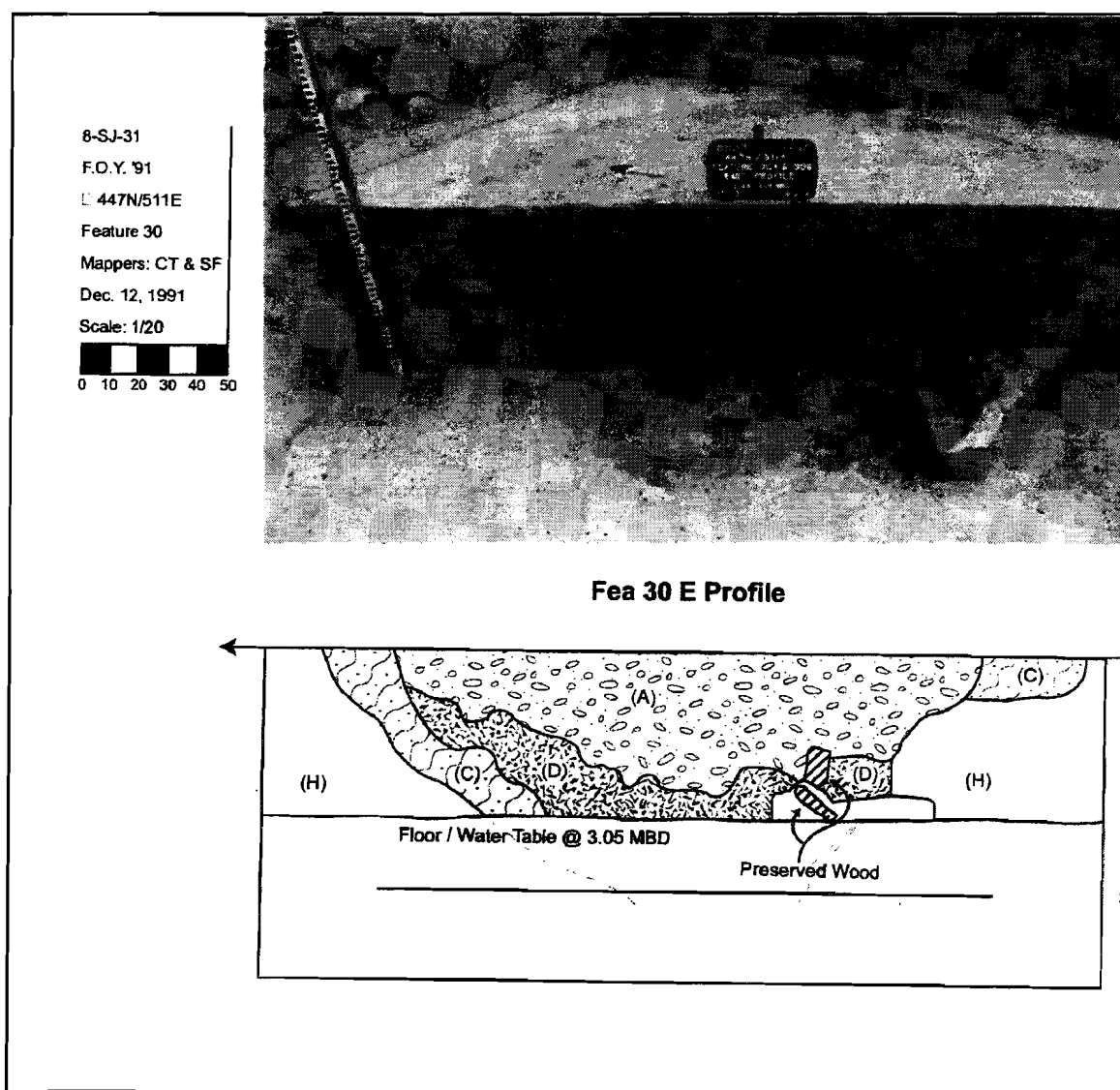


Figure 11: Large Structural Post Feature 30

placed in very large postholes. They were also much more deeply set than other posts at the site, and all extended well below the water table. Several of them (Features 30, 74 and 128) appear to

have been dug out and removed at some point, with the resulting holes used as trash pits. This was most clear in the case of Feature 74, which was apparently removed during the Menéndez occupation (Figure 12). Feature 128 may have been removed somewhat later, during the late sixteenth century Timucua re-occupation of the site.

These posts describe an oval or roughly polygonic structure measuring approximately 30 meters in diameter (Figures 8-9). On its east side, the remains of the structure are recognizable by a very dark brown, black or grey colored soil stain that includes large quantities of charcoal and iron

oxide (Feature 22). This appears to have been the result of burning of a wooden wall or room floor, and subsequent leaching of the resulting charred wood and charcoal into the low sandy soil.

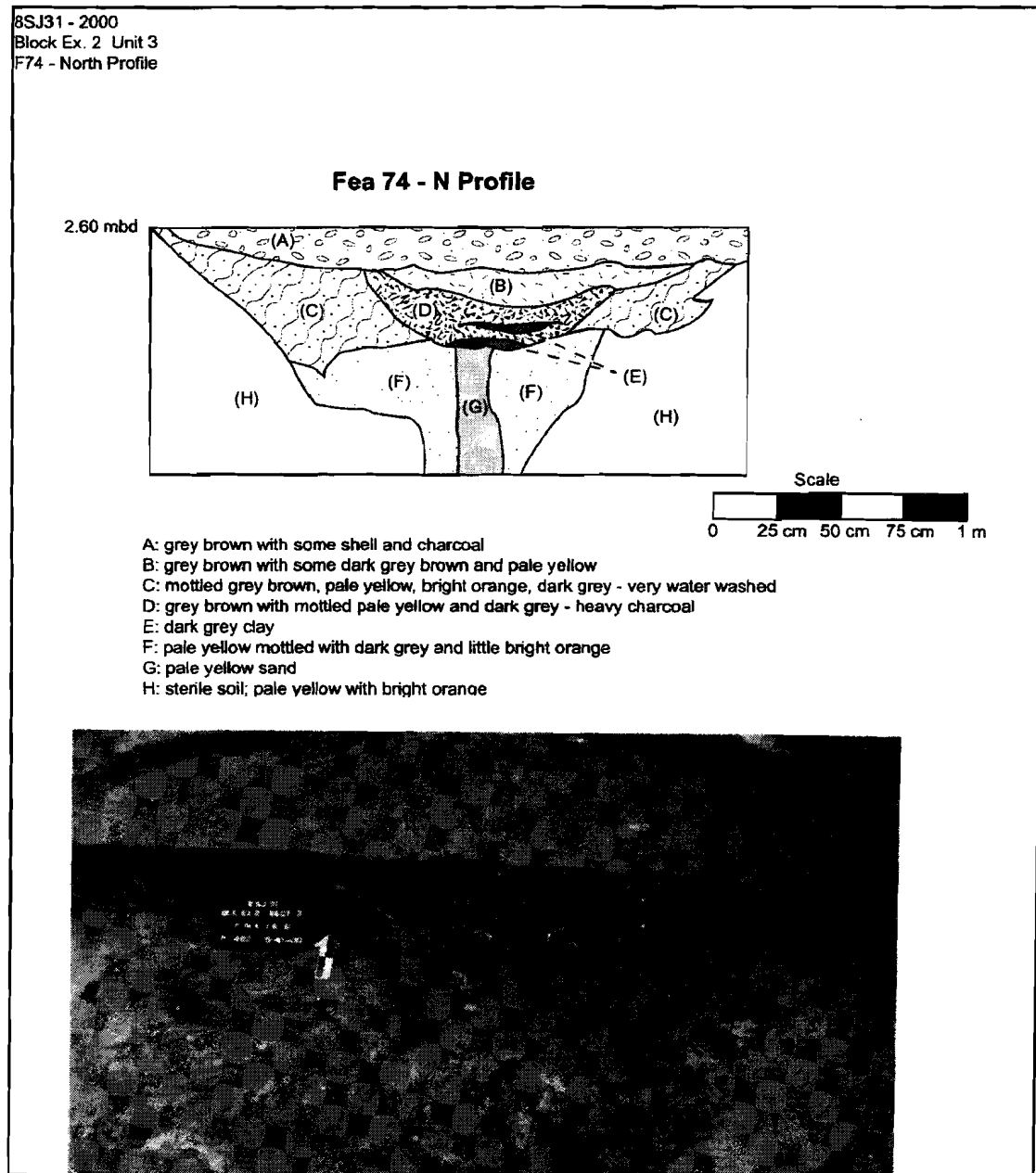


Figure 12. Large Structural Post Feature 74

The dark soil stain represented by Feature 22 has so far only been identified along the western side of the structure interior, describing a rectangle covering an area of approximately 10 meters north -

south, and five meters east-west. Its eastern edge is five meters west of the barrel well. The floor feature contained a significantly higher proportion of lead shot than is found in other Menéndez-era features at the site (14 percent of all European items, see Table 2). The combination of charcoal and the heavy concentration of small shot may suggest that this feature was part of the munitions storage house that burned in 1566 in the Selay fort.

Rectangular Pit

Excavations in 2001 uncovered an unusual rectangular pit, designated Feature 82 (Figure 13-14) (Anderson 2001:49-52). It was oriented southeast to northwest, paralleling the linear trench features discussed above. It was associated with, and aligned to Feature 87, one of two possible structural features within the area presumed to be the large structure (see Figure 18). Feature 82 measured 2.8 by 1.45 meters and was 60-62 cm. deep, with straight sides and an irregular but generally flat base. It had postmolds in the northern end. It was densely packed with whole shell and soil, and contained Native American and Spanish artifacts, including a large, broken hand-wrought brass hook at its base (Table 2),.

The function of this pit is undetermined. Its regularity, the postmolds in its base, and its contents suggest that it was not simply a refuse pit, although it may have been used for refuse after its primary purpose was finished.. It may have been intended as a foundation base for a heavy or load-bearing feature; or it may have originally had an industrial function such as a sawpit or storage pit. The association of the brass hook, which is very similar to those used in large balance scales (Deagan 2002:267) is provocative.

Another hypothesis, given its dimensions and orientation, is that it may actually be one of the undocumented excavation pits of the 1951 Cooper-Porter expedition. Given the fill, the exclusively sixteenth century artifact contents, and the posts in the base, this seems a very unlikely possibility.

Other 1951 excavation units revealed in the 2001 and 2002 excavations had highly characteristic fill

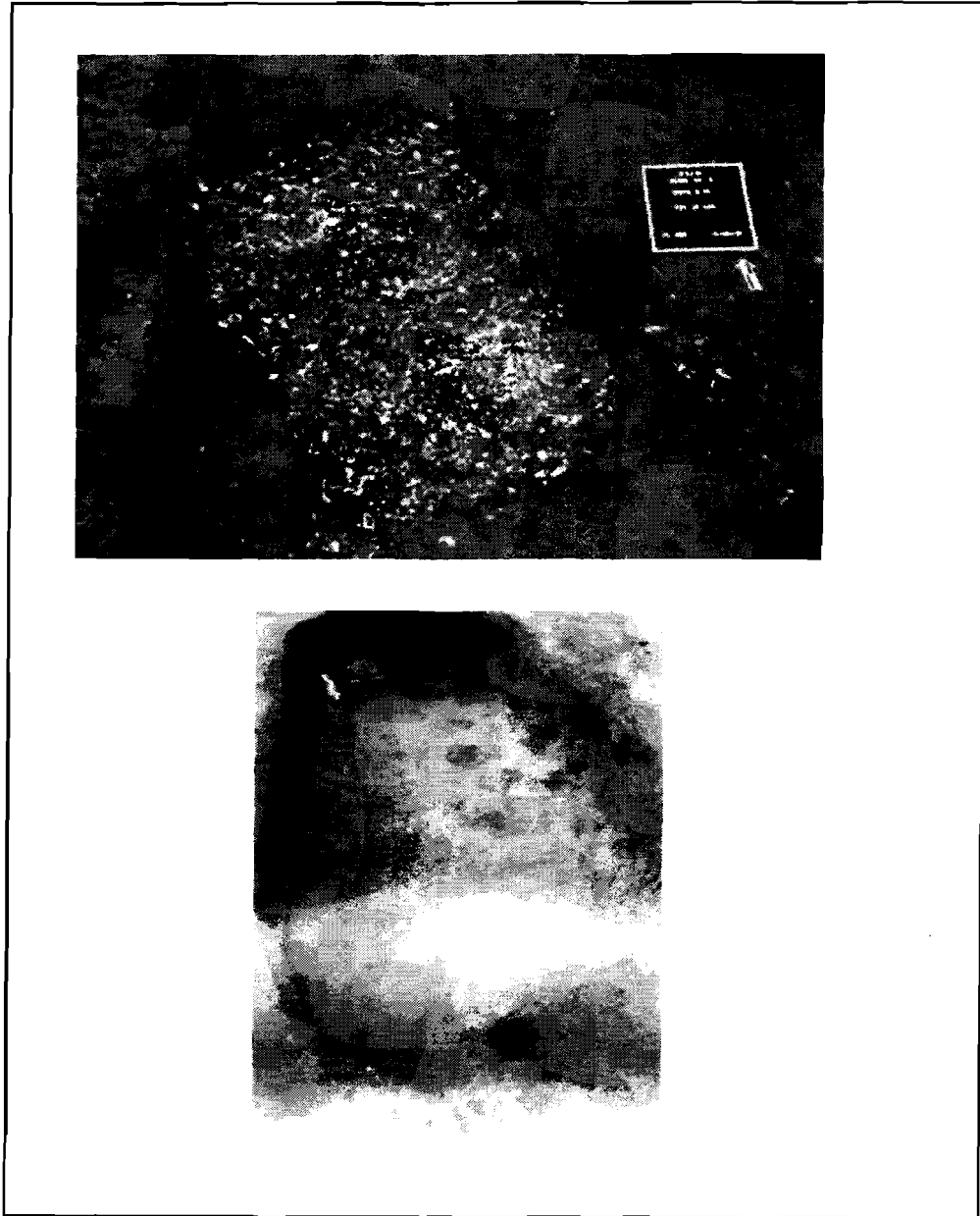


Figure 13. Feature 82, Top and Base

of black humic and mottled soil, broken shell, few artifacts, and were lined with decayed organic material -mostly palm fronds (See Anderson 2001:30-32).

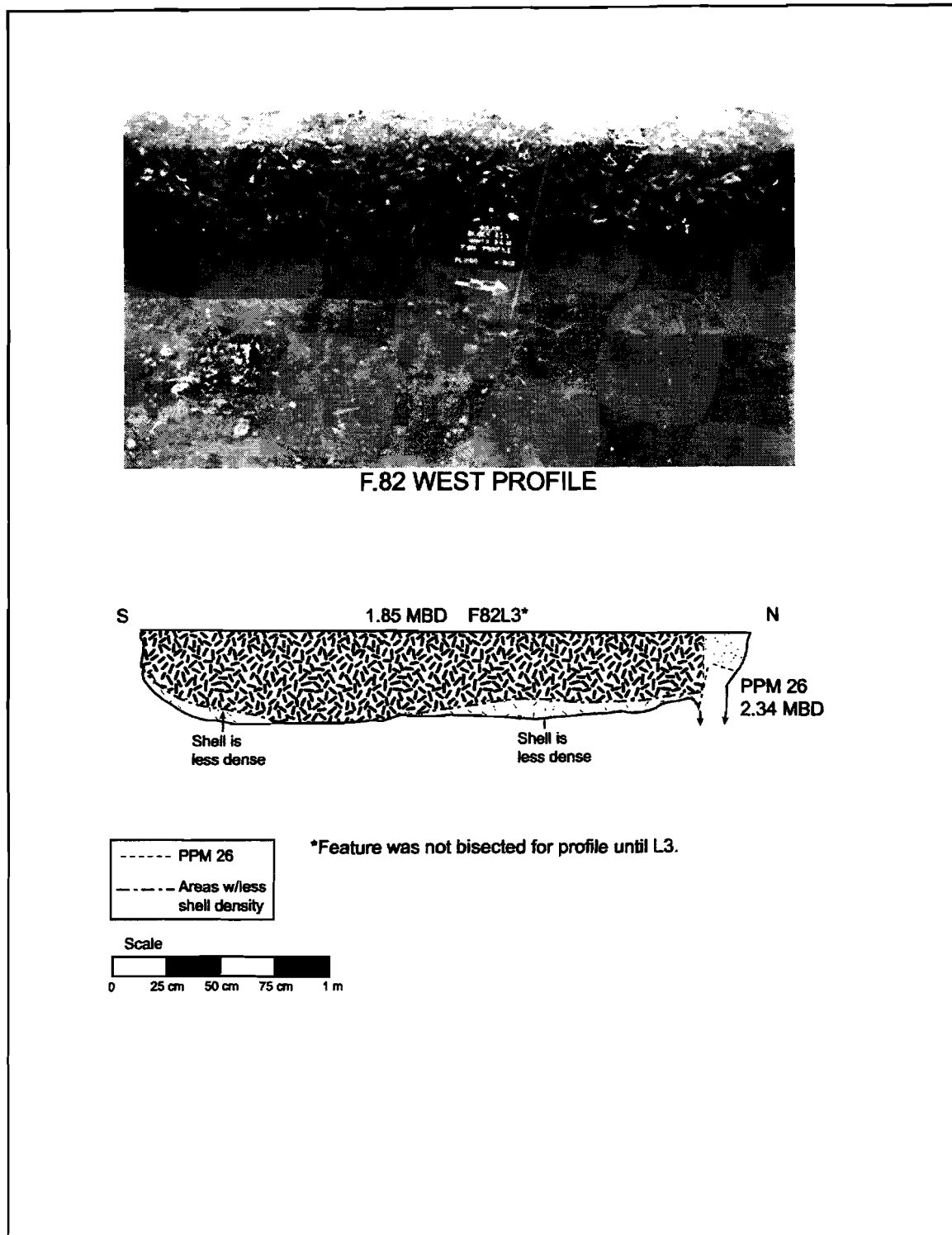


Figure 14. Feature 82, Cross Section

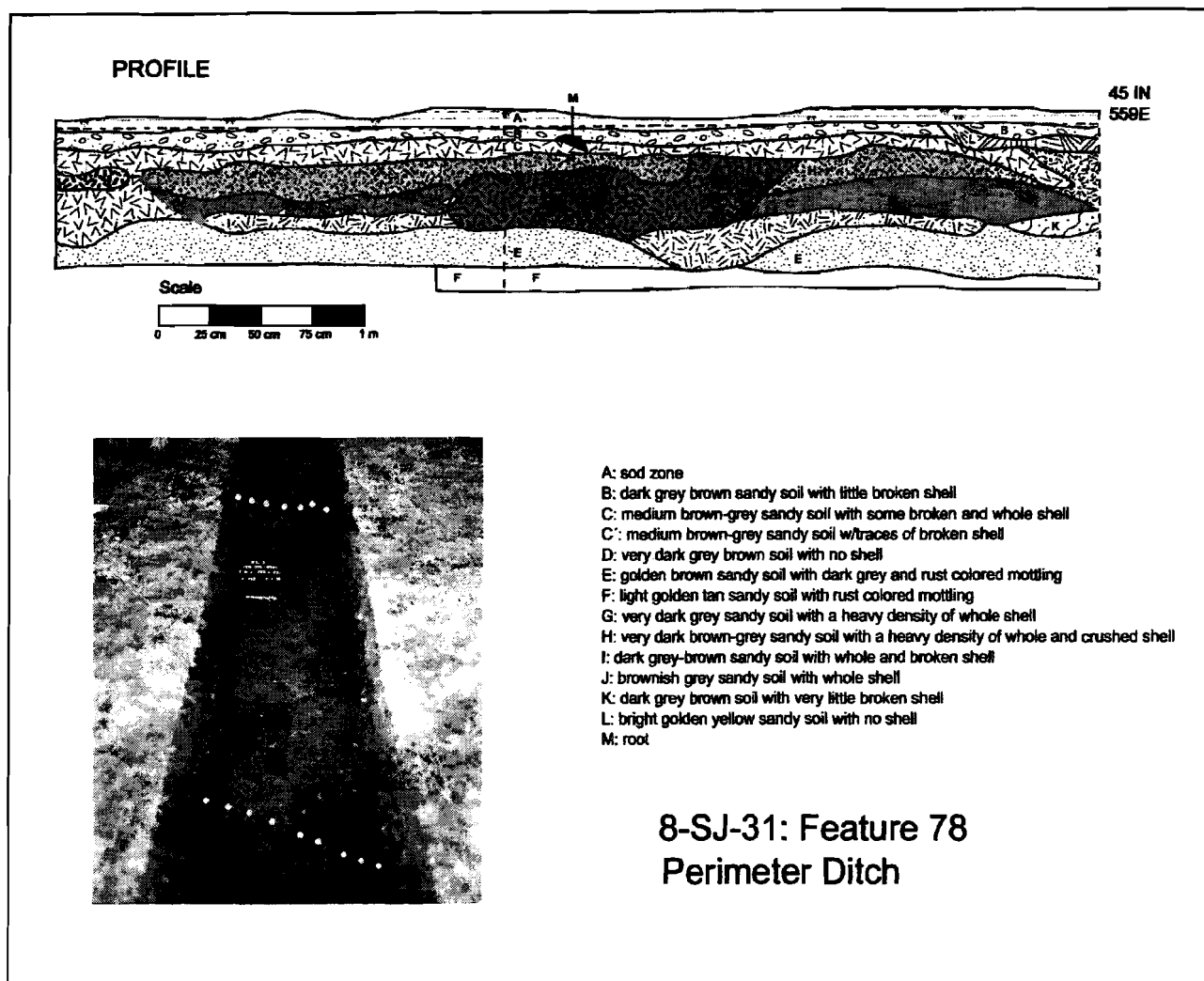


Figure 15. Possible Menéndez Perimeter Ditch or Entrenchment (after Anderson 2001)

