

THE OLD SOCORRO MISSION SITE TEST EXCAVATIONS--1981-83

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ABSTRACT

The Old Socorro Site (E.P.C.M.31:106:7:23) is the oldest mission site in the State of Texas for which the location is known. An earlier site occupied briefly between 1682 and 1684 has not yet been rediscovered. A cruciform- or transept-style church with a convent attached on the north has been partially excavated with the recovery of appropriately dated artifacts of the late seventeenth and early eighteenth centuries. It is estimated from the documentary sources and dated artifacts that the site was in use between 1684 and ca. 1750. Tewa Polychrome (late seventeenth-early eighteenth centuries) from northern New Mexico and Puebla Polychrome (ca. 1675-1725) from Puebla, Mexico, tend to confirm the early dating. The general outline of the two-meter wide adobe walls of the church and some of the rooms adjoining on the north have been exposed. Tests indicate that the convent extended approximately 25 meters north of the north wall of the nave and that in exterior dimensions the east-facing church extended approximately 32 meters east-west and was ca. 16 meters wide, including the transept and baptistry. Preliminary tests suggest that the ruins of the Piro pueblo that the mission served may be located some 200 meters northeast of the church-convent. Several burials that have been intruded into portions of the convent area suggest that the site was reused as a cemetery in the early nineteenth century.

ACKNOWLEDGMENTS

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Equipment and services were provided by several individuals who deserve special acknowledgment. Mr. Phil Barrett of Barrett Refrigeration Company, El Paso, made a 6" trenching machine available for several months and the transportation and operation of the trencher was undertaken by Mrs. Ann Maule and by Monsignor Thomas Rowland of Corpus Christi parish, El Paso. Mr. Luis Marquez of Socorro was kind enough to spend a

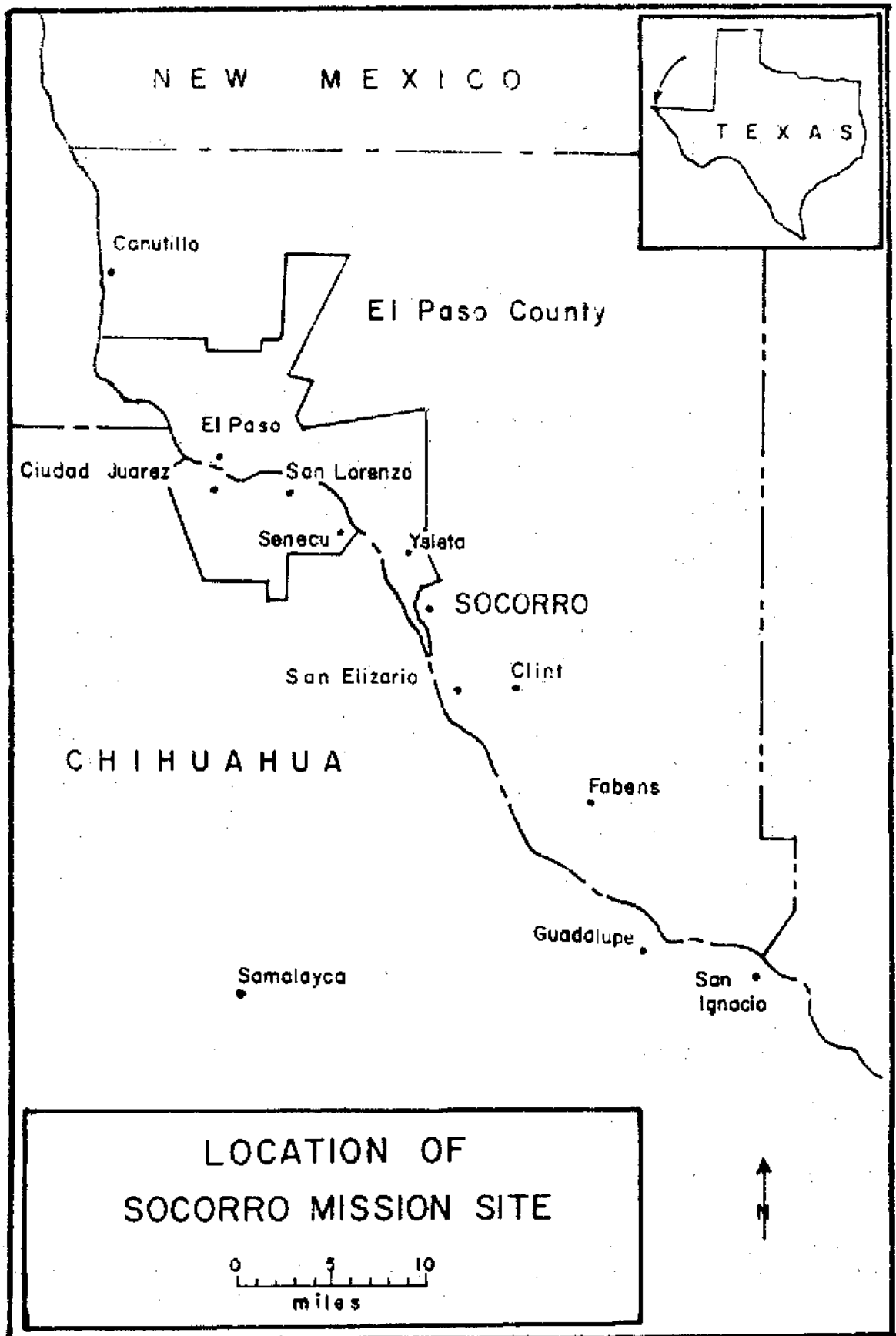


Figure 1. Location of Socorro Mission Site.

Saturday at the end of the dig backfilling the site with his front-end-loader to protect the exposed walls from deterioration. Ms. Cindy Shenk flew over the site a number of times so that aerial photographs could be taken.

A number of students at The University of Texas at El Paso and volunteers participated in the fall of 1981 in a class entitled, "The Archeology of Missions, Presidios, and Haciendas," in the "Archeology Field Work" class during the summers of 1982 and 1983, and in "Laboratory Methods in Archeology" in the fall. The assistance of all of these individuals in carrying out archival and field research and in conducting interviews is gratefully acknowledged.

Mr. Cesar Caballero and Mr. Simeon H. Newman of the Special Collections Division, U.T. El Paso Library went out of their way to assist those pursuing the Socorro Mission research through documentary and secondary sources. The value of those collections for the reconstruction of the history of the Paso del Norte area is inestimable.

The citizens of Socorro expressed interest in the project in many ways. Among those whose concern and help was particularly beneficial are Mr. and Mrs. Joe Ladesma, Mr. and Mrs. Ismael Chavez, Mrs. Mary Chavez, and Father Ramon Duran.

INTRODUCTION

The place here identified as the Old Socorro Mission Site (E.P.C.M.31:106:7:23) is the traditional location of the Socorro mission church that was destroyed by flood in 1829 (Interview, Guadalupe Garcia, Socorro, 28 July 1970; Burrus 1980:21). Archaeological evidence of an eighteenth century occupation of the area was sought several times but was not reported until 1980 when, as a result of a surface reconnaissance, Schuetz (1980:40) succeeded in finding eighteenth century Majolica sherds. The Old Socorro Mission Site is located a few miles southeast of the city limits of El Paso, Texas. It is approximately 1.1 km (0.7 mile) southeast of the present Socorro church, in a field southeast of the intersection of Buford and Nichols Roads (Figures 1 and 2).

The site is reported to have existed as a mound of adobe and sand dunes some 40 to 50 years ago, and a residence, said to have existed on the mound early in this century, was known as "*la casa de baile*" because of the frequency with which dances were held there. After the demolition of that house the artificial mound was used as a source for adobe in brick-making, and within the last decade or so, the mound was used as a borrow area for fill to raise the level of a house built nearby. About 1940 the Rios, owners of the north part of the site, built a small adobe house with a concrete foundation on the site. This structure was occupied until the late 1960s. It was 4.27 meters x 8.76 meters (14' x 27'9") in size and stood as a windowless shell when the preliminary study was carried out in the fall of 1981; subsequently two walls and the roof collapsed. After the abandonment of the Rios dwelling, the south part of

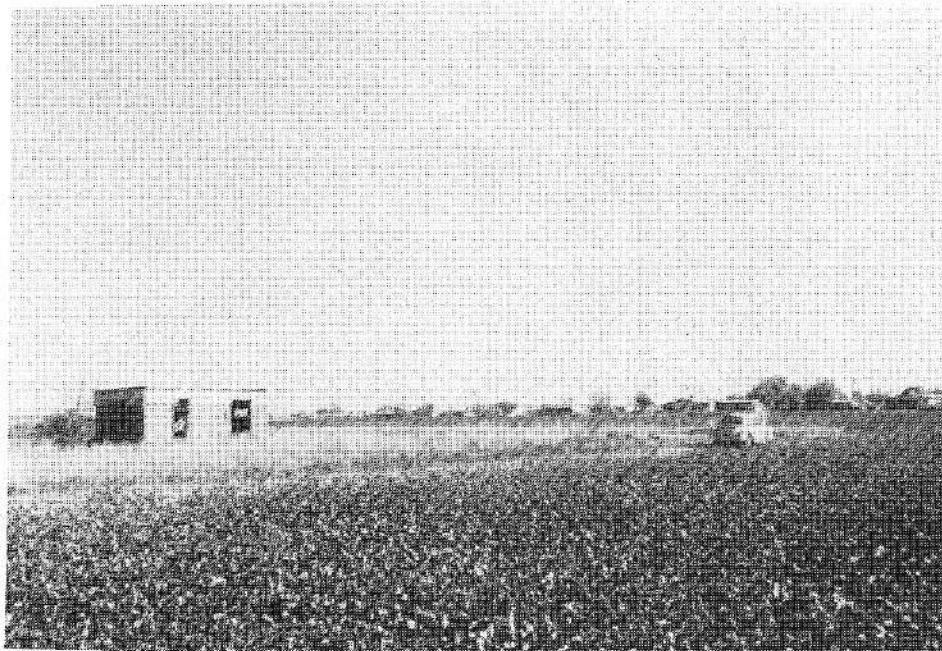


Figure 2. Old Socorro Mission Site (between the Rios house and the Volkswagen) from the northwest before excavation.

the site was put under cultivation for a season or more but without success. In an attempt to increase the fertility of the plot a 2-meter strip was subjected to deep, chisel-plowing before the operation was halted by the owner, Mr. Manuel Chavez of Socorro, who holds the central portion of the site. The north portion is owned by Mr. Antonio E. Rios and Mrs. Eva Rios Torres of Bellflower, California, and El Paso, Texas, respectively. These plots of land may be described as the east panhandle of Lot 30A and the south half of Lot 31 respectively, Block 18, Socorro survey, El Paso County, Texas. The south portion of the site is owned by Mr. Juan Lara of Chandler, Arizona, and is described as the north boundary of the east half of Lot 32, Block 15, Socorro survey, El Paso County, Texas.

During the fall of 1981, a class at the University of Texas at El Paso studying the "Archeology of Missions, Presidios, and Haciendas" examined the site following up on a report by Schuetz (1980) of evidence that a pre-1829 mission had existed there. Surface collections and a limited subsurface study produced early eighteenth century glazed Spanish potsherds, fragments of human bones, and evidence of massive adobe walls. It was concluded that there was sufficient evidence to justify the assumption that a mission might have existed at the site. As a result of this preliminary investigation a more detailed study was carried out during the summers of 1982 and 1983 by students in an archeological field school from U.T. El Paso. The results of these studies are reported below.

INVESTIGATIVE TECHNIQUES AND GOALS

The initial goals of this study were to determine if a pre-1829 structure existed at the site and to determine the function it may have served. The possibilities considered were that it was (1) a domestic structure, (2) an hacienda, (3) a presidio, and (4) a mission. Each of these possibilities will be evaluated in the final section of this report.

Current goals, listed from the more to the less specific, are as follows: (1) to determine the plan of the structure; (2) to recover any remaining artifacts; (3) to identify the function of the various rooms; (4) to reconstruct the adaptive system as fully as possible; (5) to reconstruct environmental conditions during the periods of construction and occupation; (6) to reconstruct the adaptive strategies employed by the occupants of the site.

Surface Collection

A surface collection was made for the purposes of removing the relatively large volume of trash dumped on the site within the last decade or so and of recovering pre-1829 artifacts. As a result of this effort a few colonial period and many recent objects and fragments were observed.

In order to control the loci of the artifacts the surface was staked with a 10-meter rectilinear grid which covered an area 20 meters x 40 meters in size with the long axis running east and west. The grid was oriented to true north and a baseline was established along the south edge of the site with a metal stake at the southwest corner that was designated 100N, 100E, and another at the southeast corner designated 100N, 140E. Each of these 10 meter by 10 meter squares was divided into temporary 1 meter x 1 meter squares for further spatial control during the period of collecting. Grid squares were named for their southwest corners.

Mechanized Trenching

Subsurface exploration was initiated with four trenches dug by a 6 inch (15 cm) trencher (Figure 3). This machine dug a narrow trench to a depth of 60 to 70 cm and deposited the earth from the excavation on the side of the trench and within ca. 1 meter ahead of the locus from which it was removed. Most of this fill earth was sifted through a screen of 1/4-inch mesh (Figure 4). The first four trenches were dug in the fall of 1981 to learn if there were sufficient depth of deposit to preserve structures and artifacts, if artifacts of the eighteenth century existed below the surface, and if there were human burials. Trench 1 ran the full length of the grid from east to west approximately 1.5 meters north of the 100N baseline. Trench 2 ran from south to north about 1.5 meters east of the 100E grid line. It extended from 100N to 110N. Trench 3 ran the full length of the grid from west to east about 0.5 meter south of the 110N grid line. Trench 4 ran from north to south 1.5 to 2 meters east of the 140E line.



Figure 3. Monsignor Thomas Rowland digging Trench 3 with the 6" trencher.



Figure 4. Students screening earth from Trench 3.

Two additional trenches were dug with the trencher for the purposes of determining the north-south dimensions of rooms and the approximate extension of the structure to the north. Trench 16 was dug in two segments down the middle of the large Room 3 which is tentatively identified as the church nave. The southern 7 meters were dug from south to north from 109.6N, 120.4E to 116.3N, 118.7E and the northern 33 meters were dug from north to south from 149.2N, 110.7E to 116.3N, 118.7E. Trench 17 ran from south to north through Room 2. It began at 110N and extended for 4.3 meters to the north. These trenches provided information from which to estimate the extent of the mission-convent complex.

Hand Excavation

Trench numbers 5 through 15 were assigned as a matter of convenience in record-keeping to segments of the site that were dug by hand. The goals of this excavation were to learn the state of preservation of the structure and its plan and if additional artifacts and evidence of human interments existed in the subsurface deposits. This work was carried out utilizing standard archeological techniques with pick, shovel, trowel, and whisk broom (Figure 5).

Archival Search

A search of primary and secondary historic resources was initiated in the fall of 1981 for the purpose of learning more of the history of the Socorro mission establishment. Students searched the catalog files in the Special Collections Department of the Library at The University of Texas at El Paso. Microfilm copies of a number of regional document collections are available as are many secondary sources.

Oral History

A number of the older members of families that have been long residents in the Socorro area were interviewed in order to learn local traditions relative to the study site. Specific attention was directed to recollections of the mission itself and the ruin, of later dwellings on the site, and of farming, earth borrowing, and other activities that would have altered the archeological remains.

As a result of the applications of these various techniques it is concluded that the structure examined at this site is probably a mission-convent complex and is most likely the Socorro Mission that is reported to have been abandoned in 1829 as a result of flood damage.