Perimeter Ditch or Entrenchment

A wide, relatively shallow ditch dating from the Menéndez era was located at the eastern edge of the Spanish occupation area, and may possibly represent a moat or other defensive entrenchment (Anderson 2001). The ditch, which was four meters wide and about 60 centimeters deep, extends in a roughly southeast to northwest direction, paralleling the presumed eastern boundary of the hypothesized large structure (Figure 15). The ditch was filled primarily with soil and shell, with very sparse artifact content (Table 10). The dominance of St. Johns pottery, and the absence of any materials later than Spanish Olive Jar, suggests that the ditch was filled in during or shortly after the

Menéndez occupation. Only a small portion of this feature has been uncovered, however, and it will require additional excavation to test the hypothesis that this was indeed a Menéndez-era defensive entrenchment.

Linear trench or ditch features

Excavations in 1987, 1991, 1994, 2001 and 2002 uncovered a number of long, narrow linear trench-like features around the periphery of the area thought to have the large structure (Figures 8-9). These are the most problematical deposits at the site, and until 2002, were thought to represent the stains from mud-sleeper sill construction used as supports for frame walls. The features themselves are approximately 60 centimeters wide, and from 15 to 20 centimeters deep. Some have rounded sections, and others have essentially straight walls, and some have irregular curved bases (Figure 19). Some - particularly those at the north end of the occupation area - had a deeper had a deeper lip or groove along their east side, and several have postmolds in their base or along the side.

Dating these narrow trench-like features is difficult, in that the plow zone at this part of the site often extends to the sterile subsoil, and it was frequently not possible to identify the true initial elevation for these features. This was the case particularly in the norther excavations units. Nearly all of them, however, first appear at the same elevation as other, documented Menéndez features, and so far, none have intruded into earlier features. With two exceptions, they contain only materials consistent with a sixteenth century date (Table 3). Two of the trench features (Features 15, 40 and 24) almost certainly date to the Menéndez occupation period, not only because their fill contains mid-sixteenth century artifacts, but also because they underlay a shallow sheet deposit (Feature 23) that is a Menéndez-era deposit, containing such early Spanish materials as Columbia Plain majolica and early style Olive Jar. These linear trench features at least are not later intrusions

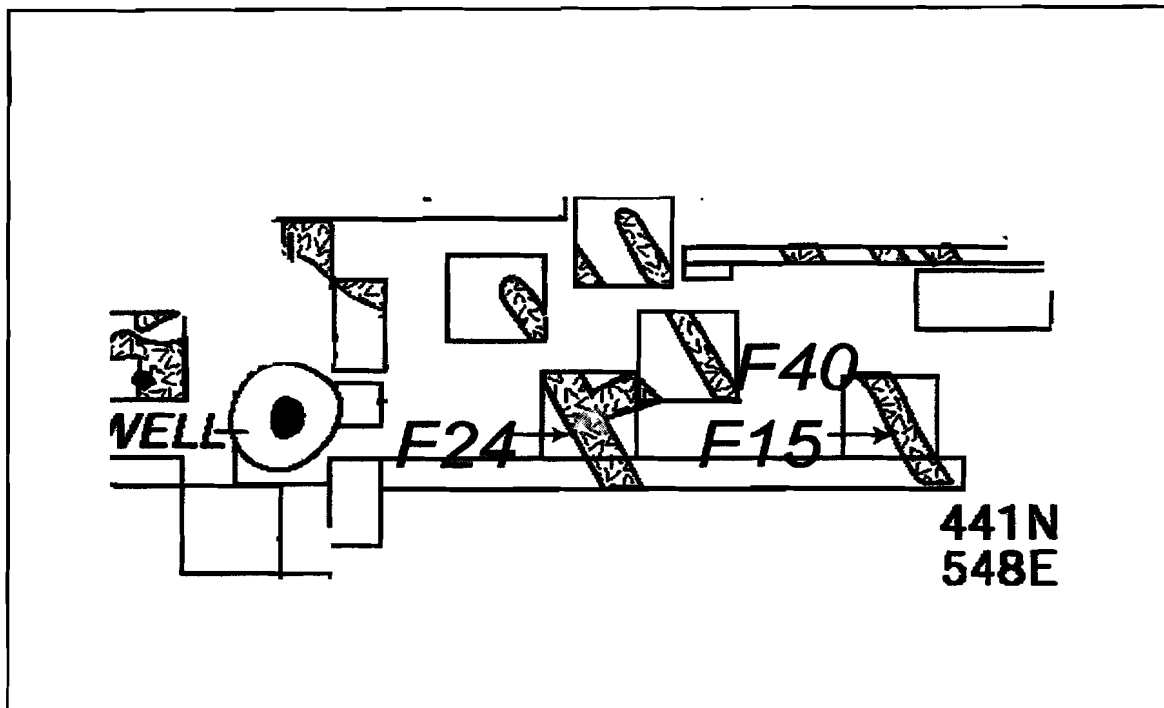


Figure 16: Sixteenth century trench configurations: Features 15, 40, 24

into the Menéndez deposits.

Nevertheless, all of the linear trenches share a similar north-south orientation, of approximate 25-30 degrees west of north, or an east-west orientation perpendicular to that. This implies that they are either contemporaneous, or at least all aligned to the same landscape features, regardless of their temporal relationships. Perhaps the most notable aspect of their arrangement is that with two exceptions discussed below (the Feature 87, and the Feature 15/24 complexes) all of the parallel ditches fall outside the hypothesized perimeter of the large structure thought to be the Seloy fort. The northern ditches all terminate at different points along the presumed northwestern wall of that structure, suggesting that whatever their function, they were in use during the time the fort was still standing. It may also be possible that these trenches were related in some way to defensive constructions, such as embankments.

The most obvious interpretation for these features is that they were agricultural ditches. inside

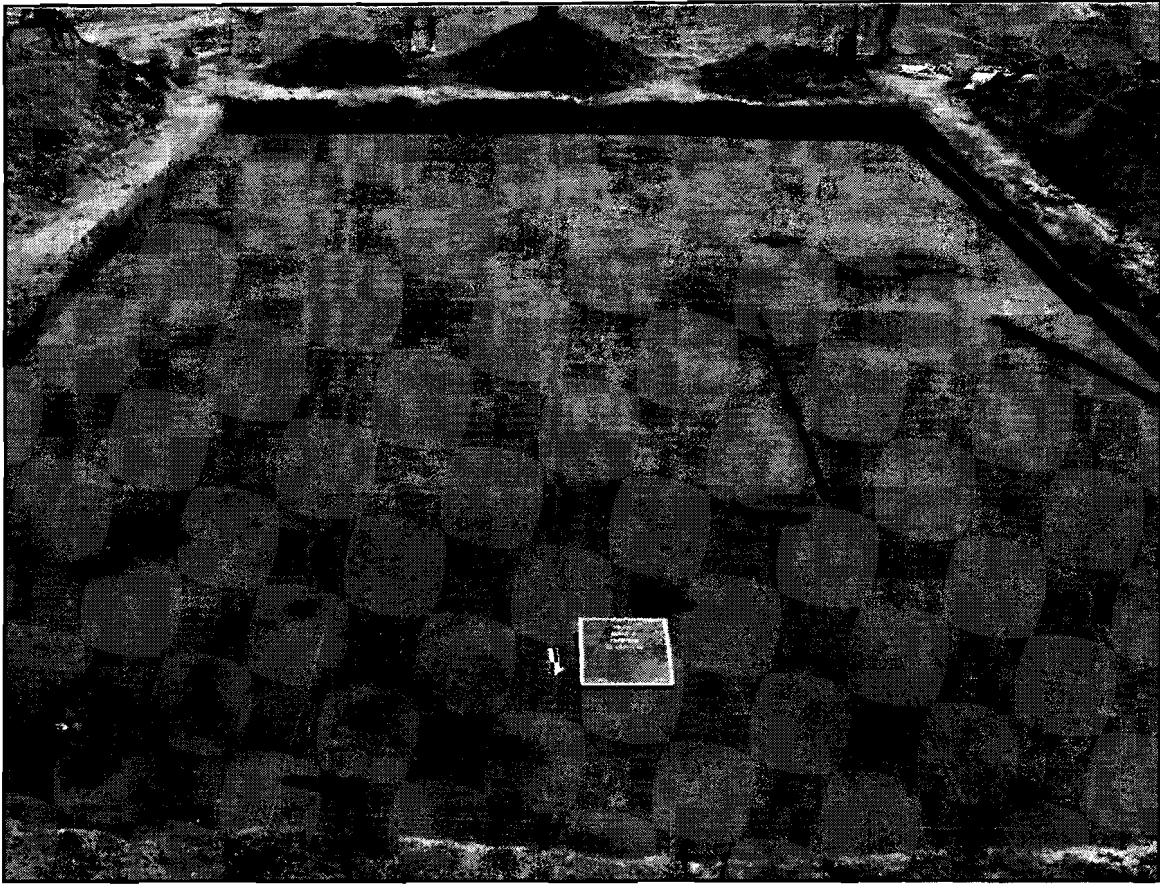


Figure 17: Northern trench features (Block 5, 2002)

In plan view, they are quite similar to the features excavated by Stanley South at the site of Santa Elena, South Carolina (Menéndez's second capital established in 1566). There, South interpreted them as vineyard ditches of the Menéndez period, and in fact, a pair of broken pruning shears was found in one of them (South 1980:8, 11-15). The ditches at Santa Elena were about 60-70 centimeters wide, 30 centimeters deep, and were filled with the dark humus used for planting. They occurred parallel to one another about 3-4 feet (1-1.5 meters) apart, and intruded into the earliest of the Santa Elena features. South's interpretation was later modified by Chester DePratter, who believed the ditches to have been nineteenth century plantation period agricultural features (DePratter and South 1993:24)

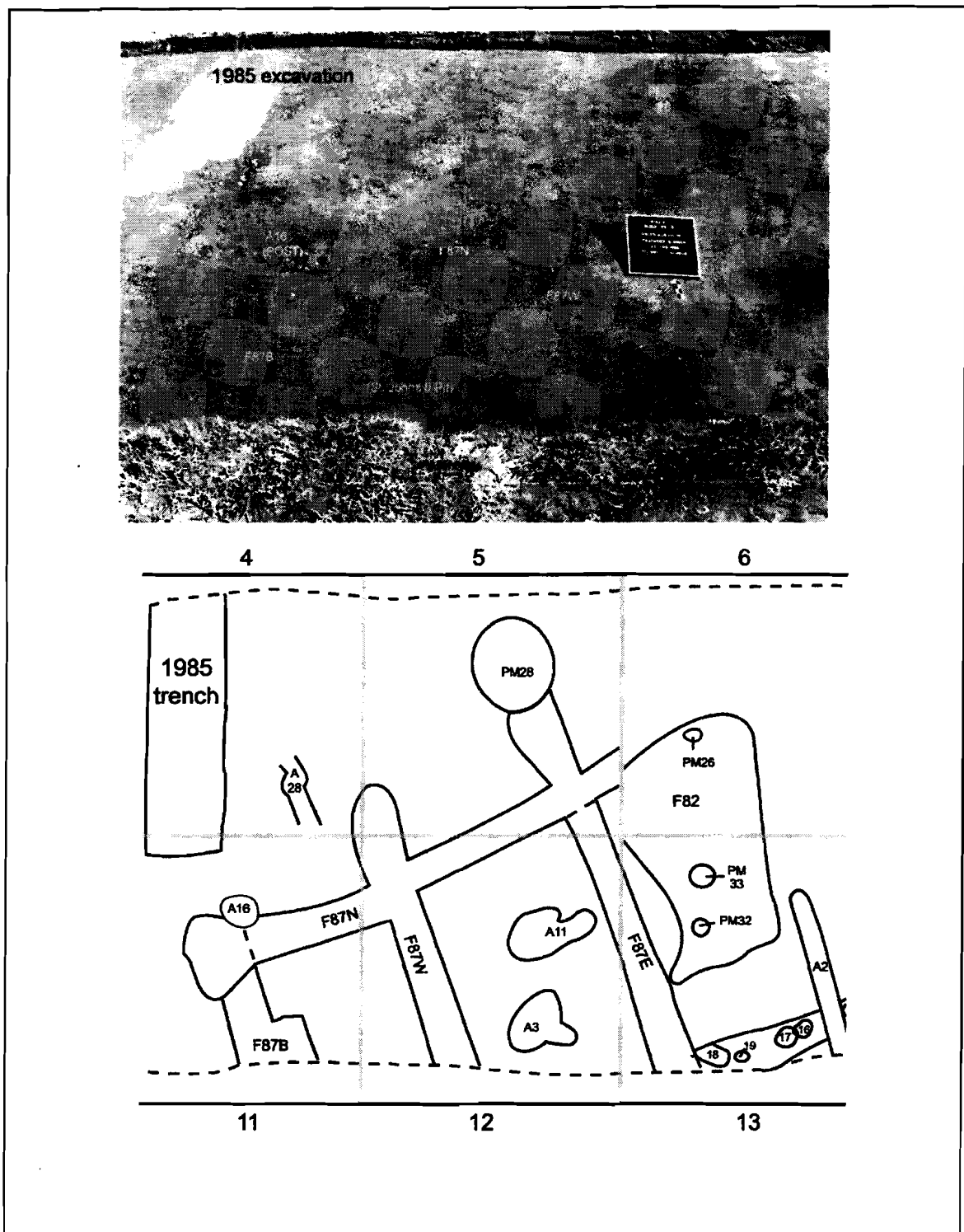


Figure 18: Feature 87 linear trench features within the south part of the presumed defensive enclosure.

The ditches excavated at the Fountain of Youth Park site are distinct in several ways from those found at Santa Elena. They are shallower, and are spaced and arranged quite differently. Those excavated in 1987, 1991 and 2001 formed rectangular shapes that appeared to describe long, narrow structures measuring of about eight meters by four meters, and what appeared to be interior divisions (Figures 9, 16, 18). Several of the trenches had posts near corner intersects, and posts at irregular intervals along the sides. They furthermore occurred in widely separated clusters rather than regularly over a large area, as one might expect from agricultural activity. No more than one or two of these trenches were present in any given area, casting doubt on their function as agricultural planting ditches.

Those revealed in the 2002 excavations, however, display a configuration more typical of planting rows, in that they parallel one another and are 1-2 meters apart (Figure 17). At least one of these, Feature 94, contained 19th century material, although it is indeterminable if this was an in situ deposit, or the result of the erosion and filling activities in this part of the site over the years. All of the other trench features contained only sixteenth century or earlier materials (Table 1), although two of them - Features 34 and 26 in the north part of the site- each had a single sherd of San Luis Blue on White majolica, which probably dates to the post-Menéndez sixteenth century period.

As noted, the ditches vary considerably in cross section (Figure 19). Several of the features at the north end of the Menéndez occupation area, including those excavated in 2002 (Features 26, 95, 96, and 98), have pronounced depressions along their eastern edges that extend some 10-15 centimeters deeper than the rest of the feature. Others (Features 34, 94, 97, and 99) are wide and shallow, with flat bases and straight sides. Both of these shape categories are restricted to the

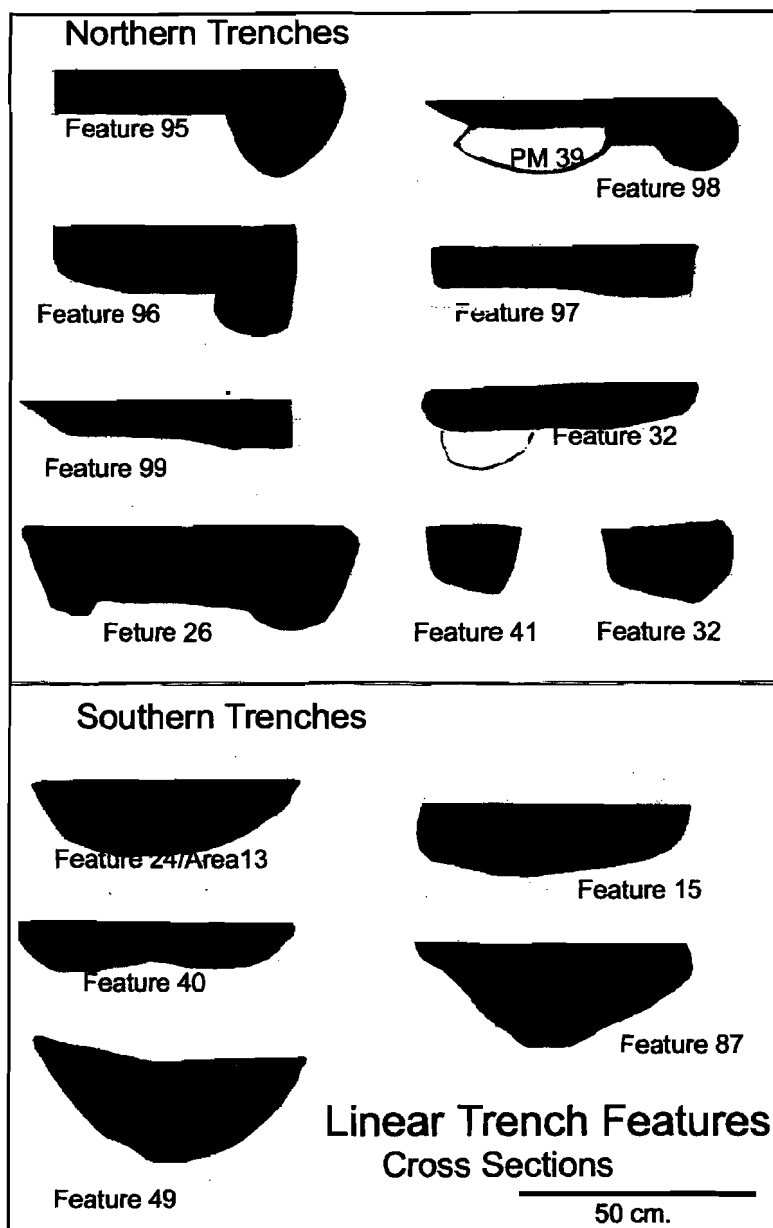


Figure 19

northern part of the occupation area.