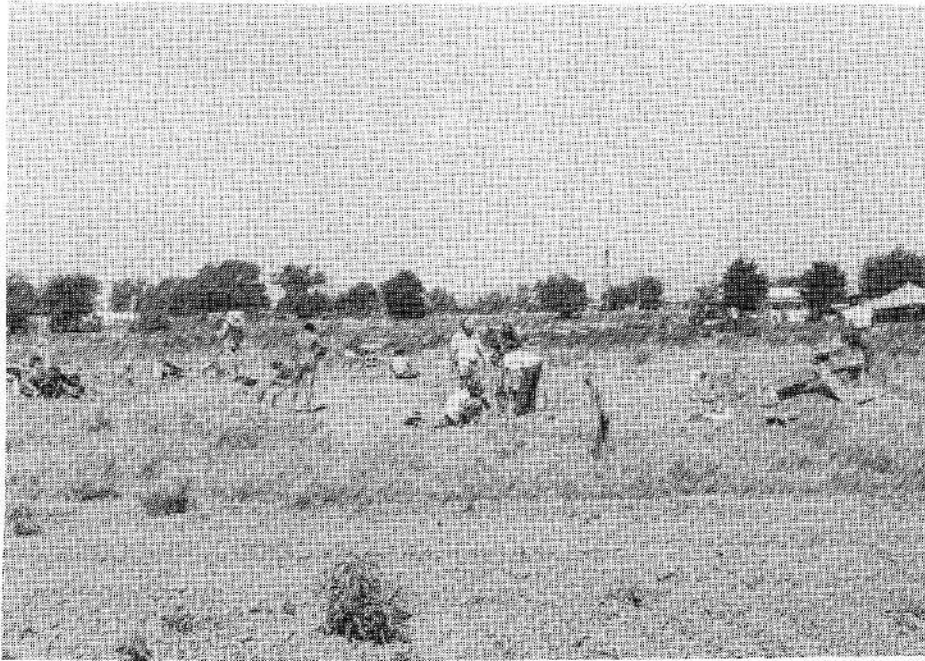


Figure 5. View from the east, of field school students working along the south facade wall.

ARCHEOLOGICAL MANIFESTATIONS

The archeological investigations at the Old Socorro Mission Site produced a number of architectural and artifactual remains which are described in the following pages.

Structural Remains

The excavation at the Old Socorro Mission Site uncovered the south ends of four rooms with thick adobe walls (Figure 6), the east-facing nave of the church (Room 5), and a mass of whole and broken adobe bricks set in mortar which may have formed the base for a bell tower or a stairway to the choir loft at the juncture of Rooms 3, 4, and 5. In the corner formed by the junction of the bell tower and the west side of Room 3 is Room 4 which may have served as the baptistry. The 2-meter thick south wall of Room 3 extends to the east where it forms the south walls of Rooms 1 and 2. Because of their smaller size and location these are assumed to have served as the office-dwelling space of the priest. Test trenches (16 and 17) in Rooms 2 and 3 exposed north walls which, in the case of Room 3, suggest a maximum north-south dimension of the complex of about 25 meters. The maximum east-west dimension appears to be 26 meters.

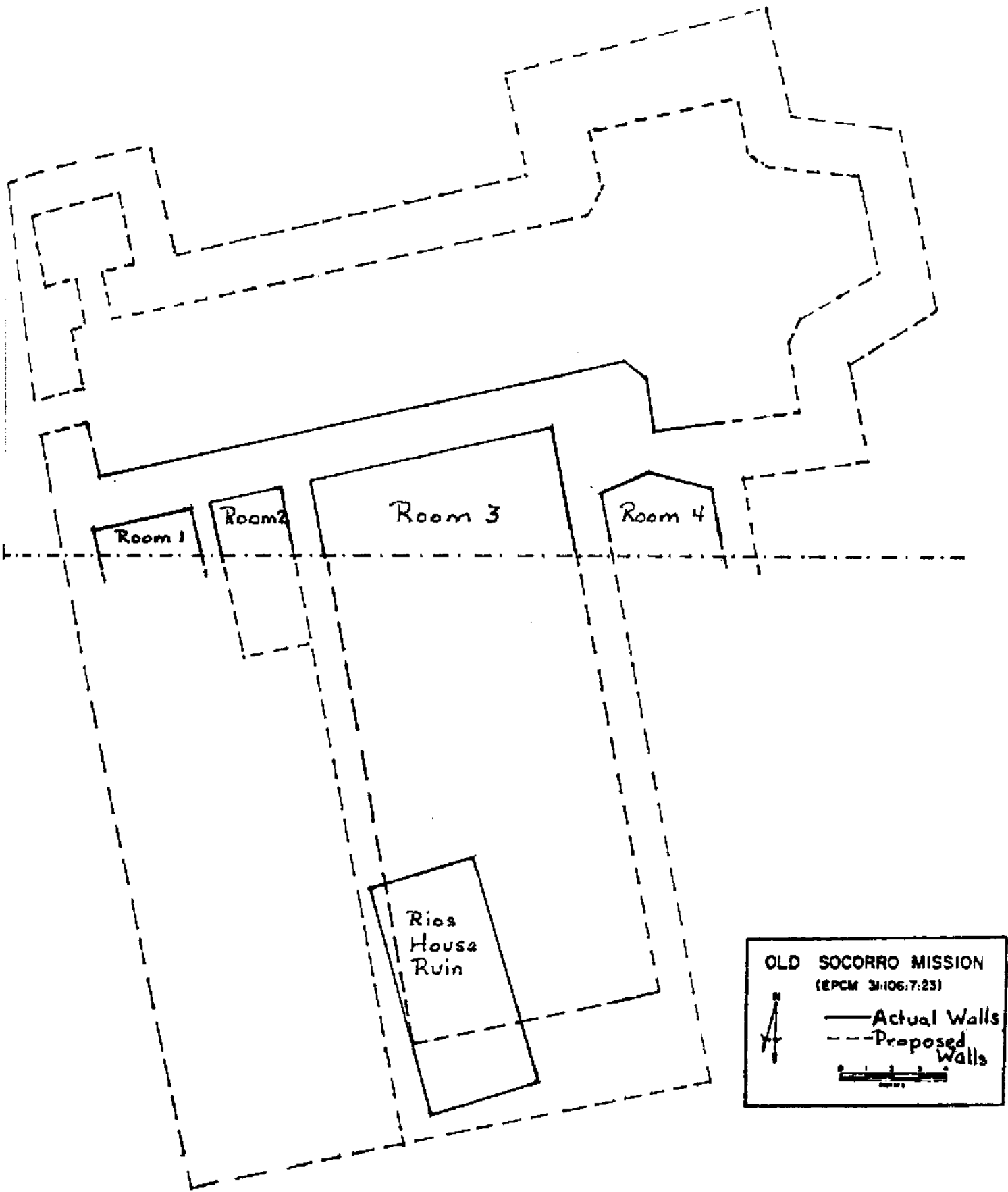


Figure 6. Site map of Old Socorro Mission.

Room 1

Room 1, an assumed convent room, is located at the east end of the south facade. It is in an area that has been utilized as a borrow area and as a consequence the adobe bricks that form the walls have been removed almost to the base. Only the southern 1.5 meters of the room has been excavated. No artifacts were encountered on the irregular level that may be the floor some 25 cm below the surface. The room is 3.75 meters wide, east-west, and almost 6 meters long, north-south. Walls are poorly preserved but are visible in cross-section in Trench 3 between 15 cm and 50 cm below the surface although bricks are not discernible in the upper few centimeters. The 15 to 30 cm immediately below the surface is disturbed over much of the area as a result of plowing and pitting.

The south wall of Room 1, which forms a portion of the facade of the complex, is 1.9 meters in thickness and is made up of four rows of adobe brick laid lengthwise of the wall in the tier exposed. The bricks of the southernmost row are about 40 cm x 62 cm in size and are of a dark brown adobe while the sharply contrasting mortar is tan in color. Neither these bricks nor any of the others at this site exhibited casts or remains of straw or similar organic inclusions. The adobe bricks that form the north row are of a lighter brown and the mortar is tan. Some of these bricks are 32 to 35 cm in dimension but because of the shallowness of the sod, the extent of the disturbance, and the hardness of the clayey soil it was decided not to remove more of the fragmentary bricks in search of clearer definitions at this time. Some of the bricks in the middle two rows appear to have been broken at the time they were laid. This entire wall appears to have been built as a unit throughout its 22-meter length from Room 1 to the tower at the southwest corner of Room 3.

The east wall of Room 1 is 1.4 meters thick and is also badly disturbed, but it is clearly visible in the cross-section where it is intersected by Trench 3. A fallen section of this wall is also recognizable in the cross-section where six bricks are seen. The outer surface (the east face) of this fallen wall segment was white-washed. The juncture of the east and south walls has not been investigated for evidence of bonding or abutment because to do so would have destroyed much or all of the remaining adobe bricks in this area.

At the north end of the west wall, there is a 60-cm wide doorway leading to Room 2. The north wall is continuous with that of Room 2.

The west wall of Room 1 is 75 cm in thickness and is visible in the Trench 3 cross-section from 15 to 55 cm below the surface. It has been disturbed by plowing and pitting as has the balance of Room 1.

Room 2

Room 2 is located west of Room 1 and east of Room 3. It is 2.75 meters wide, east-west, and 5.9 meters long, north-south. The latter dimension was obtained from the cross-section of Trench 17 where the wall is

clearly visible below the plow zone from 25 to 40 cm below the surface. The east and south walls are as described under Room 1 and the west wall will be described under Room 3.

The north wall is pierced at the northwest corner by a 70-cm wide doorway that leads to a hallway of the same width. The floor of use-packed earth was found 30 cm below the surface. Several sherds of brownware were found in floor contact.

Room 3

Room 3 is the large room that is third from the east end of the complex and was initially assumed to be the nave of the church but may be an unroofed area that is the convent patio or garden. In interior dimensions it is 9.3 meters wide at the south end and extends at least 21.5 meters to the north where the cross-section visible in Trench 17 exposes a 4-meter long stretch of adobe bricks some of which have fallen.

Only a small portion of this room was excavated along the southern 3 to 5 meters of the east and west walls and a 3-meter strip in the center of the south wall. Walls were well preserved in all areas except at the southeast corner where borrowing has destroyed the upper tiers of brick and in a 2-meter wide zone that runs east-west across the site that has been subjected to chisel-plowing. The latter is located some 2.5 to 4.5 meters north of the south end of the room and extends to a depth of more than 15 cm below the present surface. A few fragments of unpainted, white, lime plaster were observed in the southwest corner area.

The east wall is 1.1 meters in thickness and in the tier exposed is composed of a row of bricks laid lengthwise of the wall on the east face and a row laid crosswise of the wall on the west face. The bricks are of a medium brown color and the mortar is tan. Accurate measurements of brick sizes were not obtained nor was it possible to determine the type of juncture with the south wall.

The south wall is as described in the Room 1 area, but the four rows of bricks are more clearly visible here although it is not yet possible to define modal sizes. Bricks of the south row are 38 cm x 50 cm in size in one area and 38 cm x 72 cm in size in another. Those of the second row are 42 cm in width but quite variable in length, ranging from 52 to 72 cm. The third row is also variable with widths ranging from 52 to 58 cm and lengths from 57 to 72 cm. It appears that the second and third rows are composed of broken brick rubble in the western half of this wall where the bricks are of tan adobe and mortar is dark brown. The fourth, northern, row of bricks are not clearly discernible in the eastern half of the south wall but are less than 28 cm thick.

In the western half of the south wall the bricks of the northern row are oriented north-south and are 38 cm x 80 cm in size. They are tan in color and the mortar is dark brown. A few fragments of white plaster were observed near the southwest corner, but none were found adhering to

the wall. One brick in the south wall had white plaster on a vertical surface but that surface was inside the wall and the brick may, therefore, have been reused. Near the west end of this wall is a 28-cm wide ditch that appears to have been about 20 cm deep was uncovered. Stratified silt and dried and cracked mud covered the bottom.

This wall is contiguous on the west with the massed adobe structure tentatively named the Bell Tower. The south face of the wall, the facade, was plastered with a white, lime plaster that was decorated with black, red, and yellow paint. The design, which was preserved on pieces up to 20 cm in maximum dimension, was incised, the incisions painted black, and the areas thus delimited filled with yellow and red or left white.

The south 4.5 meters of the west wall of Room 3 forms a part of the Bell Tower. North of that it is 1.25 meters wide and is constructed of two rows of adobe bricks. In the tier of bricks exposed the eastern row is oriented at right angles to the length of the wall and the western row is oriented parallel to the length of the wall. The eastern row is of medium dark adobe set in tan mortar and the western row is of tan adobe set in tan mortar. The size of the bricks is obscured by east-west trending plow marks that cut through but did not completely destroy the bricks.

Evidence of floor was sought along the east, south, and west walls at the south end of Room 3 without success. It appears from the cross-section exposed in Trench 3 that the floor should be found 45 to 50 cm below the surface, but it is also clear that the floor is not especially prepared or level. Exposure of a larger area and the discovery of artifacts will probably permit the definition of an occupation level in Room 3 even if no evidence of a prepared floor is found.

Few artifacts were recovered from below the plow zone in this room. A large sherd of Tewa Polychrome (Figure 7), a small one of Puebla Blue-on-white, the handle of a copper teaspoon, and a fragment of eggshell and one of bone were found inside Room 3 near the south wall. Immediately south of the south wall of this room a worn third molar and two fragments of human bone were found as were a left first metatarsal and the transverse and spinous processes of a cervicle vertebra.

Room 4

Room 4 is located near the southwest corner of Room 3 and north of the tower. It is pentagonal in plan, is 4.1 meters in an east-west direction, and 6.6 meters long north-south. It is in a location where it could have served as a baptistry but no evidence supporting that function has yet been recovered. The east wall, which is shared with Room 3, has been described. The south side of the room is bounded by two wall segments that meet near the center of the side to form an angle of 145 degrees. Because of the chisel-plow disturbance only some 6 cm of wall stands above floor level.

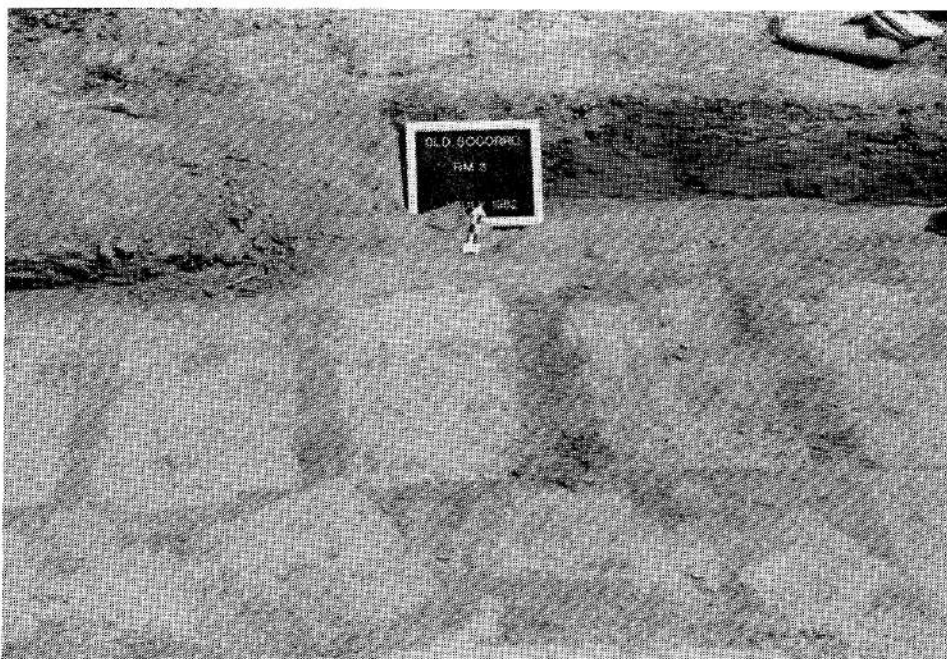


Figure 7. Tewa Polychrome sherd (to the left of the 25 cm north-south arrow) and adobe brick and rubble in the south wall of Room 3.

The southeast wall segment is 2 meters long and is composed of one or more rows of bricks. The full width of this wall segment is not discernible because it is overlaid by tiers of brick that form the northern edge of the tower. The bricks of the northernmost row are laid at right angles to the length of the wall, are some 34 cm x 57 cm in size, and of medium brown color while the mortar is tan in color.

The southwest wall segment is 2.4 meters in length and is composed of at least three rows of adobe bricks of which both outer rows are laid at right angles to the length of the wall and the inner row is laid parallel to the run of the wall. The individual bricks range in width from 36 to 41 cm and are about 68 cm in length. The bricks in the inner row are all tan in color but the mortar is of two distinct colors: tan in the eastern half of the wall segment and medium brown in the western half. The full width of the southwest wall segment appears to be about 1.8 meters. The southwest edge is not clearly visible at the depth to which excavation was carried. The bricks, set in medium brown mortar at the west end of this wall segment, are broken and fragmentary.

Two pieces of lime plaster were uncovered on the floor of this room and near the south wall segments. One piece of plaster near the junction of the southeast and southwest walls bore two layers of white plaster, the earlier of which had been painted a blue-gray color.

The west side of Room 4 was not exposed completely but its width as judged from the Trench 3 cross-section is 1.15 meters. One fragment of

white, lime plaster was found near this wall. The north wall is 1.25 meters wide and is pierced at the east end by a doorway that is 1 meter wide. The floor of this room was partially leveled but apparently otherwise unprepared.