Trenches in the eastern (Features 15, 24, and 40) and southern (Feature 87) parts of the occupation area, in contrast, have the sloped sides and rounded bases characteristic of mud sleeper stains created by split-log foundations for wood or thatch houses. These are, as already noted, also the only linear trench features located inside what is thought to be the fortified compound. They seem to form rectangular footprints rather than long, parallel lines, and have what

appear to be interior divisions. Similar features have been excavated at other first Spanish period sites - a late 16th century building at the Trinity Episcopal Church site in downtown St. Augustine (Deagan 1978) and a series of houses built by Spaniards at the seventeenth century village of San Luis, near present-day Tallahassee (McEwan 1991:258-59). San Luis was on the mission frontier, associated with the San Luis mission and fort (ca. 1633-1702), and the board and thatch split-log

TABLE 1: 8SJ31: LINEAR TRENCH FEATURES IN MENENDEZ SITE AREA

Provenience:	F34	F 49	F15	F24	F26	F41	F26/41	F32	F40	F87	TOT
ITEMS											
Aboriginal Items											
Orange Fiber Tempered	1			1							2
St. Johns Wares	203	15	23	12	110	6	17	10	8	4	408
San Marcos	85	3			23	4		1	3		119
Other Aboriginal	13	1	4	1	11		5	19		2	56
Shell Tool		1									1
Chert Flake	1								1		2
European Ceramics											
Columbia Plain Majolica					1		1				2
San Luis Blue on White Majolica	1						1				2
UID Blue/White Majolica	1										1
Glazed Olive Jar	1		3	1			1				6
Olive Jar	10		2	3	5			3	2		25
Lead-glazed Red Earthenware			1	1							2
Unglazed Earthenware					1						1
Mexican Red Painted			1								1
Other European Items											
Green Glass								1			1
Clear Glass			1								1
Seed Bead	1			1							2
Bone Bead			4								4
Cane Bead		1	1								2
Nail				1				1			2
Spike	1	1		1							3
Lead Shot	1		4	1	3			1			10
Lead Fragment			3								3
Iron Fragment		1	9	2	1						13
Lead Object					1						1
Iron Object			1								1
Wire				1							1
TOTAL	319	23	57	26	156	10	25	36	14	6	672

foundation houses were the earliest type at the site.

The easternmost complex of these features (represented by Features 15, 24 and 40), if structural, would

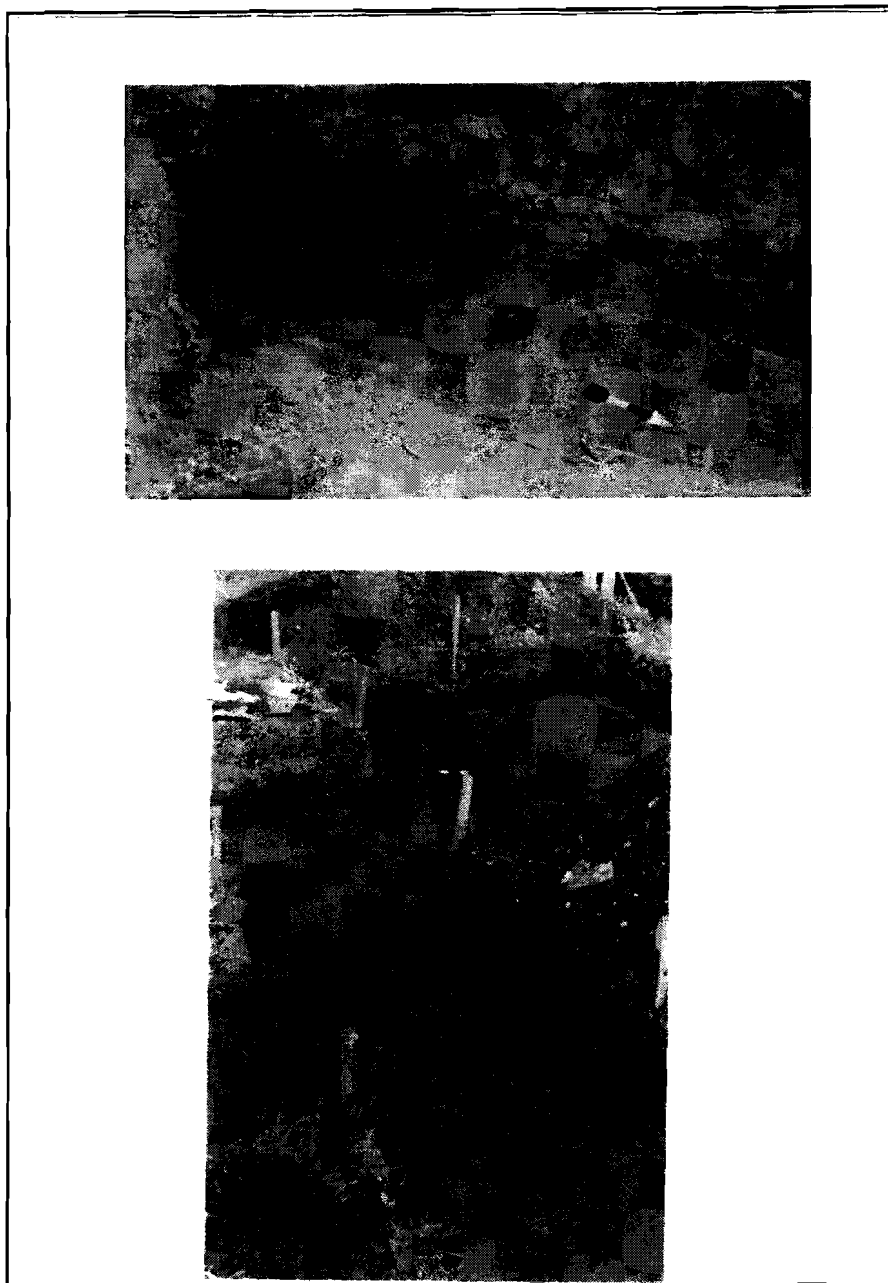


Figure 20 Linear trench and postmold features in 1953 excavations; location unknown

have described a building of about six by ten meters. The complex described by Feature 87 (and encompassing the mysterious Feature 82 shell pit) if structural, would have been six meters east to west, by an unknown dimension north and south, and had at least two rooms. The large sizes of these structures (as compared to domestic structures) suggests that they may have been barracks or other communal dwellings.

Parts of the unreported excavations by Cooper and Porter (1951) and Hahn (1953) took place in the vicinity of the Spanish settlement and located identical trench features (Figure

20). Unfortunately, no reports on those excavations were prepared, nor is information about the precise locations of the tests available. The best records for this work is a set of photographs taken by, and currently in the possession of John Fraser. These photographs clearly show excavations in the open field studied in

1976-91, and several linear trench-like features identical to those discussed here.

Although their interpretation is still unresolved, current data suggest that the linear trenches to the north and west of the hypothesized fortified compound were most likely agricultural (or possibly defense-related) in nature, but were present during the lifetime of the fort. Those on the east and south sides of the structure's interior, are currently (and tentatively) interpreted as Spanish structures, built on log sleepers.

Material Remains

Table 2 shows the distributions of all excavated materials within the major occupation periods at the site. Immediately notable is the fact that most of the artifacts from the site (67%) came from the upper plowzone levels that were farmed or otherwise disturbed during the 19th and 20th centuries. Although relatively few individual items from those 19th and 20th century activities are present, they provide the *terminus post quem* dates for the disturbance episodes. This distribution supports the interpretation that although the activities and occupation at the site during the post-colonial period were minor, they did result in considerable mixing of earlier occupation deposits.

The majority of artifacts in all levels are Native American ceramics, reflecting the intensive Timucuan (and earlier) occupation of the Park, as well as the extensive disturbance to that occupation from the Menéndez settlement onward.. St. Johns ceramics dominate the pre-contact period assemblage, which also contains Orange Fiber-tempered pottery, and a significant amount (14 percent) of non-St. Johns ceramics (sand, grog and grit-tempered varieties or trade wares from other regions).

It is likely that much of the Native American material from the late pre-contact period was incorporated into both Menéndez-era and mission period deposits through the construction and disposal activities of the later residents themselves (always a factor in multi-occupational sites). Certainly the largest proportion of artifacts in the Menéndez occupation assemblage (which is the primary one of concern here) is comprised by Native American pottery, which accounts for 74% of all artifacts. This is consistent with Shtulman's 1995

analysis, which compared the 8-SJ-31 Menéndez component with other sixteenth century Spanish sites. She found that the Fountain of Youth Park site sample contained a considerably higher proportion of Native American items (74%) than did other sites, in which Native materials comprised between 41% and 51% of the assemblage (Shtulman 1995:39). The higher proportion at the Menéndez site is undoubtedly in part owing to the temporary military campsite nature of the occupation, as well as to the fact that it was the only site in the study with a pre-existing Native American occupation.

The data used both for Table 2 of this report, and by Shtulman, includes all materials from all proveniences thought to have been deposited as part of the Menéndez settlement, including sheet deposits and fill that have been subject to minor disturbance during later periods. Table 3 shows the distribution of remains in the principal undisturbed features of the Menéndez occupation, which vary considerably in the relative amounts of Spanish and Native American materials they incorporated. In the barrel well (Feature 9), for example, 27% of the materials were Native American in origin. This feature was probably purposefully filled in by the Spanish settlers. The fill of the possible entrenchment ditch (Feature 78) in contrast, contained 90% native American items. Unlike the well, this feature was likely filled in after the Spanish abandoned the site and it was re-occupied by Indians.

Although the proportion of Native American material is higher at the Menéndez site than at other contemporary Spanish colonial sites, the kinds of artifacts are essentially the same. These include, in general, Spanish tableware majolica and small amounts of Ming porcelain, Olive Jar storage vessels, domestic items, glass and metal fragments, architectural items, clothing and ornamental items and military-related artifacts. At 8-SJ-31, military activities are represented primarily by lead shot, which was found in much greater quantity at this site than at comparable sixteenth century Spanish settlements. The shot ranged from 2 to 105 millimeters in diameter, with 85% of these measuring between 10 and 15 mm, a size usually produced by using a shot colander rather than molds, and used as scatter shot from muskets (Deagan 2002:288).

The clothing and personal items recovered at the site have included buttons thought to have been used on military-issue jackets (Deagan 2002:162-63) as well as the copper aglets (lacetips) common to Spanish clothing of the period. Fifty-six glass beads were recovered, half of which were seed beads used both for clothing ornamentation and as trade goods.

Among the items that may have been used in trade or barter was a rectangular silver “plaquette”, or small hammered and perforated ornamental plaque. These items have been found in early historic-era Native American burial mounds of South Florida, and are thought to have been made by Calusa or other people from salvaged shipwreck silver (see Wheeler 2000:138-39). This, perhaps, was an object traded to a Spaniard on one of the first Menéndez-era expeditions to South Florida.

Many of the glass beads could also have been used in rosaries or in jewelry. One bone *figa* - a clenched hand amulet - was recovered from the Feature 73 trash pit. These amulets are very common throughout the Spanish colonies as well as in Spain, and were thought to protect wearers from the Evil Eye. They were especially common as children’s protective amulets, and provide one of the few indications of the presence of children at the Menéndez settlement. Although they were most often made from jet (a substance which in itself was thought to have protective properties) the example from the Menéndez site was carved of bone, and polished with a black pigment to appear like jet (See Deagan 2002:95-97). A sample of artifacts from the Menéndez site is shown in Figure 21.

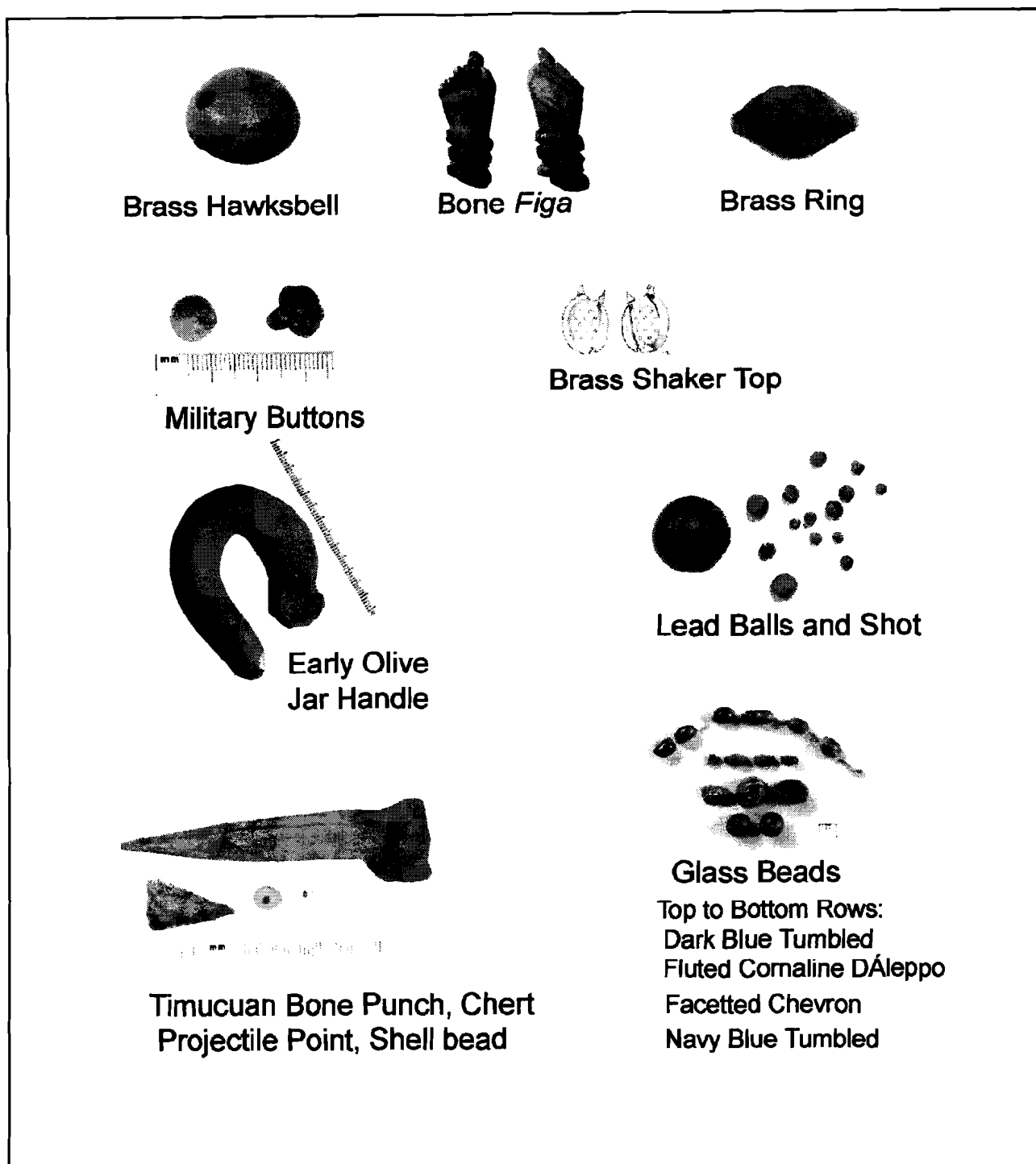


Figure 21: Menéndez-era artifacts

SUMMARY CONCLUSIONS

Excavations at the Fountain of Youth Park have revealed and documented cultural occupations during the pre-contact era, the sixteenth century, the mission era; Florida's British period, and the post-colonial periods in various areas of the Park. The focus of most recent archaeology, however, has been on the settlement established by Pedro Menéndez de Aviles in 1565, and abandoned in 1566. That settlement - or part of it- has been identified in the open field at the southeastern corner of the Park.

Archaeological features indicate that the low-lying basin-like central portion of this area was the focus of the settlement. There a number of large structural posts suggest a very large building or a perimeter enclosure that may be the first fort, which was converted by Menéndez from the Timucua Chief Seloy's council house. A portion of a ditch feature was found at the eastern edge of the excavation area, presumed to have marked the eastern edge of the structure. If the posts and possible entrenchment ditch were part of a structure, it would have been approximately 30 meters in diameter, and roughly oval in shape.

Archaeological features within the perimeter include a Spanish barrel well, a roughly rectangular burned floor with a large quantity of lead shot, and two tentatively identified structures. The possible structures are rectangular, with dimensions of about six by ten meters, and would have been constructed of wood or thatch supported by log mud sleepers. The possibility, however, that these features are related to some, as-yet unidentified agricultural activities cannot be entirely dismissed.

Very few Menéndez-period deposits have been identified outside of the perimeter of the structure or enclosure. Linear, parallel ditch-like features on the north of the presumed enclosure are thought currently to have been agricultural scars. Because they all end somewhat abruptly at the edge of the structural perimeter, however, it is likely that they were in existence during the time when the structure

was still standing. Indeed, the contents of the trenches themselves are also consistent with this, in that with only a single exception, there are no items that could not have been deposited during the sixteenth century (Table 1). Alternatively, it may be possible that these trenches represent part of an as-yet-identified type of earthen defensive complex.

The soil within the low area containing the presumed structure is sandy or humic, and relatively free of shell. On the north, south and east sides of the structure however, dense shell middens ranging from 30-40 cm. in thickness are present, appearing as distinct rises on these three perimeters. While the lowest level of the middens date to the St. Johns 2 pre-contact era, it appears that the majority of the midden was deposited during post-Menéndez and mission era times. It is likely that the constructions of the central area - the fort or Seloy council house - may have continued in use for some time after the abandonment of the structure by the Spaniards, since the midden clearly does not encroach onto its footprint.

Very little evidence for cultural activity has been encountered to the west of the low, central presumed enclosure. This part of the site, between the structure/enclosure and the duckpond, is low-lying, and often inundated. It seems probable that the marshline may have extended somewhat into this area during the sixteenth century, particularly south of grid line 440 North. Soils below that point in the first block excavation were consistently very hard, dark, and lacking in either humic content or artifacts. It suggests that the southwestern edge of the presumed structure may have been considerably closer to the water in the sixteenth century.