The excavation produced artifacts at a level 30 cm below the surface, but a distinctly marked floor level was not discernible at that depth in the Trench 3 cross-section. With the excavation of the northern portion of this room it may be possible to identify the floor more securely.

Several artifacts were recovered from the floor and doorway of Room 4. These were a locally made brownware candlestick, a disk of copper, a bovine horn-core, and a sherd of Puebla Polychrome on the floor and the semispherical base of a brownware candlestick and a brownware soup plate in the doorway.

Room 5

Room 4, the presumed nave of the church is a long east-west trending room, 5.7 meters wide, and bounded on the north and south sides by walls that are almost 2 meters thick. The east wall is suggested by a single adobe brick, all that remains around a large borrow pit, and the west wall is more than 20 meters away in an unexplored area. There is a suggestion that both the north and the south walls turn out abruptly 20 meters west of the east end where the transept should begin. The north wall was exposed by the 1982 field school and the south wall was located in 1983 in the east-west trending modern irrigation ditch where it has been partially cut away. A wall forms a right angle corner on the south side of the south wall at a point approximately 6.5 meters from the east end. If a room is discovered at this location it may have been served as a baptistry.

Painted plaster was found in several locations near the walls of Room 5. Designs in black, red, and yellow on a white base were found on the north wall, and there is evidence to suggest similar designs on the south wall although little excavation has been carried out there. The designs, which are preserved on pieces up to 20 cm in maximum dimension, was incised into the white base plaster, the incisions were painted black, and the areas thus delimited filled with yellow and red or left white.

Evidence of human burials was found in a 15-cm wide trench through the length of Room 5 and excavation revealed a number of burials of both children and adults. The mixed and disarticulated condition in which many of the bones were found suggests that the area served as a cemetery for a number of years.

The only artifacts recovered from Room 5 so far consists of a number of types of beads found in the burial excavation, one-third of a hemispherical brownware bowl, and a subspherical pestle-like stone tool. It is assumed that the beads were parts of rosaries placed with the deceased.

Bell Tower

The Bell Tower name is assigned to a room-sized mass of adobe brick set in mortar which is contiguous with the walls of Room 3 at its southwest corner and with the southeast segment of the south wall of Room 4. The southwest corner of the tower appears to have been truncated because, although there are several bricks in the corner area they are standing on edge, are separated from the balance of the structure by a crack, and extend ca. 23 cm south of the face of the balance of the south wall.

The tower consists of more than three tiers of tan adobe brick and brick fragments laid in medium to dark brown mortar over an area 3.65 meters wide, east-west, by 4.2 meters long, north-south, measured to the inner edges of the walls of the adjoining rooms (Figure 8). Complete or nearly complete bricks are rare away from the inner rows of bricks in the walls of each room and some of the brick fragments are not more than 15 cm in maximum dimensions.

It seems probable that this is an adobe-rubble-filled floor or base for an elevated structure such as a bell tower or a stairway giving access to the choir loft which is commonly found at the entry end of the nave of New Mexican mission churches of the Spanish colonial period (Kubler 1940).

Several fragments of white, lime plaster were encountered at the western edge of the tower; this would have been inside the transept, as the structure is presently visualized. Some of the plaster occurred in at least two layers, one of which was decorated with black, red, and yellow (Figure 9).

No artifacts were found among the mortar and bricks of the tower, but a few were encountered immediately to the west. One large piece and two sherds of a locally made brownware bowl were recorded near the wall in a silt deposit among fragments of fallen white plaster, charcoal, and ash. A child's mandible and a deciduous canine tooth were recovered a few meters southwest of the tower.

Artifacts

The vast majority of the excavation at the Old Socorro Mission Site during the summers of 1982 and 1983 was directed at the exposure of adobe walls. As a consequence, little time was spent in exploring within rooms and in areas adjacent to the building where deposits containing artifacts might be expected. Nonetheless, a sufficient number of premodern artifacts were recovered to shed light on the nature and time period of the occupation. Because of the plethora of modern artifacts, mainly bottle glass and ceramics, scattered over the surface, in the plow zone, and in the numerous shallow pits, little attention will be devoted to their description. None were noted that date to the late nineteenth or early twentieth centuries.

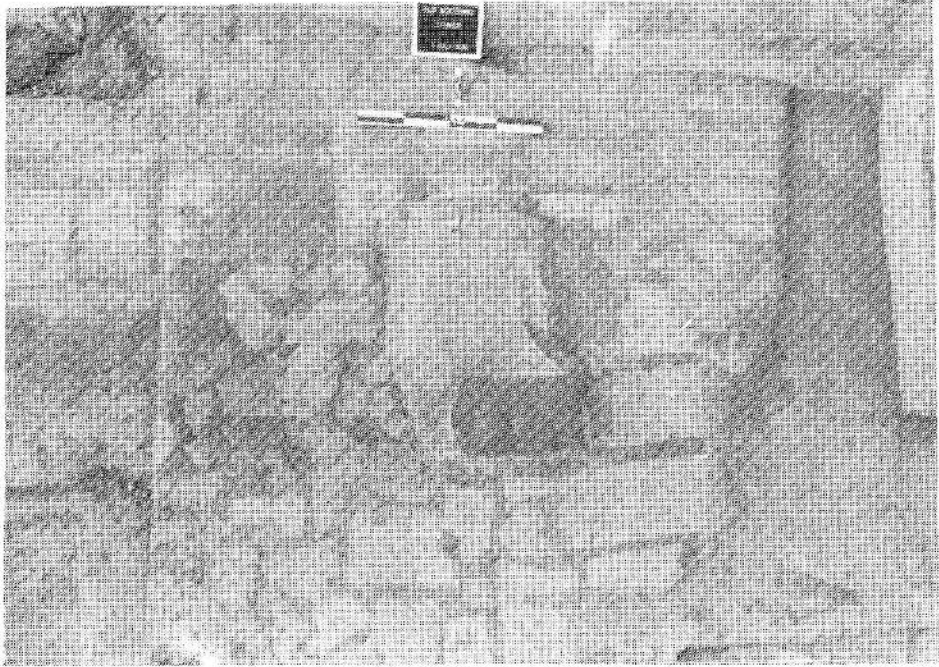


Figure 8. Adobe brick, rubble, and mortar in the Bell Tower base. The meter stick is at the south edge of the tower and the truncated corner and fallen brick are visible to the right of the meter stick and arrow. The south edge of the south wall of Room 3 appears in the upper center of the left edge of the picture.



Figure 9. Decorated plaster wall.

Ceramic

Ceramic artifacts recovered consisted of sherds of Majolica types and of locally made brownware and red-on-brownwares of the colonial period. A variety of modern types were found on and near the surface and at lower levels where they had been introduced by plowing and pitting activities. Brownware sherds were found widely scattered over the site and adjacent fields and in many subsurface deposits. The type is similar in many respects to indigenous brownwares found throughout the Southwest and northern Mexico and is assumed to have been made by the Indian-mestizo inhabitants of the site. One sherd with a design in red was also observed. The brownware type, and the red-on-brown variant, appear to be generally similar to brownwares reported from other late seventeenth through nineteenth century Spanish colonial sites (DIPeso et al. 1974:6:327-9; Gerald 1957:139-60, 1968:50, 54).

A hemispherical bowl, a soup plate, and a small jar form are identifiable from some of the larger brownware sherds at this site. In addition, a short candlestick of this pottery type was found on the floor of Room 4. It is 9 cm high, 5.9 cm in diameter, and has a hole for the candle that is 2.2 cm in diameter. The base, presumably a circular disk or section of a sphere, is broken away. One large sherd of a soup plate and a shoulder sherd of a jar of Tewa Polychrome, a late seventeenth-early eighteenth century pottery type attributed to the Pueblo Indians of north-central New Mexico (Hawley 1936:91; Snow, personal communication) were found in Rooms 3 and 5.

At least three variants of tin-lead glazed earthenware, generally identified as Majolica, were recovered from this site. Several sherds of Puebla Polychrome, which is thought by some to have been in use throughout the seventeenth century (Goggin 1968:173-182; Seifert 1975:242, 1977:174) and by others to have been used only between 1675 and 1725 (Snow, personal communication) were found on or in the immediate vicinity of the site. One San Augustin Blue-on-white sherd, which dates to the early eighteenth century (Goggin 1968:187-189), one sherd of Huajetzingo Blue-and-white which has been in use from the late seventeenth century until the present, and several sherds of Puebla Blue-on-white, which date to the eighteenth century (Goggin 1968:190-195; Seifert 1977:178) have been recovered (Figure 10). A few unidentified sherds of a green-on-white or yellowish-white glaze wares were found. The paste of several is red and the quality of the glaze is somewhat inferior to that commonly associated with earthenware of the Puebla variety and may have been made in Mexico City or elsewhere during the eighteenth century (Seifert 1977:181). Several white sherds of Majolica type were recovered. They are assumed to be undecorated fragments of one of the decorated types because no plain rim sherds, which indicate a named Majolica white ware, were found.

This is a small sample of Spanish colonial period sherds from which to draw firm conclusions, but it must be noted that the Majolica types recovered pertain to the seventeenth and eighteenth centuries exclusively and that none of them are characteristic of the nineteenth century. There are several late eighteenth and early nineteenth century types that

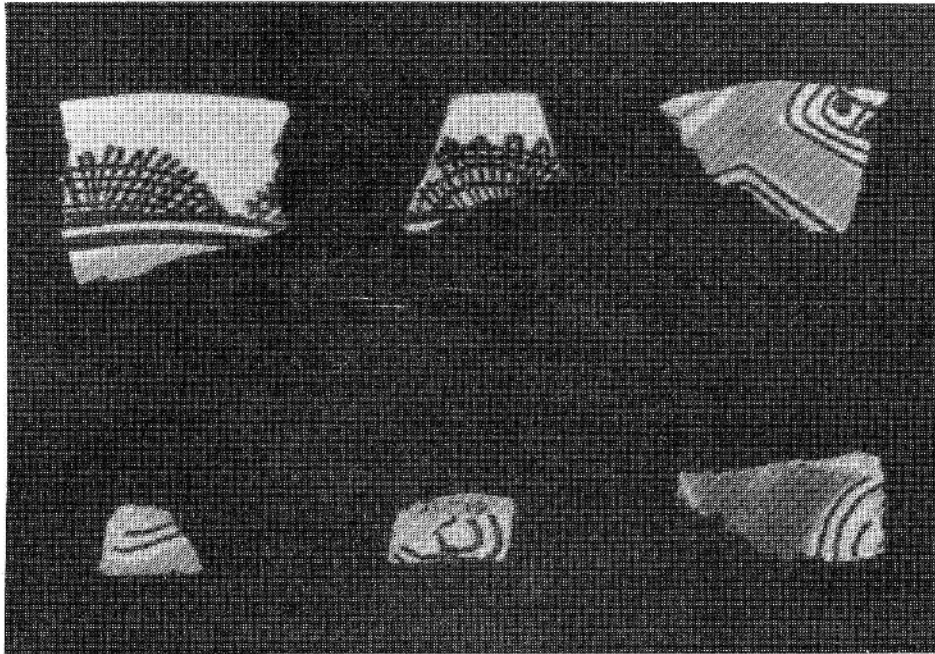


Figure 10. Blue-on-white pottery sherds.

should appear with further excavation, if this is the site abandoned in 1829. In this context it must be recalled that oral tradition suggests that a dwelling, the *casa de baile*, existed on the mound sometime in the early twentieth century or before but no artifactual evidence of an occupation of this time period has been recognized. It has been suggested that this dwelling and the associated occupational debris was removed when the mound was used as a borrow area and such may be the case regarding the expected Majolica types.

Metal

Metal objects of several types were recovered during the course of the excavation at the Old Socorro Mission Site. A small copper candlestick was found in the shallow soil over the south wall of Room 2. It is probably a cast piece although no mold seam marks are discernible. The original appears to have been lathe-turned. This specimen is 6.45 cm in height and 1.85 cm in maximum diameter. The stem is not broken but appears to have been set into a base of some type, perhaps a circular stand or a metal strip along with other candleholders of similar size. Relative to the latter it must be noted that similar objects were found at Mexican House (Gerald 1957:182) and at Mission San Jose where a somewhat larger object (length 7.8 cm) is identified by Schuetz (1970:29, Figure 3D) as an *aspergillum*. It is not clear how either of these objects could function as the handle or other part of such a sprinkler device. The Mexican House object was identified by Art Woodward as an eighteenth century candlestick.

The handle of a copper teaspoon was found in Room 3. It is 9.5 cm long and 1.5 cm wide. The spatulate terminal is rounded, smooth, and slightly raised at the tip, and the stem is generally rectangular in cross-section but is rounded slightly on the upper surface toward the terminal and thinned as it joined the bowl which is missing. There is no evidence of a rat-tail nor of a widening of the stem with the two ear-like projections where the stem joins the bowl as is reported for English spoons of the mid-eighteenth century and later (Hume 1969:183).

A flat rosette or roundel of thin (0.6 mm) sheet silver was found on the floor of Room 4. It has a convexly scalloped perimeter, is 2.2 cm in diameter, and has a round hole in the center that is 3 mm in diameter. It is apparently an ornament but bears no embossing or evidence of the manner in which it was utilized.

A final artifact that may be classified with the metals is a heavy rectangular braid that is 10.0 cm long, 1.2 cm wide, and 0.7 cm thick. It is made of 9 or 10 strands of copper wire each of which is twisted with a fiber cord and all of which are braided together. This presumed ornament was recovered at the juncture of the plow zone and the undisturbed lower deposits in Room 4. Pending further examination it is assumed to be of the Spanish period.

Iron occurred as a number of slightly to badly rusted objects and fragments, none of which were found below the disturbed area marked by the plow zone and pits, and none was identified as a premodern artifact.

Glass

Glass was encountered more frequently than any other class of material, but virtually all of it was of the modern period. Only one piece of black glass and two glass beads seem to pertain to the colonial period. The fragment of black glass was found in the disturbed area over the east wall of Room 1; the beads are all from the burial area of Room 5.

Two of the beads are octahedral, hand faceted, clear or translucent specimens with a heavily oxidized iridescent surface. A similar bead is identified by DiPeso et al. (1974) as a "padernoster" bead from a rosary and is dated to the late seventeenth and early eighteenth centuries. This type is said to have been made in Italy (DiPeso et al. 1974:8:228, type IB1)

The second type of glass bead is of the tubular type--in this case actually spherical--and translucent white in color. It is similar to "ave" bead type IIIA3, except for color, as described by DiPeso et al. (1974:8:228) from the Casas Grandes mission site.

The similar beads reported by DiPeso are of particular interest because they were excavated at the mission site of San Antonio de Casas Grandes which is located 130 miles to the southwest of Socorro. It was destroyed by the same Indian rebellion in 1684-4 that was responsible for the

removal of the Socorro pueblo and mission to the area of the Old Socorro Mission Site.

Stone

Stone artifacts are rare in the collection. One gunflint was recovered from Room 5 a few meters southwest of the tower. It is rectangular in shape, wedged in cross-section, and of a rosy chert with occasional streak of white. Its dimensions are 1.7 cm x 1.6 cm x 0.9 cm. The thin edge bears slight evidence of use. It has been observed that this color of chert was not encountered in the fine-grained survey of 991 square kilometers of the southern Tularosa Basin (David Carmichael, personal communications, 16 August 1982).

A second stone artifact was found in Room 5. It consists of a spheroidal ground stone pestle or pounder with smooth depressions on opposite sides that would have facilitated handling.

Animal Bone and Eggshell

A bovine horn core was found on the floor of Room 4. It was poorly preserved but appeared to be 4 cm in diameter at the base and 14 cm long around the outside of the curve.

Several distal limb bones of a dog were disinterred from a pit dug into the south wall of Room 3. Subsequent to the removal of the bones, it was learned that a pet Collie had been buried there a few years ago. The major portion of the skeleton was not found and is assumed to have been removed by plow action or by scavengers.

Several fragments of animal bones were encountered, many of which were burned or bore saw cuts. Most of these can be assigned to surface and plow zone deposits where the burned modern trash was located. Some of the remaining fragments are probably of the colonial period, but none of these recovered have been examined by a zoologist for the purpose of determining species and body part.

Fragments of eggshell were found in the excavation at the south end of Room 3 and in a colonial period trash deposit at the northwest corner of Room 4. They compare favorably with the "probable turkey" eggshells identified by McKusick (1974) from San Antonio de Casas Grandes.