To the west of the presumed enclosure and north of approximately grid line 440N, postmold evidence for Native American structures was found during several excavation seasons. These are not, however, associated with shell midden, and the nature and extent of this occupation has not yet been fully determined.

Although archeological work has made great strides in identifying and delineating the Menéndez-era occupation features at the Fountain of Youth Park, there are still several problematical areas for interpretation. It is still not possible to identify the all of functions and activities of the Menéndez site with complete confidence. Although there is no doubt that the large posts, well, burned floor and certain other trash deposits date to the Menéndez period, we have not yet identified enough structural features to account for a settlement of several hundred people. Survey and excavations throughout the Park property have also failed to recover evidence for a substantial European settlement of the Menéndez period. Much of this may be owing to alteration of the site through erosion, flooding, farming and possibly borrowing activities related to 20th century perimeter road and seawall construction. A more precise clarification of the extent and effects of these activities will be needed to account for the apparent absence of a dense 1565 settlement, and to accurately interpret this area.

Furthermore, if the large structure indicated by the posts is, in fact, the Seloy-Menéndez fort, we have not yet identified the nature of the Spanish defenses employed to fortify the Chief's house. The entrenchment on the eastern edge of the excavation area is so far the only obvious potential defensive feature located through excavation.

These areas of problematical interpretation guide the following recommendations for additional study.

Recommendations

1. Solid evidence for the large structure walls has been found only at the western end of the building. The areas that should contain additional support posts have not yet been excavated, and this needs to be clarified before the structure itself can be defined with confidence.
2. Only a very small segment of the presumed perimeter or defensive ditch (Feature 78) has been uncovered. The shape and extension of this feature needs to be determined through excavation before

it can be confidently identified as a defensive ditch, or before we can know what it may have been defending.

3. The area to the west of the presumed structure needs to be more extensively tested. To date, auger tests, magnetometry, electromagnetic conductivity, and limited test excavations have not produced any substantive information about the appearance or use of this area during the sixteenth century.

Occupation seems to be quite sparse, and there is some indication that part of this area (between the structure and the duckpond) may have been marsh or stream. This information will be important in any reconstruction or interpretive efforts in this part of the Park.

4. Testing should be done around the periphery of the shell midden at the southern end of the Menéndez occupation area. Almost no work has been done in these area, and excavations may reveal evidence for potential defense constructions, for additional Menéndez settlement structures, and for alterations to the site's shoreline.

5. Likewise, there has been no testing of the southern periphery of the Park along the western shoreline. This area could also potentially reveal evidence for settlement, defense construction and site alteration.

Other critical research needs

In addition to the Menéndez occupation site, the Fountain of Youth Park also has extraordinary potential for two other extremely important research areas; those of the St/ Johns 2 Timucua town, and the early Nombre de Dios Mission. Although more is known ethnographically about the Timucua of northeast Florida than almost any other contact-period Native American group, almost no systematic excavation has been carried out in late pre-contact Timucua towns. The Fountain of Youth Park site, as an important Timucua chiefly town, will be extremely important for providing such information, and developing a baseline from which comparisons both to later time periods, and to

other geographical areas can be made.

The fact that the site of Florida's first Franciscan mission exists here within the village site of the same people who occupied the late precontact Timucua town of Seloy provides an unparalleled opportunity to investigate cultural change among the Timucua in response to mission activity. These remains will also provide an invaluable resource for comparison to the later stages of the St. Augustine mission that are present on the contemporary site of Nombre de Dios; to the contemporary lifeways of the Spanish settlement in St. Augustine, and to other Franciscan mission villages on the Florida frontier.

Although the focus of research has so far been on the Menéndez component, future work should be attentive to these extremely important issues.

TABLE 2: 8-SJ-31 Distribution of all Excavated Materials Through Occupation Periods (1976-2002)

	Precontact SJ 2)		Menéndez (1565-66)		Late 16 th C. (1566-1600)		Mission Era (17 th C.)		18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone		TOTAL
	%all	#	%all	#	%all	#	%all	#	#	#	#	#	%all	#
Native American Ceramics														
<i>Orange Series Ceramics</i>														
Orange Fiber Tempered		121		240		3		4			58		157	583
Orange Incised		7		15		1		0					6	29
Subtotal Orange		128	0.27	255	0.03	4		4			58		163	612
<i>St. Johns Series (SJ) Ceramics</i>														
SJ Plain		179		3701		587		720	38	30	2635		5104	12994
SJ Red Filmed				2							1			3
SJ Check stamped		40		876		226		75	18	5	431		941	2612
SJ Grog tempered				1										1
SJ Impressed				0				1						1
SJ Incised				9		8					2		4	23
SJ Punctated				2									1	3
SJ Simple Stamped						1								1
SJ Sand Tempered Plain													1	1
SJ Sand Tempered				1										1
Subtotal St. Johns		219	0.45	4592	0.52	822	0.58	796	0.43	56	35	3069	6051	15640
<i>San Marcos Series (SM) Ceramics</i>														
SM Plain		9		247		158		241	2	13	1155		1546	3371
SM Rectinlin. Stamped		1		150		52		68	1	1	402		575	1250
SM Red Filmed Stamped				1		0		0			2		0	3
SM Check Stamped				2		5		2		3	5		8	25
SM Complicated Stamped				0		0		4					1	5
SM UID Decorated				2		1		9		1			5	18
SM Punctated				0		0		0			4		3	7
Subtotal San Marcos		10	0.02	402	0.05	216	0.15	324	0.17	3	18	1568	2138	4679
<i>Non-Local Ceramics</i>														
San Pedro		1		43				0					20	0
Akamaha				5		1		2		0	3		20	69
Lamar-like Incised				1		0		0					3	31
Mississippian-type Plain				0		5		2						4
Savannah Cord Marked				7		0		0						7
Miss.-type Red filmed				3		4		5					18	7
Weeden Island Punctate				0		0		1					0	30
Subtotal Non-local Wares		1	0.00	59	0.01	10	0.01	15	0.01	0	0	3	61	149
<i>Unidentified Aboriginal Wares</i>														
Sand-tempered Plain		44		468		53		108	4		494		1133	2304
Sand-tempered Red		0		4		0		4			2		8	18
filmed														
Sand-tempered Incised		0		5		2		0			4		15	26
Sand-tempered Stamped		4		74		9		17	0		39		74	217
Sand/Grog temp. Plain		9		294		31		16	6		241		381	978
Sand/Grog temp. Dec.		2		35		10		4	0		6		18	75
Grit/Sand-tempered Plain		9		237		34		65	7		168		720	1240
Grit/Sand-tempered				60		19		22			20		160	281
Stamped														
Grit/Sand-temp. Red-						3					5		3	11
filmed														
Shell/Sand Temp. Plain						8		8					2	18
Shell/Sand Temp.				2		1		1						4

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	Precontact SJ 2)		(Menéndez 1565-66)		Late 16 th C. (1566-1600)		Mission Era (17 th C.)		18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone		TOTAL
	%all	#	%all	#	%all	#	%all	#	#	#	#	#	%all	#
Stamped														
Shell Tempered Plain			61								1	52		114
Shell Tempered Dec.			8		1		3			1	9			22
Subtotal Unidentified wares	68	0.14	1248	0.14	171	0.12	248	0.13	17		981	2575	0.16	5308
												0		
Mission-Period Ceramics							0					0		0
Jefferson Ware							2					12		14
Miller Plain					1		0					0		1
Colono Ware												2		2
Subtotal Mission Period c					1		2					14		17
Subtotal Mission era wares					2	0.00	4	0.00				28		34
TOTAL Aboriginal Ceramics	426	0.88	6556	0.74	1224	0.86	1389	0.75	76	53	5679	11002	0.67	26405
Aboriginal Tools and Crafts														
Bead, Bone	1		9		1		2					1		14
Bead, Shell			8		1		2			1				12
Bead, Stone			1											1
Gorget, stone			1											1
Pipe	1		1											2
Bone object			2									1		3
Dipper, shell			4											4
Drill, shell												1		1
Drill, stone										1				1
Awl, bone										1		1		2
Core, chert										1				1
Debitage, chert	35		50		1					40		48		174
Flake, Chert							1			2				3
Projectile Point	1		7						1	2		7		18
Shark Tooth, Drilled	1		1											2
Tool, shell	1		7		1					6		15		30
UID Tool	1													1
Total Aboriginal tools, crafts	40	0.08	91	0.01	4	0.00	5	0.00	1		54	74		270
All Native American Items	467	0.97	6647	0.75	1228	0.86	1394	0.75	77	53	5733	11076	0.67	26675
European Items														
Ceramics														
Sixteenth Century Spanish Majolica:														
Caparra Blue			1											1
Isabela Polychrome											1			1
Columbia Plain			14		4		2		1		21	24		66
Columbia Plain, Green			3				1				1	0		5
Columbia Plain, Gunmental			4									1		5
Ligurian Blue on Blue											1	0		1
Santa Elena Mottled			13				1				7	9		30
Sevilla Blue on Blue			1								3	6		10
Santo Domingo Blue on White											1	2		3

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	Precontact SJ 2)	Menéndez (1565-66)	Late 16 th C. (1566-1600)	Mission Era (17 th C.)	18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone	TOTAL				
	%all	#	%all	#	%all	#	%all	#	%all	#			
Yayal Blue on White			1	0				2		3			
Unidentified Italian				3				0		3			
Unidentified Morisco Ware		20		0			5	7		32			
<i>Total Majolica</i>		56	0.01	5	7	0.00	1	0	40	51	160		
Other Tablewares													
Kraak Porcelain		1								1			
Ming Porcelain		2			1			4		7			
Bizcocho		1		2			4	3		10			
Melado							1			1			
Morisco Green										0			
Orange Micaceous		4		1			8	7		20			
Lead-glazed Coarse Earthenware		26		1	7		26	72		132			
<i>Total Other Tablewares</i>		34	0.00	4	8		39	86		171			
Utilitarian Wares													
Early-style Olive Jar	0	5					4	2		11			
Plain Olive Jar	2	471		47	29		2	323	365	1239			
Glazed Olive Jar	0	434		20	25		1	266	240	986			
Green Lebrillo	0	3								3			
Redware	0				1		7	15		23			
Cologne Stoneware	0	1								1			
Unidentified Coarse Earthenware	3	76			10	5		11	105	210			
<i>Total Utilitarian wares</i>	5	990	0.11	67	65	0.03	5	3	611	727	2473		
Total Menéndez-era Ceramics	5	1080	0.12	76	0.05	80	0.04	6	3	690	864	0.05	2804
<i>Colonial, Post-1570 Majolica:</i>													
Abó Polychrome									1				1
Aranama Polychrome		1					1						2
Aucilla Polychrome							1						1
Fig Springs Polychrome					2				7				9
Ichucknee Blue on White		1		1	1		2	8					13
Mexico City Blue on Cream					2			1					3
Mexico City White		3		1	4		3	14					25
San Luis Blue on White		2		4	1		3	6					16
San Luis Polychrome		1			2		16	22					41
Puebla Blue on White								28					28
Puebla Polychrome		1			2		2	4					9
Unidentified Mexico City				1			7	7					15
San Agustin Blue on White							7	11					18
Unidentified Blue on White		2		2	1		4	13					22
Unidentified Green on White		1			2			1					4
Unidentified Green		2						1					3
Unidentified Polychrome		2		2			6	2					12
Unidentified Puebla variety		2			3		11	2					18
Unidentified White	2	1		1			8	14					26
Unidentified Majolica		4		1	2		5	17					29
<i>Subtotal later Majolica</i>	<i>2</i>	<i>23</i>	<i>0.00</i>	<i>13</i>	<i>0.01</i>	<i>22</i>	<i>0.01</i>	<i>0</i>	<i>0</i>	<i>76</i>	<i>159</i>	<i>0.01</i>	<i>295</i>

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	Precontact(SJ 2)		Menéndez (1565-66)		Late 16 th C. (1566-1600)		Mission Era (17 th C.)		18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone		TOTAL
	%all	#	%all	#	%all	#	%all	#	#	#	#	#	%all	#
Other Spanish Tablewares														
Mexican Red-Painted		1				1				1		7		10
Guadalajara Polychrome						1				1				2
Black Lead-glazed Earthenware						1						5		6
Reyware										1		2		3
Total other Spanish		1				3				3		14		21
Non-Spanish Tablewares														
Blue and White Ching Porcelain						2						1		3
English Porcelain												1		1
Overglaze Polychrome Porcelain														
Canton Porcelain										1		2		3
Astbury										3				3
Agateware												1		1
Jackfield											2	2		4
Delftware				1		1				1		4		7
Delftware, Blue and White										1		8		9
Faience												1		1
Faience, Blue and White												2		3
Nottingham Stoneware												1		1
White Salt-glazed Stoneware				1		1				5		5		12
Scratch Blue Stoneware												1		1
Staffordshire Slipware		1				3					4	18		26
Elers Stoneware									1					1
Rhenish Stoneware										1	1	1		2
Total Non-Span. Tablewares		1		2		8			1	18		48	0.00	78
Utilitarian Wares														
American Red Slipware											6	13		19
Olive Jar, Late	1								2		4	93		100
Blue-Green Bacin		1										4		5
Brown Salt-glazed Stoneware		2									2	12		16
Grey Salt-glazed Stoneware											1	2		3
Salt-glazed Stoneware						1					3			4
Total later Utilitarian	1	3				1		2		16		124	0.01	147
Refined Earthenwares														
Creamware, Plain		2							1	1	37	83		124
Creamware, Feather-edged						1					1	5		7
Creamware, Hand-painted											2	3		5
Creamware, Transfer-printed						1						0		1
Pearlware						1					28	26		55
Pearlware, Shell-edged											5	10		15
Pearlware, Hand-painted						3					6	10		19
Pearlware, Polychrome painted						1					4	10		15
Pearlware, Transfer printed											14	16		30
Annular Ware		1		1								2		4
Whiteware						3					41	68		112

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	Precontact SJ 2)	Menéndez (1565-66)	Late 16 th C. (1566-1600)	Mission Era (17 th C.)	18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone	TOTAL
	%all	#	%all	#	%all	#	%all	#	%all
Whiteware, Polychrome painted				2			5	7	14
Whiteware, Transfer-printed				1			10	29	40
Ironstone		2		3			26	68	99
Ironstone, hand-painted								3	3
Ironstone, Transfer printed							1	3	4
Refined Earthenware				2	1		6	12	21
Refined Earthenware, Hand-painted							18	8	26
Refined Earthenware, Transfer-printed							2	7	9
19 th .c. Utilitarian Wares									
Ginger Beer Bottle								4	4
19 th c. Crock							4	5	9
Total Refined, 19 th c. ceramics		5	1	18	0.01	2	1	210	379 0.02 616
Total European Ceramics	9	1146	0.13	108	0.08	184	0.10	14	7 1336 2312 5118
Household/Furniture									
Mano, Basalt		1						2	3
Bail							1		1
Brass Tack		1					3		4
Brass Hook		1						1	2
Furniture hrdware							2		2
Tack		2	1				1	6	10
Cork (in Well Barell)		1							1
Glass Goblet Stem								1	1
Glass Stopper							1		1
Total Household/Furniture		6	0.00	1			8	10	25
Clothing and Personal Items									
Aglet		4					1	1	6
Buckle		1		1					2
Button		1	1	2			13	12	29
Button back							4	1	5
Grommet							2		2
Pin, Straight		2					2	3	7
Lead Seal								1	1
Hawksbell				1					1
Pipe, Tobacco		4		3			16	44	67
Silver Plaquette		1							1
Fossil			1						1
Marble							1	1	2
Total Clothing, Personal		13	0.00	2	7		39	63 0.00	124
Beads and Ornaments									0
Figa, Bone		1							1
Green Glass Teardrop Pendant							1		1
Bead, Glass		15		1			1	4	21
Bead, Glass, Wire wound		1					2	1	4
Bead, Cane		1					8	4	13
Bead, Ceramic				1					1

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	Precontact SJ 2)	Menéndez (1565-66)	Late 16 th C. (1566-1600)	Mission Era (17 th C.)	18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone	TOTAL				
	%all	#	%all	#	%all	#	%all	#	%all	#			
Bead, Chevron		5		1				4	1	11			
Bead, Cornaline D'Aleppo		5						2		7			
Bead, Raspberry								1		1			
Bead, Nueva Cadiz		1								1			
Bead, Seed		25		2			16	2		46			
Bead, Silver		2								2			
Total Beads, Ornaments		56	0.01	3			32	15		109			
Glass Fragments													
Glass, Aqua							9	19		28			
Glass, Amber		2					8	8		18			
Glass, Black								2		2			
Glass, Blue		2					2	4		8			
Glass, Brown					1		1	30	21	53			
Glass, Clear	1	15		2		3		173	337	544			
Glass, Dark Green		6						58	33	97			
Glass, Emerald Green								2		2			
Glass, Flat		10		2				150	97	260			
Glass, Frosted									1	1			
Glass, Green		9		2				88	105	205			
Glass, Light Blue		1						2	14	18			
Glas, Light Green		3		1				18	9	31			
Glass, Manganese								11	5	16			
Milk Glass					1			1	2	4			
Glass, Olive Green		3		2				34	150	195			
Glass, Patinated									2	2			
Glass, Pink								1	6	7			
Glass, Red									1	1			
Glass, White		2						4	4	10			
Glass, Yellow				1				3	1	6			
Glass, Unidentifiable		8						8	95	136			
Total Glass Fragments	1	61	0.01	10	0.01	50	0.03	3	1	602	916	0.06	1644
Arms-Related													
Brigandine Fragment					1								1
Chain mail fragment								1					1
Musketball					1					5			6
Lead Shot		134		32				145	28				340
Minie Ball								2					2
Gunflint										2			2
Total Arms related		134	0.02	32	0.02	3		148	35	0.00			352
Architecture, construction													
Nail, Corroded (UID)	3	134		10				6		686	1158		2077
Nail, Wrought		47		7						223	61		340
Nail, Cut										9	49		58
Nail, Wire		1				2				18	11		32
Spike, Corroded (UID)		12				1				4	15		32
Spike, Wrought	1	2		2						2	2		9
Spike, Cut											1		1
Copper wire		3								2	1		6
Screw										1	1		2
Barrel stave		5											5
Rooftile										1	8		9