Human Bones

During the summer of 1982, several fragments of human bone were recovered during the course of the study at the Old Socorro Mission Site. One fragment of bone that may be human was found during the screening of the dirt from the mechanically dug Trench 3. It came from near the center of the southern part of Room 3. The spinous and transverse processes of a

cervicle vertebra of an adult, a worn third molar, and a first metatarsal were found immediately south of the thick south wall of Room 3. Another fragment of bone that is probably human was found in the plowed field about 15 meters south of Room 3. The left half of a mandible of an 8- to 10-year-old child and a separate deciduous canine tooth were found 6 to 10 meters southwest of the tower. This suggests that burials may have been interred inside the church and that a cemetery or "*campo santo*" may have existed south of the complex.

During the summer of 1983, one intact and two other probably complete burials were discovered in the presumed transept area of Room 5. All three bodies were laid out parallel to the length of the room with their feet to the west where the altar is assumed to have been located. Numerous disarticulated infant and adult bones were encountered in the soil above the intact burial which suggests that the area was used for burials over a lengthy period of time with earlier burials disturbed by the excavations for later ones. One probable glass button and a number of beads were recovered. No other evidence of clothing or other burial furnishings was encountered. There were no indications of caskets.

WRITTEN AND ORAL DATA

Archeological resources are enhanced greatly when they can be supplemented by written, oral, and other types of information describing the intangible or less tangible activities and conditions that affect the archeological remains at a site. Those types of data are discussed here.

Documentary Sources

Sources of information on the history of Socorro and the general El Paso del Norte area, which are voluminous locally and elsewhere, have received little attention until recently. As a consequence the history of the churches of Socorro is poorly known. The current archeological study has kindled interests in a number of students who it is hoped will continue to pursue the history of all of the colonial sites in the area.

The original site of Socorro was at the Piro Indian pueblo and mission of that name in the vicinity of the present town of Socorro, New Mexico. It is mentioned by Father Benavides as a recently founded mission in 1629 (Benavides 1916). The population was transferred to the El Paso del Norte area at the time of the pueblo revolt in 1680 (Hackett and Shelby 1942). There is evidence that in February of 1682 the population settled on the Texas side of the Rio Grande some 32 miles below Nuestra Señora de Guadalupe, the latter of which is now located in downtown Ciudad Juarez (Bandeller n.d.; Burrus 1980:7). The Piro apparently believed that they could cultivate a meadow across the river from the Spanish capital-in-exile of New Mexico, San Lorenzo de la Toma; a few individuals were buried there and the construction of a church may have been initiated (Chavez 1957:8).

Revolts and threatened revolts presented such hazards to the settled populations of Indians and Spaniards that Governor Jirona de Cruzate consolidated the settlements closer to the Pass, and the Socorro Piro were moved to the area presently occupied by that community before 6 July 1684 (Hughes 1914:366). A mission church and convent had already been built under the direction of Father Antonio Guerra by 20 May 1692 when Governor de Vargas formally transferred possession of that structure and its supporting farmland to Father Joachin de Hinojosa, president of the Custodia of New Mexico (Walz 1951:301-4 [Walz's date of 29 May is incorrect]). The formal act transferring possession to Father Hinojosa provides much information about the plan of the church and convent at Socorro that is useful to the archeologist. There was a patio in front of the front door of the church, steps led from the nave floor to the main altar, and there was the standard separate, vesting room or sacristy near the sanctuary. Apparently, the baptismal font was visible from the nave, presumably from near the main entrance. The convent, which was entered from the patio in front of the church, contained cells for the priests, offices, and another patio (Vargas 1692). This description contains enough information to permit a comparison with the structure at the Old Socorro Mission Site once the plan of that building is complete but at present too few of the details are known.

Unfortunately, the exact location of this structure is not discernible from the documents although there seems no reason to doubt that it was in the general vicinity of the Old Socorro Mission Site because in the same year Governor de Vargas sought out Father Guerra for assistance in settling a dispute over the boundary between the pueblos of Socorro and Ysleta which are still adjacent communities. The church which had a bell and an ornament was being rebuilt in 1706 according to the inspection report of Father Juan Alvarez (Hackett 1937:377). Father Juan Miguel Menchero visited Socorro on 10 May 1744 and produced a map some two years later dedicated to Viceroy Juan Francisco Guemesy Horcasitas which portrays the missions of Socorro, Ysleta, and Senecu in the same positions relative to one another in which they are seen today. Unfortunately, neither his description nor his map provides information on the structural components of the mission (Burrus 1980:13-14; Hackett 1937:407).

Bishop Tamaron y Romeral visited the missions in the Paso del Norte area in 1760 and provided a brief description of the Socorro church that included its dimensions. It was 36 varas long, 7 varas wide, and 9 varas high; the transept was 14 varas across and the sacristy was 6 varas square. A priest was in residence and the bishop and his party spent the night there (Tamaron y Romeral 1760; Adams 1954:39 [this latter source is incomplete]). The vara as measured in Mexico is given by Haggard (1941: 84) as 838 mm which converts the above dimensions of the church to a length of 30.17 meters, a width of 5.87 meters, and a height of 7.54 meters; the transept width was 11.73 meters and the sacristy was 5.03 meters on a side. It is assumed that these are interior measurements because an outside width measurement of 5.87 meters for the nave would permit an interior width of 4 meters or less which would be extremely narrow for a structure of this size. The presumed nave (Room 5) of the

Old Socorro Mission Site is 5.7 meters wide and more than 22 meters long. The west end of the structure has not been explored completely, but there is a suggestion that a transept may exist there. A wall has been discovered outside the southeast corner of Room 5 which is in a position often occupied by a baptistry. No excavation has been carried out at the west, altar, end of Room 5 where the sacristy should be located.

A document dated 20 June 1795 records that there was a new church at Socorro, which was made of adobe and had three altars. No transept is mentioned specifically and dimensions are not given. Among the furnishings are listed four small candlesticks, three small bells on the three altars, and two medium-sized bells in the tower, all of copper or other metal. The convent is in a poor state of repair--"*mui arruinado*" (Bravo 1795).

It is assumed, in accord with local tradition, that this is the building that collapsed during the flood of 1829 and whose roof-support beams and furnishings were salvaged for use in the present structure which was dedicated on 1 August 1843. The nave proper of the modern Socorro church, excluding the added transepts and sanctuary extension which was added in 1876, is 20 feet wide and about 94 feet long or 6.1 meters x 28.6 meters (Schuetz 1980:15). The interior dimensions of Room 5 of the Old Socorro Mission Site are 5.7 meters by over 22 meters, it will be recalled. There were, until January 1984, two pine beams and one of cottonwood in the sanctuary of the present church that are similar to the other beams that are reputed to have been salvaged from the previous church. An additional similar but badly weathered square beam of cottonwood rests on blocks in front of the modern church. This suggests that the pre-1829 church was longer than the nave of the present church before the transept and sanctuary were added.

This brief survey of the documentary sources bearing usable descriptions of Mission Socorro suggests that there were at least two church-convent complexes in the vicinity of the present community of Socorro and possibly as many as three. Further study in the archives and more archaeological work will be required to eliminate some of these possibilities.

Oral History

Interview data have provided useful information relating to the location and destruction of the structure that is the focus of this report, and it has furnished data on the post-1829 occupation of the site. Most of this has been summarized in the Introduction and is covered in detail in a master's thesis by Father Thomas Rowland (1984). Informants remember that the site was covered by a high mound of adobe in the early decades of this century and that there were sand dunes around the mound. The *casa de baile* was built on the mound and subsequently removed as was much of the mound and the sand dunes. The Rios House was built on the reduced mound in the early 1940s and stands as a ruin now. During the 40-year period the remaining mound was mined for adobe in the course of which two

brownware candlesticks were found that resembled the one recovered in Room 4. An attempt was made in recent decades to level and cultivate the site, but apparently the underlying adobe was responsible for a reduction in the crop yield and the effort was curtailed by the owner. In recent years domestic trash has been burned on the southeast one-quarter of the site. There are recollections by several individuals of human bones having been encountered in and around the site and of ghostly figures having been seen or heard by the occupants of the latest dwelling on the site.

Some of the information derived from oral histories has provided solutions to problems posed during the excavation of this site, and all of it has been useful in gaining a better perspective on the traditional history of the area. It is expected that further interviews will continue to provide valuable insight as work continues.

SUMMARY AND DISCUSSION

An archaeological site located in Socorro, Texas, and known as the Old Socorro Mission Site (E.P.C.M. 31:106:7:23) was investigated using anthropological techniques. The initial goals of the study were to learn if a pre-twentieth century structure had existed on the site and if so, what its function may have been. To accomplish these goals a variety of more specific goals were pursued.

Controlled surface collections were made for the purposes of removing the voluminous recent trash and of recovering any pre-1829 artifacts that might be encountered. These goals were only partially realized insofar as it was not possible to collect all modern material that was near enough to the surface to become exposed shortly after an area was passed over by the collector. The second goal was realized to the extent that a few colonial period artifacts were recovered from the surface.

Mechanical trenching was employed for the purposes of learning if structural remains were preserved below the surface, the age of any buried artifacts that might be recovered, and if human interments existed at the site. All of these goals were realized insofar as subsurface evidence of an adobe structure was found and artifacts of the eighteenth century and earlier were recovered as were fragments of human bone, presumably from burials.

Hand excavation provided the greatest amount of information and was carried out for the purposes of evaluating the state of preservation of the subsurface adobe structure and of determining its plan. Other goals were to recover more artifacts for use in dating the structure and to seek further evidence of human burials.

The architectural remains consisted of a very large, thick-walled room that is thought to have been the nave of a church, four smaller rooms and a larger walled enclosure on one side that are believed to have been the cells of the convent and the garth, and a transected mass of adobe that

may have been the base of a bell tower. The walls were found to be well-preserved generally, but the height of the surviving wall stubs was relatively low (ca. 60 cm). One area had been subjected to deep plowing which disturbed the remains of the wall stubs to a limited extent; however, this did not preclude the recovery of the plan of the building in those parts of the ruin that were excavated.

Most of the field time was devoted to the exposing of walls. Artifacts were infrequently encountered, but several of the Spanish colonial period were recovered. None of those found below the disturbed level appeared to be of the nineteenth century or later. Fourteen sherds of Puebla Polychrome (1675-1725) were found as were seventeen of Puebla Blue-on-white (eighteenth century), one sherd of San Augustin Blue-on-white, one of Huetlotzingo Blue-and-white, two sherds of Tewa Polychrome (seventeenth century) and a few other unidentified glazed sherds. Brownware of presumed local manufacture was the most common ceramic type, but it is not assignable to a specific time span within the Historic period. Hand-faceted "padernoster" beads (late seventeenth to early eighteenth century), spherical "ave" beads, beads of green bold platted thread, and clay beads, all possibly from a rosary, were found. Copper objects include a spoon handle (early eighteenth century), a small candlestick, and a tack. An ornamental disk of silver was also found. Other specimens recovered included a stone pestle-like tool. Three intact adult burials were encountered amidst evidence of numerous disturbed child and adult interments in the nave of the church.

The initial goals of the research were accomplished with little difficulty, and it has been generally assumed in the foregoing description and discussion that the structure found at the Old Socorro Mission Site is indeed the ruin of an eighteenth century mission. However, it may be one of three other types of function-specific structures known to have existed in the area and these possibilities must be examined and eliminated, if possible, on the basis of data presently available. Other function-specific types of structures that are known to have existed in the general area are domestic houses, haciendas, and presidios.

Before these possibilities can be evaluated meaningfully, it must be demonstrated that the ruin does pertain to the eighteenth century. This may be accomplished by noting that although relatively few artifacts were found none of those recovered from undisturbed deposits are datable to the nineteenth century or later and all of those from undisturbed deposits that have been dated pertain to earlier time periods. The limited size of the artifact sample must be taken into account but with that caveat in mind all evidence points to an occupation of the eighteenth century and earlier.

The possibility that this structure functioned as a domestic house can be ruled out even before the majority of the site has been excavated because the thickness of the walls and the size of Room 3 are far greater than those found in ordinary dwelling. Most of the artifacts would not be out of place individually in a domestic structure--the brownware sherds and the fragmentary jar and bowl, the Tewa Polychrome segment, the Puebla

Polychrome and Blue-on-white sherds, the gunflint, the brownware and the copper candlesticks, the silver disk ornament, the copper-and-cordage braid, the copper spoon handle, and the rosary beads--but in the aggregate they are noticeable because of the absence of larger quantities of sherds of utilitarian ceramics. Finally, the evidence of human burials within and in front of the edifice is not a characteristic of Spanish colonial domestic structures. Taken as a group the qualities observed at this site refute the argument that this is a domestic house.

Two haciendas are reported to have existed in the general area of Socorro during the eighteenth century but none are known earlier. The Haciendas of Tiburcios and of San Antonio are both shown (the latter as "*despoblada*" on the Miera y Pacheco map of the 1770s (Adams and Chavez 1954:268-9) and are often mentioned in contemporary documents. Neither seems to have encompassed more than ranching operations although the Hacienda de San Antonio is said to have had a stable that was converted to a chapel (Adams 1954:107-9). Nothing is known in detail of Tiburcios except that the priest at Socorro was given the responsibility of administering to the needs of the population there occasionally. If, as a minimum, it is assumed that both places carried out ranching operations and were occupied by social groups that were of family size at least, we can expect to find in the archeological record evidence of domestic structures and artifacts, of ranch animals and equipment, and perhaps some evidence of weapons and fortification. This area was at the southeast extremity of local Spanish settlements in the eighteenth century and, therefore, was exposed to raids by nomadic pagan and apostate sedentary Indians. A bovine horn core and a gunflint fit into the ranching and the weapons categories, but as noted above, there is no evidence of domestic structures and domestic artifacts are under-represented. Evidence of a corral or stable is missing, or is outside the area that has been investigated, and nothing exposed so far except the thickness of the walls and the possible tower could be construed as evidence of a fortification. The scanty data available do not indicate that the study site housed a ranching operation, and the datable artifacts do not fit a late eighteenth century occupation. It seems unlikely that this is the remains of an hacienda.

Two presidios are believed to have been located in the general area of the site under discussion. The building that was to become the Presidio de Nuestra Señora del Pilar y Glorioso San Jose may have been initiated in this area in 1683-4, but there is no evidence that the fortification was completed and occupied (Hughes 1914:364-6). The Presidio de San Elceario (now spelled San Elizario) was moved to the nearby site of the Hacienda de Tiburcios in 1789 and continued in that location until its abandonment in 1847 (Connelley 1907:384; Moorhead 1975:111). San Elizario, Texas, is located 5 miles south of the Old Socorro Mission Site. As noted above, neither the plan nor the artifacts of the study site support a function as a fortification, and the datable artifacts do not fit the late eighteenth century and early nineteenth century date of San Elizario. It is improbable that the structure exposed at this site is that of a presidio.

The final possibility to be considered is that the ruin exposed is that of a mission-convent complex. Structures of these types in Spanish colonial New Mexico ranged widely in size, number of room, and special features (Adams and Chavez 1956; Kessell 1980; Montgomery, Smith, and Brew 1949; Vivian and Van Valkenberg 1979). As something of a minimum of characteristics we may expect to find a large room with proportionately thick walls that served as a nave, a vesting room or sacristy near the sanctuary, and other rooms, possibly built around a small patio, that were used by the priest for his dwelling, office, and storage space. In addition, there was often a small room or alcove near the entrance of the church in which the baptismal ritual took place and burials were commonly placed inside the church itself as well as in the enclosed yard in front of and around the church. Artifacts associated with the Roman Catholic liturgy would be expected in the nave, sacristy, and baptistry, and might be found in associated structures. Artifacts appropriate for use by a bachelor priest or priests might be found in one part of the convent while artifacts associated with traditional female activities such as cooking, might be found in a segregated part of the convent where food preparation and cooking took place.

Those portions of the ruined building and the few artifacts exposed during the course of this study exhibit characteristics that make it impossible to rule out the possibility that this is the Socorro Mission site founded in the late seventeenth century. Much more field work must be carried out before it will be possible to evaluate more fully the functions these rooms may have served, but there are no data presently available with which to refute their functioning in a mission-convent complex.

In summary it may be stated that the initial goals of this research project were carried out successfully: the Old Socorro Mission Site is very likely the ruin of the mission-convent complex that was established in the late seventeenth century. Much more evidence must be compiled, however, before a definitive statement can be made relative to the details of the architectural plan of this site and to the full range in time of the occupation.

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