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	Precontact SJ 2)	Menéndez (1565-66)	Late 16 th C. (1566-1600)	Mission Era (17 th C.)	18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone	TOTAL					
	%all	#	%all	#	%all	#	%all	#	%all	#				
Rivet							1			1				
Staple							1			1				
Brick, Red			1		7		54	107		169				
Brick, Pumice		1								1				
Metal file								1		1				
Pulley								1		1				
<i>Total Architectural Items</i>	<i>4</i>	<i>205</i>	<i>0.02</i>	<i>20</i>	<i>0.01</i>	<i>92</i>	<i>0.05</i>	<i>6</i>	<i>0</i>	<i>1002</i>	<i>1416</i>	<i>0.09</i>	<i>2745</i>	
<i>Metal Fragments</i>														
Silver Fragment			1										1	
Brass Fragment							1	1					2	
Copper Alloy Fragment		4	1		2		4	4					15	
Iron Fragment	2	551	28		176		609	1214					2580	
Lead Fragment		34	6				21	8					69	
Tin Fragment								2					2	
Whitemetal fragment								4					4	
<i>Unidentifiable metal objects</i>														
Brass Object		1						1					2	
Copper Alloy Object		5					11	4					20	
Iron Object		43					10	109					162	
Lead Object		9		1			4	5					19	
Tin Object								3					3	
<i>Subtotal UID Met. Obj.</i>		<i>58</i>			<i>1</i>		<i>25</i>	<i>122</i>					<i>206</i>	
TOTAL European Items	16	0.03	2235	0.25	196	0.14	466	0.25	19	6	3504	5398	0.33	11839
TOTAL Pre-20th century	483	8883	1424	1860	96	59	9237	16474					38528	
% of all Pre-20th c. items	0.01	0.23	0.04	0.05	0.00	0.00	0.24	0.43					0	
<i>20th Century Items</i>														
Coin, US														
Barbed Wire								4					4	
Bottle cap								26					26	
Bullet		1					1	5					7	
Tin Can								1					1	
Comb, Plastic								2					2	
Drill Bit Frag.							1						1	
Hose Fitting							1						1	
Light Bulb							1	41					42	
Paper Clip														
Safety Pin								1					1	
Poptop								1					1	
Plastic		2					21	17					40	
Cement								7					7	
Pencil lead								1					1	
Modern Screw							1						1	
Sewer pipe							4						4	
Shingle							1						1	
Shotgun shell							3	4					7	
Watch fragment								1					1	
Toy cup							1						1	

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	Precontact SJ 2)		(Menéndez 1565-66)		Late 16 th C. (1566-1600)		Mission Era (17 th C.)		18 th C. Spanish	British/ SP 2	19 th Cent.	Mixed/ Plowzone		TOTAL
	%all	#	%all	#	%all	#	%all	#	#	#	#	#	%all	#
Modern Porcelain											3	25		28
20 th Century Items		3									3	136		177

TABLE 3 8-SJ31: MATERIALS IN MAJOR MENENDEZ-ERA FEATURES

	Well Pit (Feature 8)		Well (Feature 9)		Floor (Feature 22)		Postmold (Feature 73)		Trash Pit (Feature 74)		Entrenchment (Feature 78)		Shell Pit (Feature 82)		TOTAL	
St. Johns Incised Red Filmed	1												1		2	
St. Johns Plain	285		50		49		169		257		166		137		1113	
St. Johns Red Filmed	1														1	
St. Johns Check Stamped	60		23		18		55		91		36		56		339	
<i>Subtotal St. Johns</i>	<i>347</i>	<i>0.72</i>	<i>73</i>	<i>0.65</i>	<i>67</i>	<i>0.44</i>	<i>224</i>	<i>0.77</i>	<i>348</i>	<i>0.83</i>	<i>202</i>	<i>0.84</i>	<i>194</i>	<i>0.78</i>	<i>1455</i>	<i>0.75</i>
San Marcos Plain	2		2		18		9		2		3		3		39	
San Marcos Stamped	6				21		8		10				3		48	
<i>Subtotal San Marcos</i>	<i>8</i>	<i>0.02</i>	<i>2</i>	<i>0.02</i>	<i>39</i>	<i>0.25</i>	<i>17</i>	<i>0.06</i>	<i>12</i>	<i>0.03</i>	<i>3</i>	<i>0.01</i>	<i>6</i>	<i>0.02</i>	<i>87</i>	<i>0.04</i>
Grog/Sand Tempered Plain	39		8		1										48	
Grog/Sand Tempered Decorated	1		8				2		5		4				20	
Grog Tempered Decorated	13		2				15		14		4		9		57	
San Pedro	42		4		3		1		4		7		7		68	
Grit Tempered Plain	10				1		3		2						16	
Grit Tempered Stamped	1				8		13		7		5		7		41	
Grit Tempered Red-filmed													1		1	
Sand tempered Plain	17		14		23		17		25		7		17		120	
Sand and Shell Tempered Plain													4		4	
Savannah Cord-marked											8				8	
Lamar-like Bold Incised			1												1	
Orange Fiber-Tempered Plain	1				12				4				3		20	
<i>Subtotal Other</i>	<i>124</i>	<i>0.26</i>	<i>37</i>	<i>0.33</i>	<i>48</i>	<i>0.31</i>	<i>51</i>	<i>0.17</i>	<i>61</i>	<i>0.14</i>	<i>35</i>	<i>0.15</i>	<i>48</i>	<i>0.19</i>	<i>404</i>	<i>0.21</i>
<i>Subtot. N.A. Ceramics</i>	<i>479</i>		<i>112</i>		<i>154</i>		<i>292</i>		<i>421</i>		<i>240</i>		<i>248</i>		<i>1946</i>	

TABLE 3 8-SJ31: MATERIALS IN MAJOR MENENDEZ-ERA FEATURES

	Well		Well		Floor		Postmold		Trash Pit		Entrenchment		Shell Pit		TOTAL	
	Pit (Feature 8)		(Feature 9)		(Feature 22)		(Feature 73)		(Feature 74)		(Feature 78)		(Feature 82)			
NON-CERAMIC ITEMS																
Projectile Point	1						1								2	
Chert Debitage	11		3				2		2				5		23	
Shell Dipper			3												3	
Stone Bead					1										1	
Shell Bead							2		2				1		5	
Pipe					1										1	
Shell Tool													2		2	
	% All		% All		% All		% All		% All		% All		% All		% All	
SUBTOT. NATIVE AMERICAN	491	0.41	118	0.27	156	0.66	297	0.78	425	0.82	240	0.95	256	0.90	1981	0.60
EUROPEAN ITEMS																
CERAMICS	%		%		%		%		%		%		%		%	
Bisque																
Columbia Plain	6		1						2						9	
Columbia Plain Green	1		1												2	
Columbia Plain Gunmetal			4												4	
Seville Blue on Blue									1						1	
Mexico City Majolica (intrusive)																
UID Morisco Majolica	15		3				3		6						27	
UID Blue and White Majolica							1								1	
UID Polychrome Majolica							1								1	
Morisco Green							1								1	
Green Lebrillo							3								3	
Orange Micaceous Ware	2														2	
El Morro							4								4	
Lead-glazed Coarse Earthenware							4		5						9	

TABLE 3		8-SJ31: MATERIALS IN MAJOR MENENDEZ-ERA FEATURES	
Feature	Material	Feature	Material
1	...	1	...
2	...	2	...
3	...	3	...
4	...	4	...
5	...	5	...
6	...	6	...
7	...	7	...
8	...	8	...
9	...	9	...
10	...	10	...
11	...	11	...
12	...	12	...
13	...	13	...
14	...	14	...
15	...	15	...
16	...	16	...
17	...	17	...
18	...	18	...
19	...	19	...
20	...	20	...
21	...	21	...
22	...	22	...
23	...	23	...
24	...	24	...
25	...	25	...
26	...	26	...
27	...	27	...
28	...	28	...
29	...	29	...
30	...	30	...
31	...	31	...
32	...	32	...
33	...	33	...
34	...	34	...
35	...	35	...
36	...	36	...
37	...	37	...
38	...	38	...
39	...	39	...
40	...	40	...
41	...	41	...
42	...	42	...
43	...	43	...
44	...	44	...
45	...	45	...
46	...	46	...
47	...	47	...
48	...	48	...
49	...	49	...
50	...	50	...
51	...	51	...
52	...	52	...
53	...	53	...
54	...	54	...
55	...	55	...
56	...	56	...
57	...	57	...
58	...	58	...
59	...	59	...
60	...	60	...
61	...	61	...
62	...	62	...
63	...	63	...
64	...	64	...
65	...	65	...
66	...	66	...
67	...	67	...
68	...	68	...
69	...	69	...
70	...	70	...
71	...	71	...
72	...	72	...
73	...	73	...
74	...	74	...
75	...	75	...
76	...	76	...
77	...	77	...
78	...	78	...
79	...	79	...
80	...	80	...
81	...	81	...
82	...	82	...
83	...	83	...
84	...	84	...
85	...	85	...
86	...	86	...
87	...	87	...
88	...	88	...
89	...	89	...
90	...	90	...
91	...	91	...
92	...	92	...
93	...	93	...
94	...	94	...
95	...	95	...
96	...	96	...
97	...	97	...
98	...	98	...
99	...	99	...
100	...	100	...

[illegible]

TABLE 3 8-SJ31: MATERIALS IN MAJOR MENENDEZ-ERA FEATURES

	Well Pit (Feature 8)		Well (Feature 9)		Floor (Feature 22)		Postmold (Feature 73)		Trash Pit (Feature 74)		Entrenchment (Feature 78)		Shell Pit (Feature 82)		TOTAL	
Brass hook													1		1	
Brass Tack					1										1	
Carved Wood			3												3	
Copper Fragment	3												1		4	
Copper Object	1						1								2	
Iron Fragment	185		37		8		10		27		6		3		276	0.21
Iron Object	19		5		2				1		1				28	0.02
Lead Shot	12	0.02	6		22	0.28			1						41	0.03
Lead fragment	5		6		5		2		1						19	0.01
Lead Object	1		1				3								5	
Lead Sprue									1						1	
Nail, Wrought	2		2		15		9		6		2		7		43	0.03
Spike, Wrought					2		3		3				1		9	0.01
Wire					1										1	
<i>Subtot. non-ceramic</i>	243	0.34	63	0.19	68	0.85	41	0.50	58	0.63	10	0.83	15	0.54	498	0.37
	% all		% all		% all		% all		% all		% all		% all		% all	
SUBTOTAL EUROPEAN	710	0.59	326	0.73	80	0.34	82	0.22	92	0.18	12	0.05	28	0.10	1333	0.40
TOTAL ALL ARTIFACTS	1201		444		236		379		517		252		284		3314	
Weighed Substances																
Aboriginal discard					46.69		266		299		19.56		25.08			
Faunal Bone	43.4		55.3		33.1		9.2		11.9		525.2		577.5			
Charcoal	158.1		137		114.4						76.31		1755.5			
Fire-cracked Rock	1.3		1249		123.2											
Shell	41		8424		2666		4440		8805		282423		479462			
Rock							15.7		4.3				23.5			

TABLE 3 8-SJ31: MATERIALS IN MAJOR MENENDEZ-ERA FEATURES

	Well Pit (Feature 8)	Well (Feature 9)	Floor (Feature 22)	Postmold (Feature 73)	Trash Pit (Feature 74)	Entrenchment (Feature 78)	Shell Pit (Feature 82)	TOTAL
Pumice Brick	10					3.91	14.76	
Lime Mortar						4.04		
Slag	12							
Wood	704.2	4700						

Report on the 2002 Excavations at 8-SJ-31, The Fountain of Youth Park

Alfred Woods

Florida Museum of Natural History

Introduction

With support from the St. Augustine Foundation, Inc. (SAF) excavations were conducted at 8-SJ-31 (the Fountain of Youth Park Site) in St. Augustine between January and May 2002. Excavations funded in part by the SAF in 2000 and 2001 provided irrefutable evidence that this site was of the Menéndez era, and the 2002 season built upon this work to more precisely define the nature of Spanish presence at the site. Previous excavations and their results are discussed in the preceding summary and introduction by Deagan.

The location of the 16th century component of the site 8SJ31, the Fountain of Youth Park Site, was first identified during one of several subsurface power auger surveys of St. Augustine conducted in the 1970's. Two concentrations of 16th century occupation were found outside of the walled city limits, at the Fountain of Youth Park, and at the adjacent property, the Mission Nombre de Dios (8SJ34) (Merritt 1977, see also Chaney 1986). Surveys within the Fountain of Youth Park indicated that the 16th century component of this site is located in the low-lying open field in the southeastern corner of the property (Luccketti 1977). This information, combined with the data collected from the historical documents by Dr. Eugene Lyon, and subsequent archaeological excavations has helped to confirm this spot as the initial settlement of St. Augustine (Lyon 1997).

The southeast corner of the park is located in a cleared field bordered to the south and east by marshlands and Hospital Creek, while a path that leads east from the park gardens towards the water and terminating in a concrete obelisk forms the northern boundary (See Deagan Summary, Figures 2-4). Shell midden is present in two distinct areas of the site, an area extending south of the path that forms the northern boundary and a larger more circular shaped concentration in the extreme southern part of the site (Lucchetti 1977). Each of these areas appears as a slight rise in the landscape, bordering a central low-lying area, which is periodically inundated by intermittent flooding. Based on the auger survey and other previous archaeological excavations, it appears that the Spanish colonial occupation is confined to this central low area (Anderson and Deagan 2002).

2002 Field Season and Research Design

Excavations during the 2002 field season were placed to investigate the northern and southern boundaries of the Spanish occupation area (Figure 1). The specific focus of the work was the line of very large Menéndez era posts uncovered between 1991 and 2001 (Feature 30, Feature 36, Feature 74), which extended north to south along the western end of the Spanish occupation area (see preceding summary, Figure 4). As noted, these are thought to be possible elements of the large Timucua chief's house used by Menéndez as the first fort. The 2002 tests were intended to determine if the post line continued either to the north or south, and to locate additional evidence for such a structure.

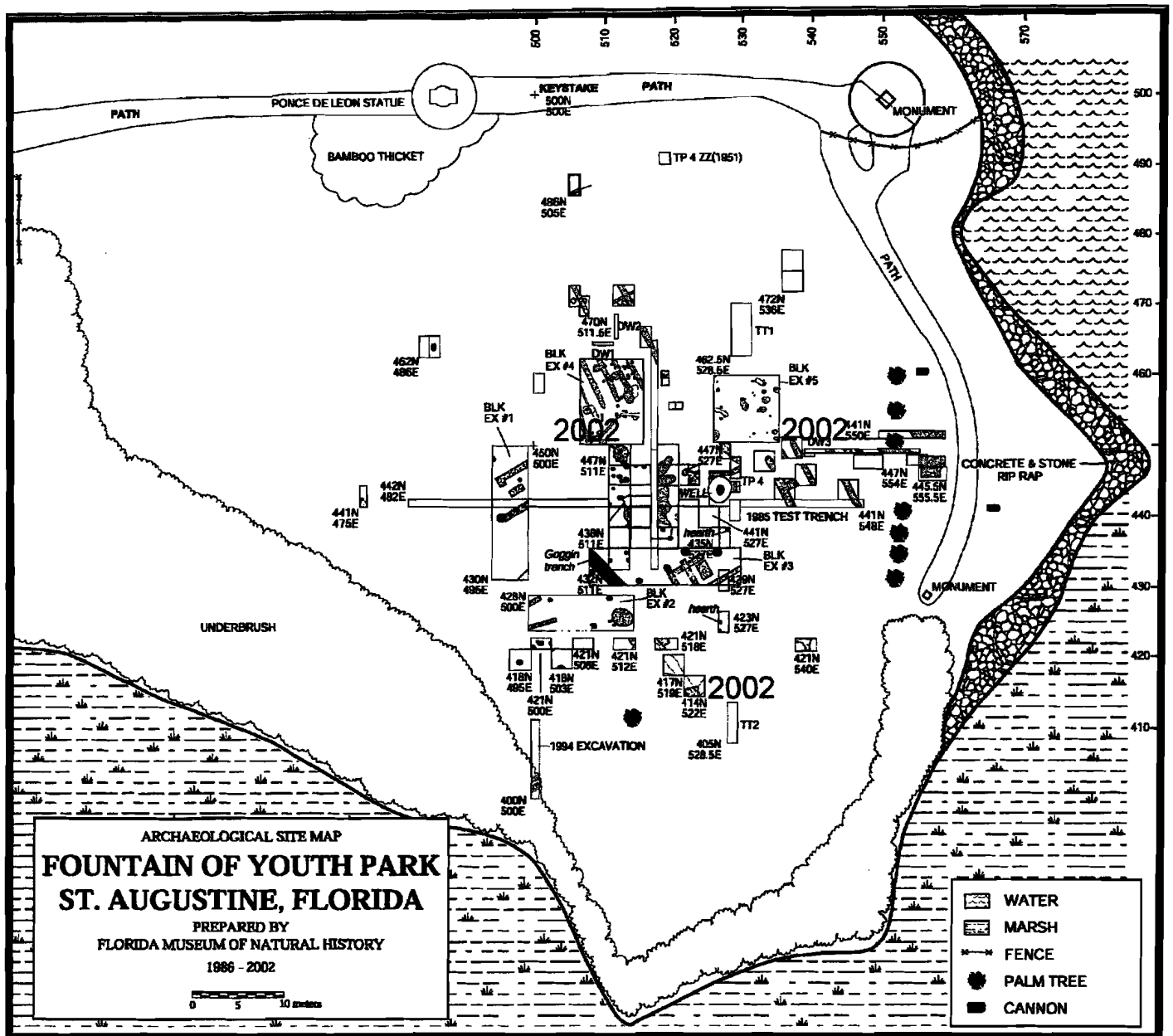


Figure 1 Location of 2002 excavations

Excavation locations to the north were placed to test previously unstudied areas of the site, and specifically to extend excavations around previously located features thought to be related to the large Menéndez-era structure. The results of ground penetrating radar tests conducted in 2001 and 2002 helped refine the specific placement of excavation units (see Figure 2).

The southern excavation units, located on the rise formed by a shell midden, were

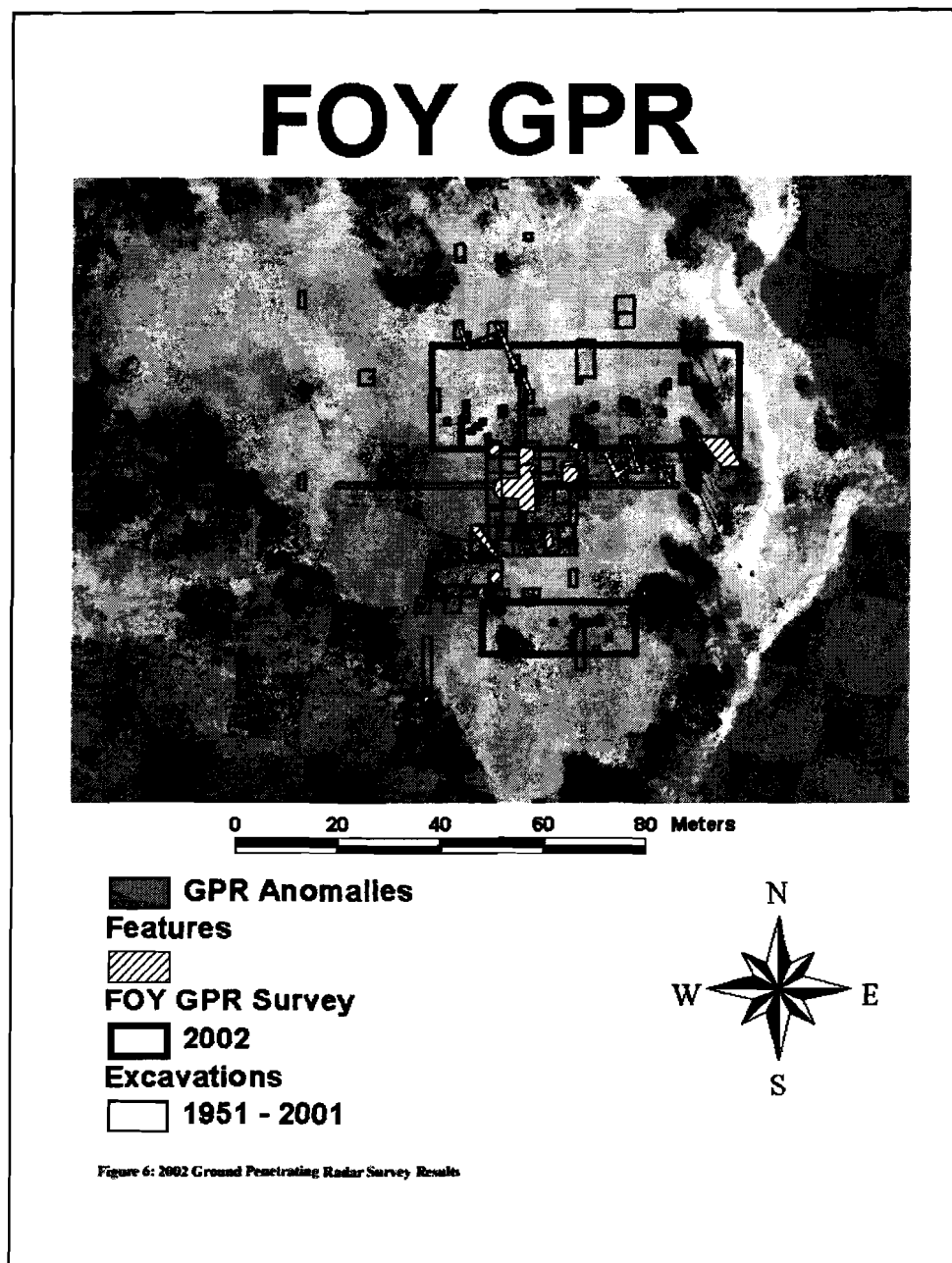


Figure 2. 8-SJ-31 Ground Penetrating Radar Area

selected using a slightly different set of criteria. The 2000 and 2001 excavations at 8SJ31



Figure 3 1951 Excavations showing large feature

(White 2000; Anderson 2001) had revealed an excavation trench placed by students of John Goggin in 1953 (designated Feature 85 in 2001). What appears to have been the southern terminus of this trench also appears in a 1953 photograph of those excavations, revealing the top of a very large feature that appears to be another of the extremely large posts thought to be associated with the Menéndez occupation (Figure 3). The identification of the trench in previous excavations allowed us to relocate and test the area in the photograph, in order to assess those features. Ground-penetrating radar was additionally used in the area to help refine the excavation locations.

Site Excavation Strategy

During the 2002 field season a total of 207 square meters was excavated (Figure 1). Two 3m X 3m units were excavated at the southern end of the site near the palm tree shown in the Goggin photographs. Two block excavation units were placed just to the north of previous excavations at the site. The larger of the two was 12m north to south and 9m east to west and was placed to the west of the 1985 North-South trench with its southwest corner located at grid coordinate 450N 506E. The second block was placed to the east of the 1985 North-South trench and was 9m X 9m square. The southwest grid coordinate for this block was 450N 525E. Each excavation block was divided into 3 meter by 3 meter units, and were assigned unit numbers to provide for greater control of excavations.

Approximately the upper 20 centimeters of soil were mechanically stripped prior to excavation. This level consisted primarily of fill added over the years to help control water inundation of the site.

Excavation controls

A modified Chicago grid system was used at the site to maintain horizontal control. The system was reestablished off the iron rebar placed at 500N 500E, in the main east/west path, originally set in 1976, and used in each season thereafter. A second rebar placed at 458N/500E during the 2000 field season was also located, and from these two reference points several wooden stakes were placed running north/south along the 500E line.

A fixed datum plane was established to obtain vertical control across the site. It was tied into the datum planes used in previous field seasons by taking elevations at

the SW corner of the concrete base of the San Juan de Pinos Monument, which measured 1.31 meters below datum. All provenience elevations of the 2002 season were recorded in meters below datum written as “mbd” throughout this report.

Excavation units were designated by the grid coordinates of their southwest corner. Each unit was excavated to culturally sterile soil unless noted otherwise. Each provenience was designated as one of the following categories that have been established through the archaeological work conducted in St. Augustine by the University of Florida. These five designations and their field abbreviations are:

- 1) Feature (F): a deposit that was known to be the result of human activity and possessing an identifiable function. Feature numbers were carried over from the previous field seasons and new features that were discovered were given the next consecutive feature number, with this year’s first new feature being labeled F89.
- 2) Area (A): a soil discoloration or intrusion into the soil matrix of a unit. These areas could not be confidently identified as cultural in origin, and were given consecutive numbers within each unit.
- 3) Postmold (PM): a stain resulting from the deterioration of a post. Postmolds were numbered consecutively within each unit. Postmolds were pedestaled and then vertically sectioned and drawn in cross section and the soil associated with the postmold was retained for screening and analysis.

- 4) Posthole (PH): the area surrounding a postmold of the hole into which a post was placed. Postholes were also numbered consecutively within each unit.

Postholes were excavated in the same manner as postmolds.

- 5) Zone (Z): a naturally occurring deposit or sheet midden that covers the entire site or large portions of it.

During excavations, each provenience was given its own unique field specimen (FS) number. A provenience was defined as “a deposit in the ground resulting from a single behavioral event or process”. When deep deposits were encountered, they were excavated in 10 centimeter arbitrary levels, with each level of a provenience being given a separate FS number. FS numbers along with all other field records were continued from those used in the 2001 season. The first FS number of the season was FS# 2496. All provenience information including top and base elevations was recorded in the field specimen log; also an additional log was kept of weights for shell, faunal remains and charcoal that were weighed in the laboratory.

Field notes were taken throughout the day by the field supervisor. The field notes contain observations on the excavations of each unit, sketch maps of units at various points during excavation, records of when a unit was photographed, mapped, etc., and notes on the general procedure of the field work and any relevant comments. Additional notebooks were kept at each individual unit so that the crew could keep informal daily logs of that unit’s progress and any noteworthy circumstances.

During excavation each unit was mapped in plan view with each change in soil configuration, to show the size, shape and depth of all intrusive proveniences. Each map

was given a consecutive number following those map numbers used in the 2001 field season. Photographic records were also made of the units, usually before a map was drawn. Photographs were taken in black and white print film, color slide film and digitally. Each photographic subject was given a photographic log (PL) number, which followed consecutively from previous excavations. In the two 3 X 3m units to the south walls which showed a significant provenience had stratigraphic profiles drawn. In addition to the profiles being drawn, a separate stratigraphic record form was completed, which identifies and links those proveniences present in the stratigraphic profiles with proveniences which were excavated in that unit.

In addition to formal records, a number of other records were maintained for each unit. Proveniences were given soil descriptions by the field supervisor to maintain consistency in color descriptions by use of the Munsell Soil Color chart. Records were kept daily at each unit through the use of a unit provenience log, which consisted of a sketch map in plan view of the unit at various levels, the Munsell value for each provenience, and the top and bottom elevations for each provenience within the unit. Feature forms containing important information such as sketch maps, elevations, FS numbers, etc. for each individual feature. After each unit was completely excavated, an excavation unit record was completed, recording the map numbers, stratigraphic records, photo log numbers for each unit along with all the proveniences excavated in that unit and their respective FS numbers.

The excavated soil from all proveniences was water screened through 1/4" mesh. The soil from areas and features were screened through 1/16" mesh in addition to the 1/4"

mesh and then dried and bagged. The material found in the 1/4" screen was then separated into cultural materials, charcoal, faunal remains and shell, and then bagged separately. The shell recovered from each provenience was weighed, recorded and discarded, and a random sample equaling one large bag of approximately 5 liters of whole and hinged shells was taken from features and areas. A random five-liter soil sample was taken from features and areas before the provenience was screened, and one half of all sectioned postmolds were kept as a soil sample.

All charcoal, faunal and shell samples were weighed and recorded in the lab, and all building materials were separated into categories of coquina, plaster, brick, mortar, etc., weighed and recorded. The cultural artifacts were analyzed in the lab, where artifact type, frequency, weight and any other pertinent information was recorded. The information that was obtained from the artifact analysis was used to determine the terminus post quem (TPQ) of each provenience. Using the TPQ, along with stratigraphic information, the cultural period of each provenience was determined. All of the information generated from the artifact analysis, including the cultural period, was then entered into Florida Museum of Natural History's Historical Archaeology Database using Microsoft Access. All artifacts and records are stored at the Florida Museum of Natural History in Gainesville, Florida (Accession # 2002-17).

General Site Stratigraphy

The Fountain of Youth Park site consists of three zones or sheet deposits that are found throughout the site. Underneath these three zones lies a golden yellow sandy soil that through the years of excavation has been determined to be culturally sterile. The

depth, thickness, and sometime presence of these zones varies throughout the site, however, their sequence of deposition is consistent. These three zones, from upper most to lower most strata are:

Zone 1 (Z1): Medium to dark grey/brown sandy soil that may contain small pieces of shell and charcoal, and root disturbances. This zones lies directly under, and is disturbed by the sod layer, and contains mixed cultural material from the 16th through 20th centuries.

Zone 2 (Z2): Medium brown/grey sandy soil with a heavy content of whole and broken shell. This zone is associated with shell midden thought to date after the Menéndez occupation, and is found in noncontiguous, discrete areas throughout the site, including south of the east/west path, along the extreme eastern edge near the water, and in the southernmost portion

Zone 3 (Z3): Lighter golden tan and grey/brown mottled sandy soil with rust colored flecking that contains no shell. This zone is associated with the prehistoric and Menéndez occupations at the site.

The Munsell values for each zone have been fairly consistent throughout the site and numerous field seasons, with any variations being attributed to the numerous people reading the soil colors.

Excavation Results

The following is a description of each of the excavation units and blocks, including the reasoning behind their placement, and the results of the excavation.

417N 519E

One of the first two units opened was a 3 meter square placed at the southern end of the site, corresponding to the trench shown in the Goggin photographs from 1952. Although the placement of this unit did not succeed in locating the large post shown in that photograph and discussed above, it did uncover Goggin's excavation trench (designated

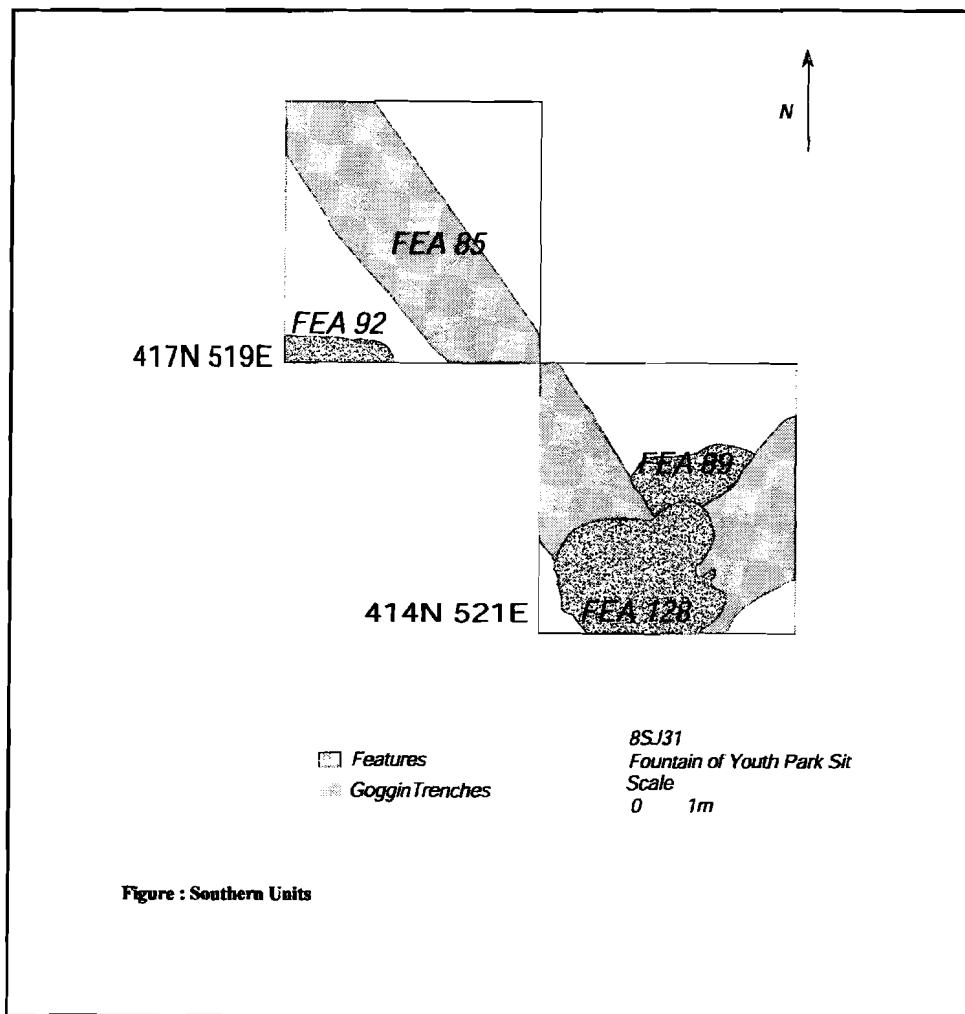


Figure 4 2002 South Excavations Units, Plan view

Feature 85 in 2001) verifying that we were in the vicinity of the 1952 excavations. It also indicated the placement of the extension of excavation to the adjacent unit, where a large post feature was located.

Unit 417N/519E was dominated and extensively disturbed by F85 (which was 1.2m wide running diagonally NW to SE across the unit). Despite the intrusion one other feature of particular note was found. Feature 92 was located in the SW corner of the unit and appears to be only a small portion of a larger feature to the south (Figure 4). This feature apparently was a large posthole that contained a number of small postmolds, nine were identified within the portion which lies in the unit. Although the artifact content was scant this feature seems to date to the 16th century Spanish occupation and could possibly be the edge of another large postmold like those previously excavated..

414N 522E

The second of the units at the south end of the site was a 3m X 3m unit located directly to the southeast of the unit discussed above. By placing this unit at this location, it was hoped to further excavate the 1953 trench and possibly find the postmold shown in the photo.

Feature 85 continued southeast diagonally across this unit. It was joined by another apparent Goggin trench in the south half of the unit running perpendicular to Feature 85 and extending to the to the Northeast (Figure 4). Within the inner elbow of these two trenches a large trash pit was located and designated Feature 89. This pit dates to the mission period (second half of the 17th century), Although heavily impacted by the Goggin

trenches, this trash pit would have been approximately 1 meter in diameter and some 30 centimeters deep.



Figure 5 Features 128-129

Once the fill of the Goggin trenches was removed, a very large stain was revealed in the south wall of the unit, and extending to the south. This was designated Feature 126 (Figure 4). This, too, was a large trash pit dating to the mission period, and was apparently perturbed by root activity, as though there may have been a tree at this spot prior to the trash pit. In addition to extending further to the south, Feature 126 clearly intrudes into and overlies another larger stain, which was designated Feature 128 (Figure 5-6)

Although we were not able to complete excavation of this feature due to the rising water table, its configuration in profile is clear (Figure 6). This large circular feature is nearly 2m in diameter at its widest point and is nearly completely devoid of any type of

cultural material. In profile the stain becomes narrower as it descends in depth, possibly becoming basin-shaped at the base. Given the almost complete lack of cultural material within the feature, its stratigraphic position, and the similarities in plan and profile with the large post features previously excavated at the site it is hypothesized that F128 is also a large post dating to the Menéndez period. If so, the location of this post is somewhat to the east of the north-south line of large posts previously identified and possibly provides an important clue regarding the location and size of the council house/fort. Despite the fact that this post was clearly within the confines of (but below) the 1951 Goggin excavation trenches, it does not appear to be the one shown in the 1951 photo (Figure 2). The configuration of that excavation unit is considerably different from the Feature 85 complex found in these units, although it is clearly nearby. There may yet be another such feature in this vicinity.

Block Excavation 4

This excavation block was located to the north of previous excavations at the site and was placed west of the 1985 North-South trench (Chaney 1987). It was 12 meters north to south and 9 meter east to west, with its southwest corner located at grid coordinate 450N 506E.

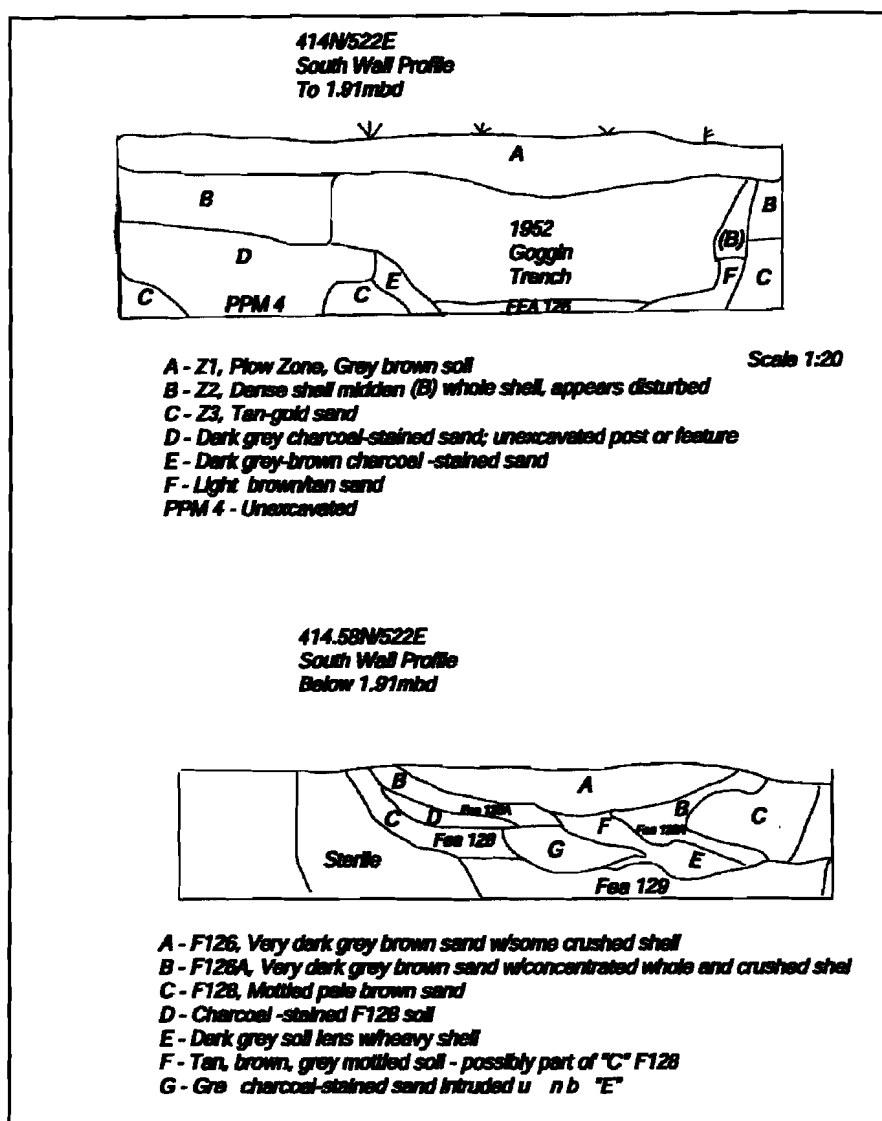


Figure 6 Profiles, 414N 522E

After the location of the unit was established, the upper layers of soil were mechanically removed with a backhoe. These upper layers were fill added over the years to try and control flooding and erosion and Zone 1, which consists of, mixed cultural materials from the 16th through 20th centuries, and is of little analytical use. After stripping, the excavation block was divided into 3m X 3m excavation units. The smaller excavation units aided in the further removal of Zone 1 soils by hand excavation. This provided greater vertical control allowing us to excavate in 5 centimeter levels until we were able to level off

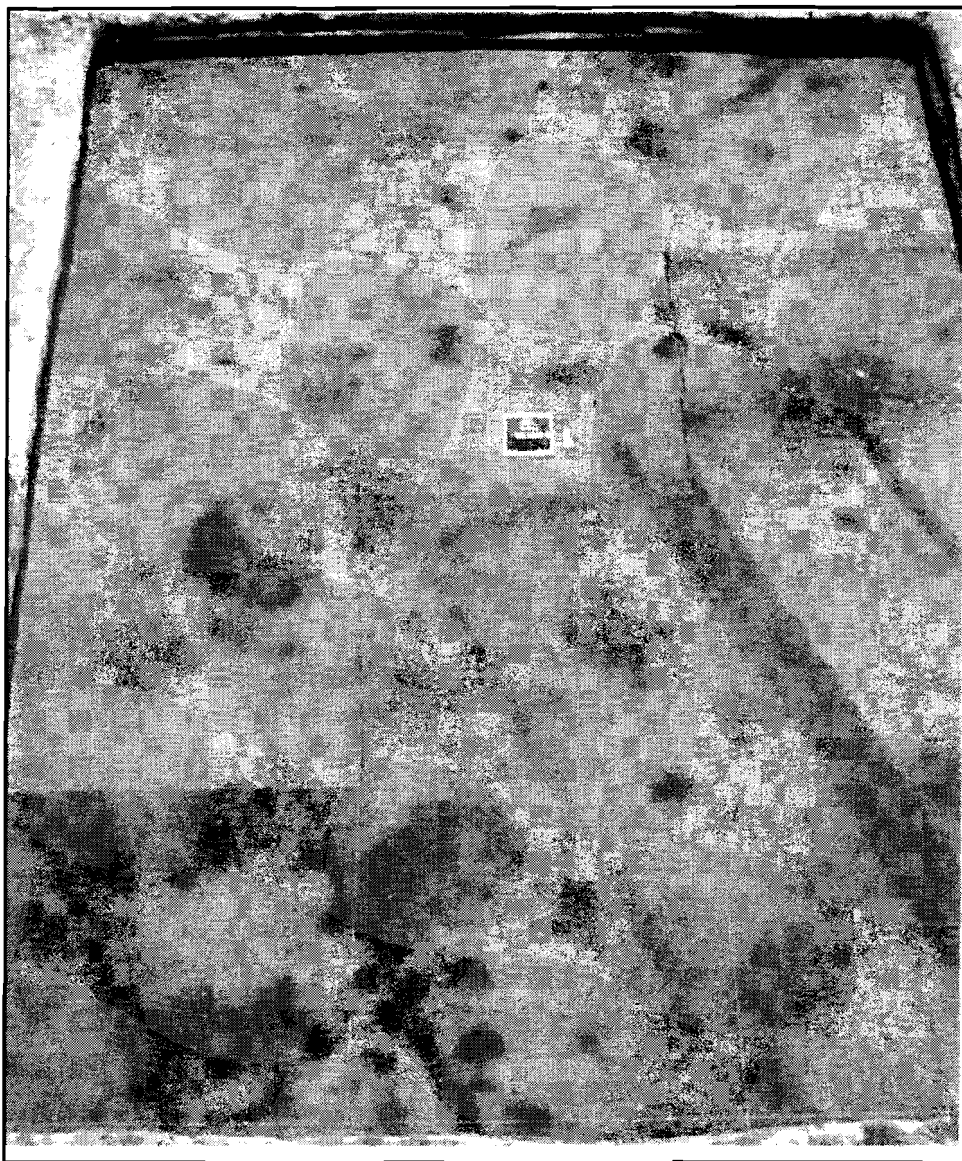


Figure 7 Block 4 excavations

the entire block at the top of Zone 3 thus revealing the features, areas, and postmolds in Zone 3 that presumably date to the Menéndez period or earlier. All features, areas, and postmolds were mapped and photographed before being excavated.

Certainly the most prominent features found in Block 4 were a series of linear trench-like features (Features 94-99), which run from NW to SE at an angle of

approximately 20° east of grid North. These features were similar to those found during previous year's excavations that were interpreted as mud sleeper trenches. There were six

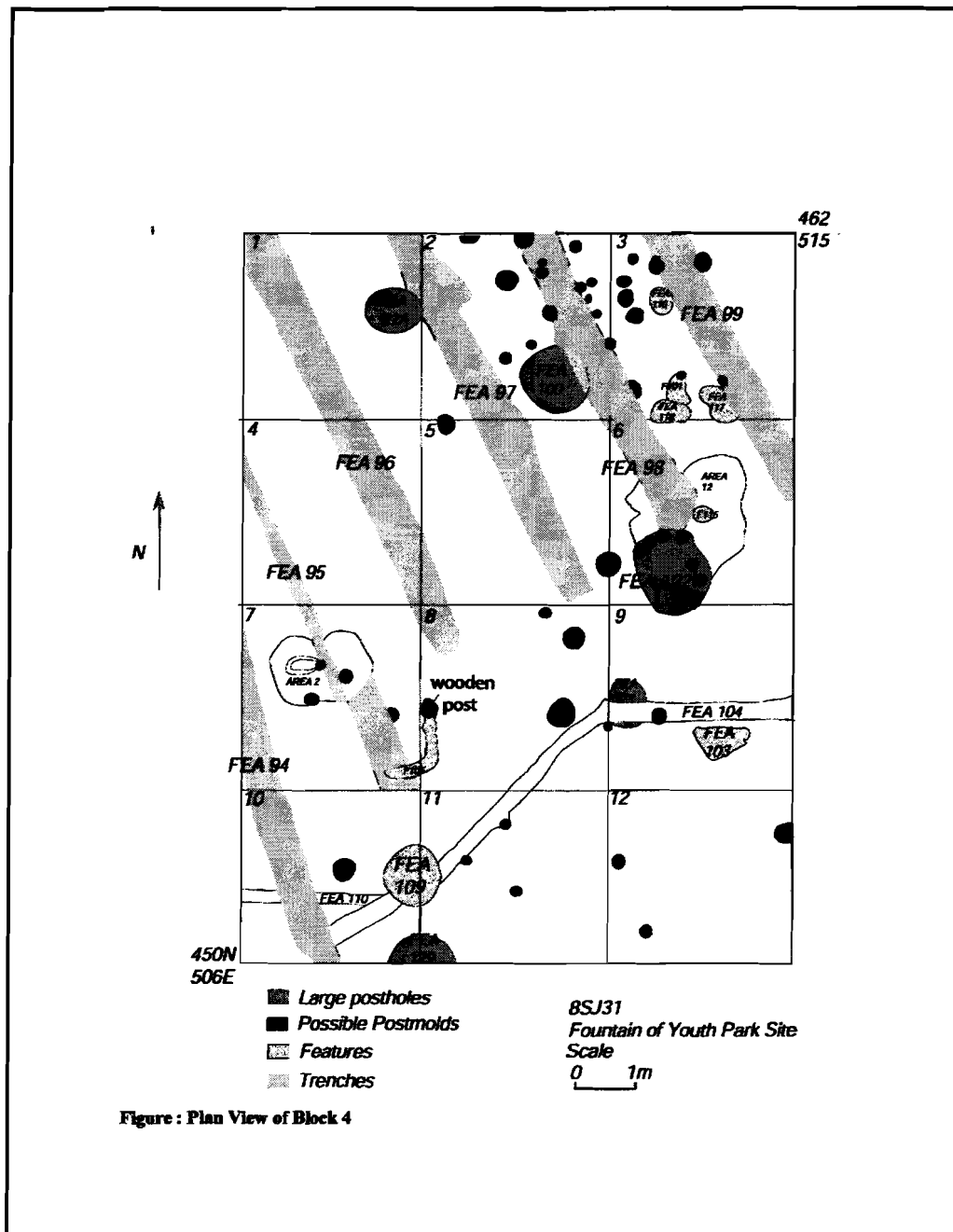


Figure 8 Block 4 Features, Plan View

trenches found in the NW ½ of block 4 (Figures 6-7) (see also previous summary discussion). Although the angle of orientation of these features is the same as those found in previous years, the linear trenches found in 2002 were wider at 60 to 80 centimeters than those found previously in the center of the site. They were also closer together, and more regularly spaced in a parallel set approximately 1.6 to 2m apart. These trenches were also darker and more clearly defined in plan view than those from earlier excavations. Smaller, possible “connector” trenches were mapped between and perpendicular to Features 94 through 98, but these stains disappeared within a few centimeters of excavation.

All of the trench features, except for Feature 94, extended slightly deeper on the eastern edge, giving the trench profiles the appearance of being notched along the east side (Figure 8). This deeper extension was approximately 20 centimeters in width and continued for another 5 to 10 centimeters in depth below the rest of the feature. Artifacts recovered from the features generally dated to the 16th century with the exception of Features 94 and 96, which both contained materials from the 19th century including refined earthenwares and Late Style Olive Jar fragments.

There are several possible interpretations of the function of these trenches. The first is that they are mud sleeper foundations dating to the Menéndez occupation and another is that they are some type of agricultural trenches from the British occupation or afterward. The presence of post 16th century artifacts in two of the trenches might suggest that either those two trenches do not belong to the 16th century occupation or that none of them do, if we assume that the function of one must be the same for all. If indeed these were mud sleeper foundations it would not be at all surprising for the features to have post

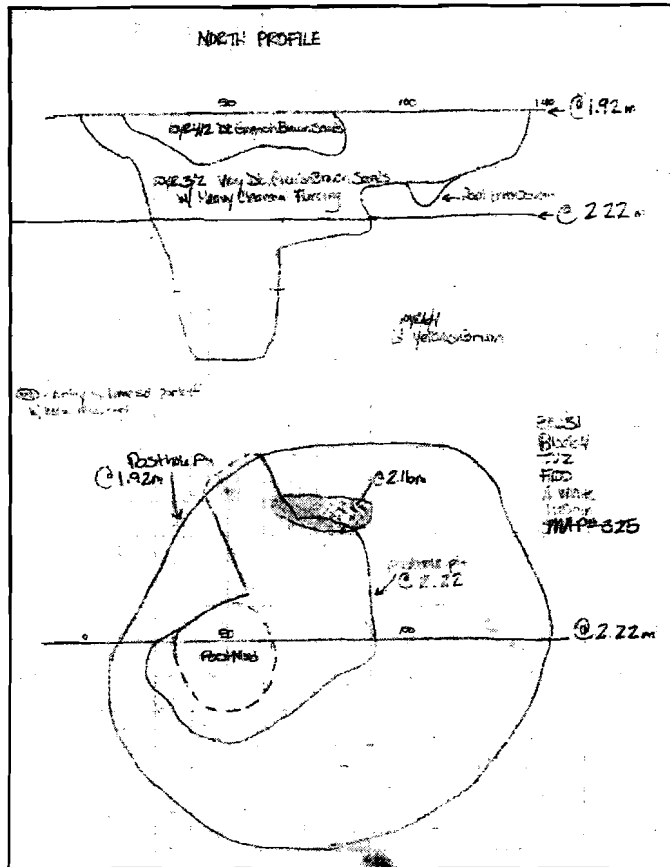


Figure 9 Feature 100 Post, Block 4

Menéndez-period artifacts. The soil within the features would have to post date their use, filling in the void left when either the split logs within the trenches were removed or rotted away.

The argument that these were agricultural trenches rather than foundations has been the regularity and uniformity of the trenches themselves and how closely

spaced they are compared to trench features found in the past. One possible explanation for this is that these trenches do not necessarily represent the location of walls as the linear features have been interpreted in the past excavations. Instead they could be floor foundations that would have had floor joists laid out over them and a raised floor attached to the joists. This scenario would make sense given the susceptibility of this area to flooding and the likelihood this would have also been the situation when the Spaniards arrived. If these trenches do indeed represent the presence of a Spanish structure it could be that it was added on to an already existing Indian structure to the Southeast where the foundation trenches abruptly end.

Several large postholes were identified and excavated within Menéndez era deposits in Block 4 (Figure 8-9). These postholes ranged from 80 to 120 centimeter in diameter and were all very deep, with depths of from 38 to 75 centimeter from the top of the features. Another common characteristic of these postholes is the presence of a much smaller postmold within the feature and some evidence in the profiles that these posts may have been removed by excavation. If this was the case it would have almost certainly have had to occurred during the 16th century given their stratigraphic position, and the presence of only sixteenth century or pre-Columbian artifacts in their fill.

Feature 97A was found in Unit 1 of Block 4 (Figure 8). This post was originally thought to be part of a connector trench between F97 and 98. At 1.92 mbd it became better defined as a large circular stain 90 centimeter in diameter. At 2.02 mbd a smaller circular stain nearly 40 centimeters in diameter and likely a postmold, was noted in the north half of the feature. A large iron bar as well as a small blue seed bead were recovered from within the feature.

Feature 100, another large posthole, was excavated in Unit 3 of Block 4 (Figure 9). This feature was 120 centimeters in diameter and was first defined at 1.87mbd. It is among a cluster of many smaller postmold stains that also seem to be related to Feature 98, since they are either on the side or within it. Feature 100 also contained a smaller postmold stain that was 30 centimeter in diameter. Artifacts recovered were primarily aboriginal with some iron, olive jar, and a fragment of white tin-enameled pottery of unidentified origin.

Three additional large posts were located and excavated within Block 4. Feature

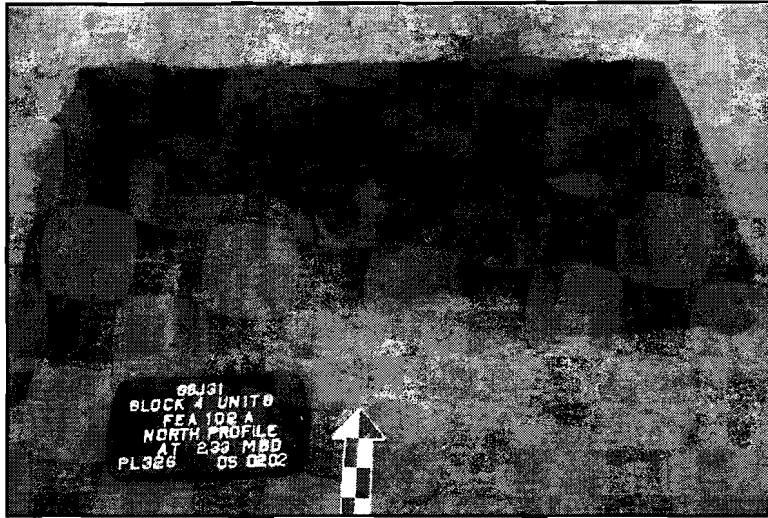


Figure 10 Feature 102 (Postmold)

102 in Unit 6 was a posthole, 115 centimeters in diameter, with a postmold identified in the center of the feature, and evidence of removal of the post by excavation (Figure 10). Feature 102 was

located within Area 12, a large, shallow and amorphous soil stain (Fig. 8). Both features contained Spanish and aboriginal materials, and are thought to be a Menéndez-era deposit.

A posthole designated Feature 114 was located in Unit 9 just southeast of Feature 102. It was 80 centimeter in diameter and contained a postmold in the eastern half that was identified at the bottom of the feature (at 2.27mbd). A lavender seed bead was recovered from this feature.

Feature 119, also a large posthole feature, was located near the south wall of Block 4, where units 10 and 11 meet. This was 115 centimeters in diameter and had 2 postmolds within it. It contained a glass bead and a fragment of copper alloy in addition to aboriginal artifacts.

Unit 3 of Block 4 contained a cluster of features and postmolds located between Features 98 and 99 (the linear trenches), and that appear to pre-date them. This area in the

in this unit. Initially designated as PPM 15, this small feature was entirely comprised of whole charred corncobs.

Perhaps the most striking finds of the 2002 field season was the location of two preserved posts, one of which was found in Unit 8 of Block 4 (the second, in Block 5, is discussed below). (Figure 12) . This post was found in postmold Feature 105, initially



Figure 12 Wood post remnant, Feature 105

defined at 1.92mbd. At 1.97mbd it became clear that F105 was actually two post stains side by side. The northernmost stain was excavated to a depth 2.30 mbd, where wood was encountered. When extracted it proved to be the bottom of a wooden post,

approximately 20 centimeter in diameter, preserved below the water table. The base of the post appears to have been sawn, and although it's fill contained only aboriginal materials, it is thought to have been placed by Europeans, likely from the Menéndez period

Two additional trench-like features were found in Block 4. Feature 104 was a narrow trench-like feature, 20 centimeter wide, which ran east to west across unit 9 and then turned diagonally crossing units 8, 11, and 10 before terminating in the south wall of the block (Figure 8). First encountered at 1.92mbd, its function is unknown. The soil in

this feature was virtually identical to that of Zone 3, Level 3, although it was stained slightly darker than the surrounding matrix. The feature contained exclusively aboriginal materials, and its location, following the southern ends of trench features 94-98 may suggest that it was in place when those features were created. Associated with Feature 104 was Feature 109, which appears to intrude into F104 where units 10 and 11 meet. This feature was a shallow basin shaped depression devoid of European artifacts, and may represent the remains of a Timucuan posthole.

In addition to the features described above, 57 postmolds were identified and mapped within Block 4. Most were approximately 20 centimeter in diameter. Not all of the postmolds were excavated due to time constraints and a need to concentrate on the features, however most were cross-sectioned and profile maps drawn to determine their function.

BLOCK 5 EXCAVATION

Block 5 was placed to the north of previous excavations at the site (east of the 1985 North-South trench) in the second target area identified through the ground-penetrating radar survey. It was 9 meters north to south and 9 meters east to west, with its southwest corner located at grid coordinate 450N 525E. The methods for excavating Block 5 are identical to those described for Block 4.

Block 5, however, was completely different than Block 4 in its evidence for cultural deposits. There were no linear trenches located within Block 5, and there appeared to be much less activity within this area. Only nine features and 21 postmolds were identified (Figure 13).

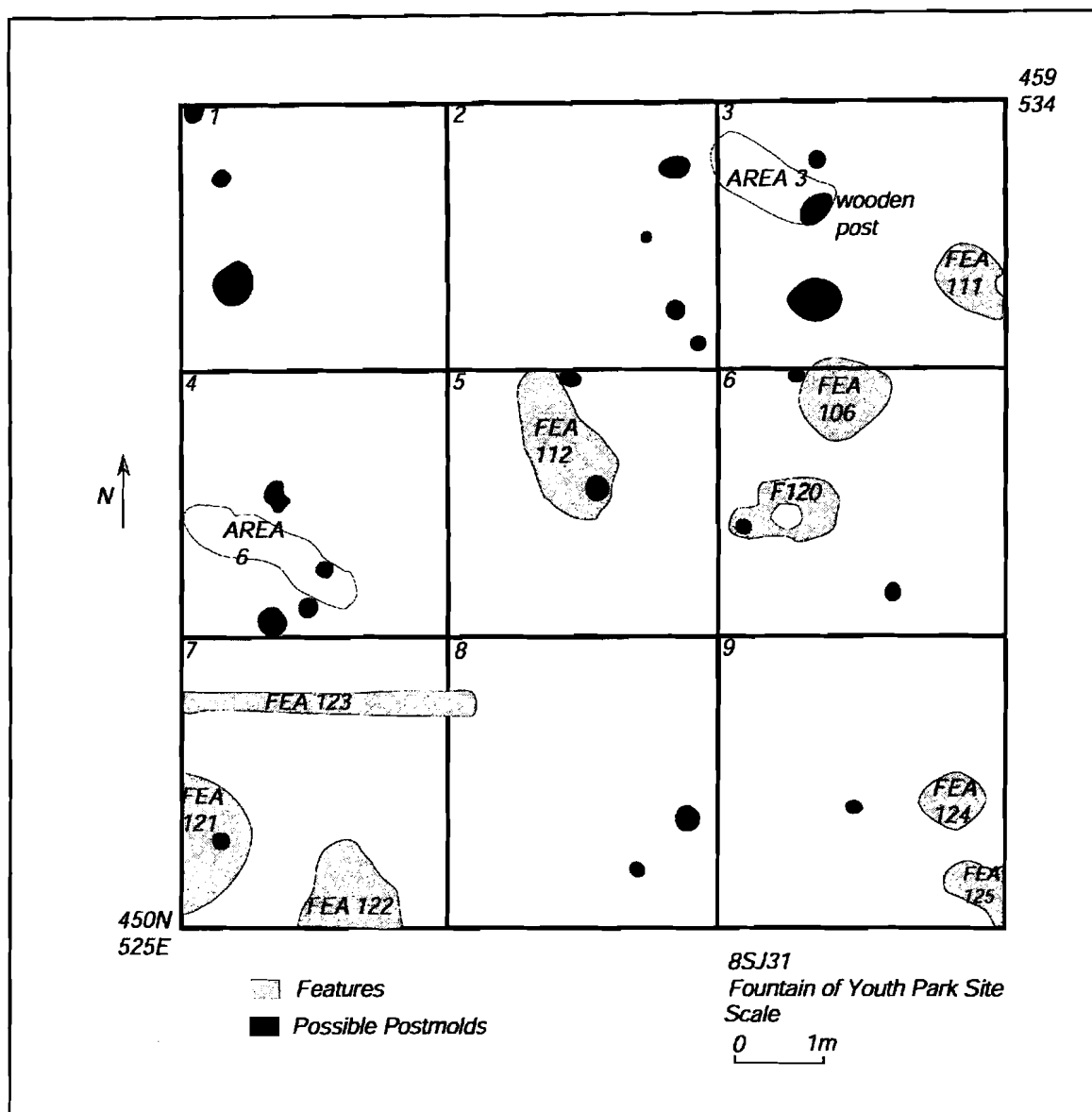


Figure 13 Block 5, Plan view

A circular stain was identified in the southeast corner of Unit 3 and designated Feature 111, revealed in excavation to be a postmold within a posthole. Artifacts recovered were primarily aboriginal with St. John's plain and check-stamped present. In addition to the aboriginal artifacts there was European coarse earthenware fragments as well as a lead fragment. Also found within this unit was a second intact wooden post,

found at the base of PPM18 at a depth of 2.45mbd. We were able to remove the post intact and along with the other it was sent to the Bureau of Archaeological Research Conservation Laboratory in Tallahassee for preservation.

Feature 112 was identified as an oblong feature approximately 160 centimeter in length oriented roughly north to south in the north half of unit 5. This feature consists of fine ashy gray sand and is shallow with an irregularly shaped base in profile. No function was determined possibly just an irregularly shaped trash deposit. Artifacts recovered were overwhelmingly aboriginal with the exception of three wrought nails and one glazed olive jar fragment, suggesting an early historic period date. PPM19 intruded through F112 extending 38 centimeter below the base of the feature to a depth of 2.55mbd.

Two features designated Feature 106 and Feature 120, respectively, were located in Unit 6. Feature 106 was a dark circular stain with shell 90 centimeter in diameter that narrowed rapidly into a basin-shaped pit 30 centimeter in depth. This feature had a high concentration of aboriginal ceramics including several large fragments of St. John's plain and check-stamped. A single fragment of olive jar and two nail fragments were also recovered, placing this feature in the early historic era.

Feature 120 also appears to be another large posthole of the Menéndez era. It was located in the southwest quadrant of unit 6 and was an oblong shape, about 80 centimeter in length east to west (Figure 12). The fill of the posthole was fine gray sand with a large amount of charcoal, with a postmold becoming apparent at 2.25mbd. The postmold was cored and found to extend to a depth of 2.5mbd. PPM 20 was also associated with this

feature. Aboriginal materials, as well as Spanish olive jar fragments were recovered from this feature.

The southwest corner of Block 5 was different from the rest of the block with a matrix of brown sands mottled with ferrous staining which extended from the southwest corner of unit 4 throughout unit 7 and into the southwest corner of unit 8. Three features were identified within this area. Feature 123 was a faint linear feature of ashy light gray sand 20 centimeter wide which extended west to east across the north half of unit 7 and 70 centimeter into unit 8. This feature was mapped in plan view at 1.95mbd but not excavated due to its ephemeral nature. Feature 122 was mapped along the south wall of unit 7 and attempt was made to excavate this feature but it was impossible to distinguish it after only a couple centimeters of excavation. This stain was also very faint when originally mapped in plan. Feature 121 was yet another faint semi-circular stain located along the west edge of unit 7. This feature was excavated to a depth of 2.30mbd where we encountered the water table, which was rising towards the end of the field season. A postmold was located at this depth and it was cored to a depth of 2.36mbd. Very few artifacts were recovered from this feature all of which were aboriginal. Owing to their ephemeral nature and exclusively aboriginal materials, these features are thought to pre-date the Menéndez occupation.

In the southeast corner of the block two more circular features were located in unit 9. Features 124 and 125 are both dark circular stains approximately 70 centimeter in diameter. In profile F124 is a shallow basin-shaped pit, and Feature 125 had a very irregular shaped base. No European artifacts were recovered, and Native wares included

St. John's plain and check-stamped.. The function of these two features is unclear, and they are probably pre-contact.

As noted, the deposits in Block 5 were much different than those found in Block 4. In general, features were not only less frequent in Block 4 but also tended to have a greater concentration of Indian artifacts, although many while clearly were deposited in the early contact period. Perhaps this was an area of Indian activity during the Menéndez period or immediately prior to the coming of the Spaniards when this area was relinquished to their use.

TABLE 1 8SJ31 2002 Excavations : Principal Menéndez -Era Features

	LARGE						SMALLER					POSTH		PITS		S						TRENC						Subtot.
(Feature #)	100	102	117*	128	92	93	105	111	119	128	125	F114	F11	F103	F106	F124	F101	F113	F110	F121	F112	F96	F95	F97	F98	F99	F104	16th c.
ABORIGINAL DISCARD	5	5		1	1		3	4	2	1	1	3		1	4	2	2	2	1	2	5	5	5	9	3	1	0	
ITEM																												
NATIVE AMERICAN																												
ABORIGINAL GRIT																						1						1
ABORIGINAL GRIT	2															1						1		1		1		6
ABORIGINAL																								1				1
ABORIGINAL GROG								1																	1			2
ABORIGINAL GROG	1	1						1		1		2			1	1	1				1	1	1	2	2			16
ABORIGINAL	1	1															1											3
ABORIGINAL	1	1	0	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	3	1	0	2	0	0	0	12
ABORIGINAL SAND																									1			1
ABORIGINAL SAND	2	1				1	1	4	2	1	2	2		1	2	1	1				2	5	3	1	2	1		35
ABORIGINAL SAND/GRIT	1																				1							2
ABORIGINAL SAND/GRIT	1									1					1						1			1	2	1		8
ABORIGINAL																												0
ORANGE FIBER																			1			1		1				3
ORANGE FIBER				1						1	1																	3
Subtotal	9	4	0	1	0	1	1	6	4	4	3	4	0	1	5	3	4	0	1	0	8	10	4	9	8	3	0	93
ST. JOHNS INCISED																												
ST. JOHNS PLAIN	5	6			1		2	5	2	1	2	3			5	2	1	2	1	2	5	6	6	8	3	2	1	71
ST. JOHNS STAMPED	4	5			1			4	1		1	1			4	1	1				4	5	2	7	4	2	1	48
Subtotal	9	11	0	0	1	1	2	9	3	1	3	4	0	0	9	3	2	2	1	2	9	11	8	15	7	4	2	119

TABLE 1 8SJ31 2002 Excavations : Principal Menéndez -Era Features																												
SAN MARCOS PLAIN	1	1												1						2	3	2	1	2	13		24	
SAN MARCOS STAMPED	2																				3	1		1	7	1	15	
MISSION RED FILMED																				1					1		1	
Subtotal	3	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	6	3	1	3	18	1	41	
PROJECTILE POINT																	1										1	
Subtotal Native	21	16	0	1	1	2	3	15	7	6	6	8	0	1	15	6	6	3	2	2	20	27	15	25	18	26	3	255
16th c. European																											0	
COLUMBIA PLAIN																											0	
ORIENTAL PORCELAIN																					1						1	
WHITE ITALIANATE	1																										1	
UID BLUE ON WHITE																											0	
ORANGE MICACEOUS																						1		1			2	
EL MORRO																											0	
LEAD GLAZED COARSE																											0	
UID COARSE	2						3		1													1	1				8	
STORAGE JAR																							1				1	
LATE STYLE OLIVE JAR														1							3	1		1			6	
MIDDLE STYLE OLIVE		1							1															1			3	
OLIVE JAR	2	2			1																		1				6	
OLIVE JAR GLAZED	1								1											1							3	
Post-Menéndez																											0	
MEXICO CITY WHITE																					1						1	
PUEBLA POLYCHROME																											0	
SAN LUIS POLYCHROME																											0	
Non-Spanish																											0	

TABLE 1 8SJ31 2002 Excavations : Principal Menéndez -Era Features																													
STAFFORDSHIRE																													0
UID SLIPWARE																													0
CREAMWARE																													0
TRANSFER PRINTED																													0
WHITEWARE																													0
UID REFINED																													0
IRONSTONE																													0
																													0
Non-ceramic																													0
LIGHT BLUE GLASS																											1		1
GLASS																											1		1
SEED BEAD													1														1		3
GLASS BEAD																													1
UID SPIKE																											2		3
UID NAIL	0	0																										1	2
WROUGHT NAIL																											1	1	2
IRON OBJECT			1																										2
COPPER ALLOY OBJECT																													1
LEAD FRAGMENT																													1
PIPESTEM																													
FURNITURE HARDWARE																													
HAIR COMB FRAG																												1	
PLASTIC																													
Subtotal European	6	4	0	0	0	10	0	5	2	2	1	2	0	0	2	0	1	0	0	0	2	7	6	6	2	2	0		49
																													0
TOTAL ALL	27	20	0*	1	1	30	3	20	9	8	7	10	*0	1	17	6	7	3	2	2	22	34	21	31	20	28	3		305
% European	0.22	0.20		0.00	0.0	0.3	0.00	0.25	0.22	0.25	0.1	0.20		0.00	0.12	0.00	0.14	0.00	0.00	0.00	0.09	0.21	0.29	0.19	0.10	0.07	0.00		
% Native American	0.78	0.80		1.00	1.0	0.6	1.00	0.75	0.78	0.75	0.8	0.80		1.00	0.88	1.00	0.86	1.00	1.00	1.00	0.91	0.79	0.71	0.81	0.90	0.93	1.00		



References-1

REFERENCES CITED

Adams, William, R. Robert Steinbach and Michael Scardaville

1980 Historic Sites and Buildings Survey of St. Augustine, Florida. Project report on file,
Historic St. Augustine Preservation Board/City of St. Augustine.

Anderson, Jamie

2001 2001 Excavations at 8SJ31 - The Fountain of Youth Park site. 1565 Campground.
Florida Museum of Natural History Miscellaneous Project Reports in Archaeology # 54.
Gainesville.

Anderson, Jamie and Kathleen Deagan

2002 Menéndez Settlement and Fort Site. National Historic Landmark Application. On
File, Florida Museum of Natural History, University of Florida

Barrett, Marie and Korinn Braden

2001 "Posthole Survey 2001: Northeast Portion of the Fountain of Youth Park." Manuscript of file at
the Florida Museum of Natural History, Gainesville.

Chaney, Edward

1986 Survey and evaluation of archaeological resources in the Abbott Tract and North
City, St. Augustine. Project report on file, Florida Museum of Natural History,
University of Florida, Gainesville.

1987 Report on the 1985 Excavations at the Fountain of Youth Park (8-SJ-31), St. Augustine,
Florida. Ms. on file, Florida Museum of Natural History, Gainesville.

Chaney, Edward and Kathleen Deagan

1989 St. Augustine and the La Florida Colony: New Life-styles in a New Land. In First
Encounters: Spanish Exploration in the Caribbean and the United States, 1492-1570,
edited by Jerald T. Milanich and Susan Milbrath. University Presses of Florida,
Gainesville. Pp.166- 82.

Chatelaine, Verne

1941 The Defenses of Spanish Florida, 1565-1763. Carnegie Institute of Washington
Publication # 511.

Corse, Carita D.

1933 The Fountain of Youth and Ancient Indian Village and Burial Ground. Privately Printed,
St. Augustine, Florida.

Deagan, Kathleen

References-2

- 1978 Archaeological investigation into an unknown era: sixteenth century St. Augustine. Summary report prepared for the St. Augustine Foundation, Inc. St. Augustine. (on file, Florida Museum of Natural History, Gainesville.
- Deagan, Kathleen
1992 Introduction to Report on the 1992 excavations at the Fountain of Youth Park Site, St. Augustine (8--SJ 31) by Gardener Gordon, with synthesis by Kathleen Deagan. Unpublished site report on file, Florida Museum of Natural History.(57 pp.)
- Deagan, Kathleen
2002 Artifacts of the Spanish Colonies: Volume 2 Portable Personal Possessions. Smithsonian Institution Press, Washington D.C.
- Franklin, Marianne and John W. Morris
1996 The St. Augustine shipwreck survey: Phase 1. Project report, Southern Oceans Archaeological Research, Inc. Pensacola, FL
- Gannon, Michael V.
1965 The Cross in the Sand: The Early Catholic Church in Florida, 1513-1870. University Press of Florida, Gainesville.
- Goggin, John
1952 Space and Time Perspective in Northern St. Johns Archaeology, Florida. Yale University Publications in Anthropology 47.
- 1968 Spanish Majolica in the New World. Yale University Publications in Anthropology 72. Yale University Press, New Haven.
- Gordon, Gardner
1992 Report on the 1992 excavations at the Fountain of Youth Park Site, St. Augustine (8--SJ 31). With Summary and synthesis by Kathleen Deagan. Unpublished site report on file, Florida Museum of Natural History.(57 pp.)
- Hann, John
1990 Summary guide to Florida missions and visitas with churches in the sixteenth and seventeenth centuries.The Americas XLVI (4): Whole number.
- Jones, Rick
1976 Test excavations of a St. Johns II village: SJ31. Unpublished student field report on file, Florida Museum of Natural History, Gainesville.
- Laudonniere, Rene de
2000 Three Voyages. Edited by Charles Bennett. University of Alabama Press, Tuscaloosa.

References-3

Lawson, Edward

1956 The first landing place of Ponce de Leon on the North American continent in 1513. Unpublished MS. Edward Lawson Collection, Pk. Yonge Library of Florida History, University of Florida.

Lewis, Kim and Anna Wright

2001 "Report on the Archaeological Investigations of the Northeast Section at the Fountain of Youth Park Site in St. Augustine, Florida." Manuscript on file at the Florida Museum of Natural History, Gainesville.

Lucchetti, Nicholas

1977 "Auger Survey of North St. Augustine." Manuscript on file at the Florida Museum of Natural History, Gainesville.

Lyon, Eugene

1976 The Enterprise of Florida. University Presses of Florida, Gainesville.

1997a The first three wooden forts of Spanish St. Augustine, 1565-1571. Project Historian's report on file, Florida Museum of Natural History, University of Florida, Gainesville. (134pp)

1997b The first three wooden forts of Spanish St. Augustine, 1565-1571. El Escribano Volume 34:140-157.

Manucy, Albert

1997 Sixteenth century St. Augustine: The people and their Homes. Gainesville, University Presses of Florida.

McEwan, Bonnie G.

1991 Hispanic life on the seventeenth century Florida frontier. The Florida Anthropologist 44(2-4):255-67.

McGrath, John

2000 The French in Early Florida. University Press of Florida, Gainesville.

Merritt, James D.

1977 Excavations of a Coastal Eastern Timucuan Village in Northeast Florida. Unpublished Master's thesis, Florida State University, Tallahassee.

1983 Beyond the Town Walls: The Indian Element in Colonial St.

Augustine. In Spanish St. Augustine: The Archaeology of a Colonial Creole Community, edited by K. Deagan, pp. 125-150. Academic Press, New York.

References-4

Milanich, Jerald T.

1994 The Archaeology of Precolumbian Florida. University Press of Florida, Gainesville.

Morris, John W.

1995 1994 Excavations at 8-SJ-34. Project report on file, Florida Museum of Natural History, University of Florida, Gainesville.(35pp)

Reitz, Elizabeth

1985 A comparison of Spanish and aboriginal subsistence on the Atlantic coastal plain. Southeastern Archaeology 4(1):41-50.

Russo, Micheal

1992 Chronologies and cultures of the St. Mary's region of northeast Florida and Southeast Georgia. The Florida Anthropologist45(2):107-126.

Seaberg, Lillian

1951 Report on the Indian Site at the "Fountain of Youth". Ms. on file, Florida State Museum, University of Florida, Gainesville. (Reprinted in Spanish St. Augustine: A sourcebook for America's Ancient City. edited by K. Deagan. 1991, Garland Press.)

Smith, Jimmy and Stanley Bond

1981 Phase III archaeological survey of St. Augustine, Florida. Ms. project report on file, Historic St. Augustine Preservation Board/ City of St. Augustine.

Shtulman, Robin

1995 Acculturation in the Spanish colonies: a comparison of sixteenth century St. Augustine and Puerto Real. . *Unpublished MA thesis*, University of Florida, Anthropology.

South, Stanley

1980 The Discovery of Santa Elena. Research Manuscript Series 165. The University of South Carolina Institute of Archaeology and Anthropology

South, Stanley and Chester DePratter

1993 Block Excavation 1993. South Carolina Institute of Archaeology and Anthropology Research Manuscript Series 222. Columbia, South Carolina

Waters, Gifford J.

1998 1997 excavations at the 8SJ34/Nombre de Dios site: Florida's First Spanish Fort. Project report on file, Florida Museum of Natural History, University of Florida, Gainesville (42pp).

Wheeler, Ryan J.

2000 Treasure of the Calusa. The Johnson/Willock Collection from Mound Key, Florida. Monographs in Florida Archaeology # 1. Tallahassee

References-5

White, Cheryl

2000 Report on the 2000 Excavations at The Fountain of Youth Park, St. Augustine (8-SJ-31)."
Manuscript on file at the Florida Museum of Natural History, Gainesville.

Woods, Alfred and John Schultz

2000 "Geoprospecting at the Fountain of Youth Site in St. Augustine, Florida." Manuscript on file at the
Florida Museum of Natural History, Gainesville.