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Archeological Test Excavations in Areas to be Affected by a Proposed French Drain West of the Granary, Mission San Jose State Site (41BX3), Bexar County, Texas

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ARCHEOLOGICAL TEST EXCAVATIONS IN AREAS TO BE
AFFECTED BY A PROPOSED FRENCH DRAIN WEST OF
THE GRANARY, MISSION SAN JOSE STATE HISTORIC
SITE (41BX3), BEXAR COUNTY, TEXAS

by

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and

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REPORTS OF INVESTIGATIONS, NUMBER 3

Prewitt and Associates, Inc.
Consulting Archeologists
Austin, Texas

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Report submitted to Texas Parks and Wildlife Department, Austin, Texas, by Prewitt and Associates, Inc., in fulfillment of the terms of Contract Number 349-368 dated July 20, 1979. These investigations were conducted under the terms of Antiquities Permit Number 210 issued by the Texas Antiquities Committee, Austin, Texas, on July 25, 1979.

ABSTRACT

Limited archeological test excavations were conducted along the west wall of the granary at Mission San Jose State Historic Site (41BX3) in Bexar County, Texas, during July and August, 1979. The investigations were designed to provide information regarding the presence or absence of significant archeological materials in areas to be affected by the construction of a proposed French drain intended to relieve moisture-related structural problems along the west wall of the granary.

Six 0.5 by 1 meter test pits were excavated; 1,303 artifacts and 1,809 bone and shell fragments were recovered. Seven features were documented; these included a wall and a flagstone floor remnant, 4 pits and a lime-filled trench. The wall and floor may represent the remains of a Spanish Colonial blacksmith shop while the pits probably originated during the late 19th Century. The artifacts are primarily trash resulting from nearly 240 years of activity at the mission complex although some items may be relatable to the smithy.

Two alternatives for the proposed construction are suggested: 1) abandon plans for a French drain and develop an alternate non-disruptive method for relieving moisture problems; or, 2) continue plans for constructing a French drain but precede the modifications with an intensive program of archeological excavations in a broad area along the west wall of the granary.

ACKNOWLEDGEMENTS

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This report was typed by Anita R. Porterfield.

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INTRODUCTION

Archeological test excavations along the west wall of the granary at Mission San Jose y San Miguel de Aguayo were conducted from July 31 through August 3, 1979, by Prewitt and Associates, Inc. Funded through a contract with the Texas Parks and Wildlife Department, this work was designed to provide information relevant to the presence or absence of significant archeological remains in an area proposed for modification during installation of a French drain. Test excavations were governed by the terms of State of Texas Antiquities Permit No. 210 issued for the purpose of archeological testing and monitoring at Mission San Jose State Historic Site, Bexar County, Texas. Mission San Jose is recorded as site 41BX3 in the files of the Texas Archeological Research Laboratory, The University of Texas at Austin.

Installation of a French drain along the west wall of the granary was proposed as a measure to relieve serious damage to the original Spanish Colonial wall caused by "creeping damp" or moisture resulting from heavy runoff issuing from the canales (or gargolas) draining the vaulted roof (boveda). Plans for the French drain specify an apron 4 feet wide extending the length of the west wall of the granary; the apron is designed to channel runoff water into a trench 1.5 feet deep and lined with perforated PVC pipe. At the northwest corner of the granary, the trench and pipe will extend northwestward for a distance of approximately 77 feet; the final 37 feet of the drain consists of a 3-pipe dispersion field.

The Granary

Descriptions of Mission San Jose and discussions of

the history of the mission complex are contained in Clark (1979) and need not be repeated here. By 1740, the mission location was established at its present site on a high terrace on the right (west) bank of the San Antonio River; previous locations for the mission were on the east (left) bank of the San Antonio River (1720), and on a lower river terrace on the west bank of the river (1727). The present investigations are concerned with the granary which was initially constructed during the mid-18th Century. Apparently the granary was one of the first stone structures erected at this final location of the mission; in 1755 Marmolejo reported the interior of the granary was 30 varas by 7 varas in dimensions. See Clark (1979:37-38) for a detailed history of construction events associated with the granary.

Two ancilliary structures associated with the granary are of significance to the current investigations; the first is a carpenter's shop and the second is a blacksmith shop. The carpenter's shop is thought to have been on the east side of the granary, and foundation remnants of the appropriate dimensions noted during WPA excavations in the 1930s tend to support this hypothesis. The blacksmith shop was reported by Marmolejo (1755) to be 8 varas by 4 varas and covered by a thatched roof. Salas (1785) suggests the smithy was on the opposite side of the granary from the carpenter's shop. If indeed these observations are correct, then the smithy was located adjacent to the west wall of the granary and evidence of the shop should be expected in that area if undisturbed Spanish Colonial deposits remain intact.

During the latter part of the 19th Century and the early part of the 20th Century, observers noted that several families (some thought to be descendants of mission Indians) were living in the granary (Corner 1890:18;

Smith 1918:18). The roof of the granary had collapsed by 1931; the structure was restored by Harvey P. Smith, Sr., during 1932 and 1933.

Setting

Clark (1979:9-11) has provided a discussion of the natural environment and location of Mission San Jose; this information need not be repeated in detail. Briefly, the site is situated on the interior edge of the West Gulf Coastal Plain near the Balcones Escarpment in south-central Bexar County and within the southern edge of San Antonio. Blair (1950:98) indicates the area is on the boundary zone of the Tamaulipan and Balconian biotic provinces.

1979 TEST EXCAVATIONS

As previously noted, the purpose of the current excavations was to provide information on the presence or absence of significant archeological remains along the exterior of the west wall of the granary in areas to be affected by the proposed construction of a French drain. The investigations were intended to provide observations on the nature of any materials and features which exist within that area, and to suggest appropriate recommendations relative to the proposed subsurface modifications.

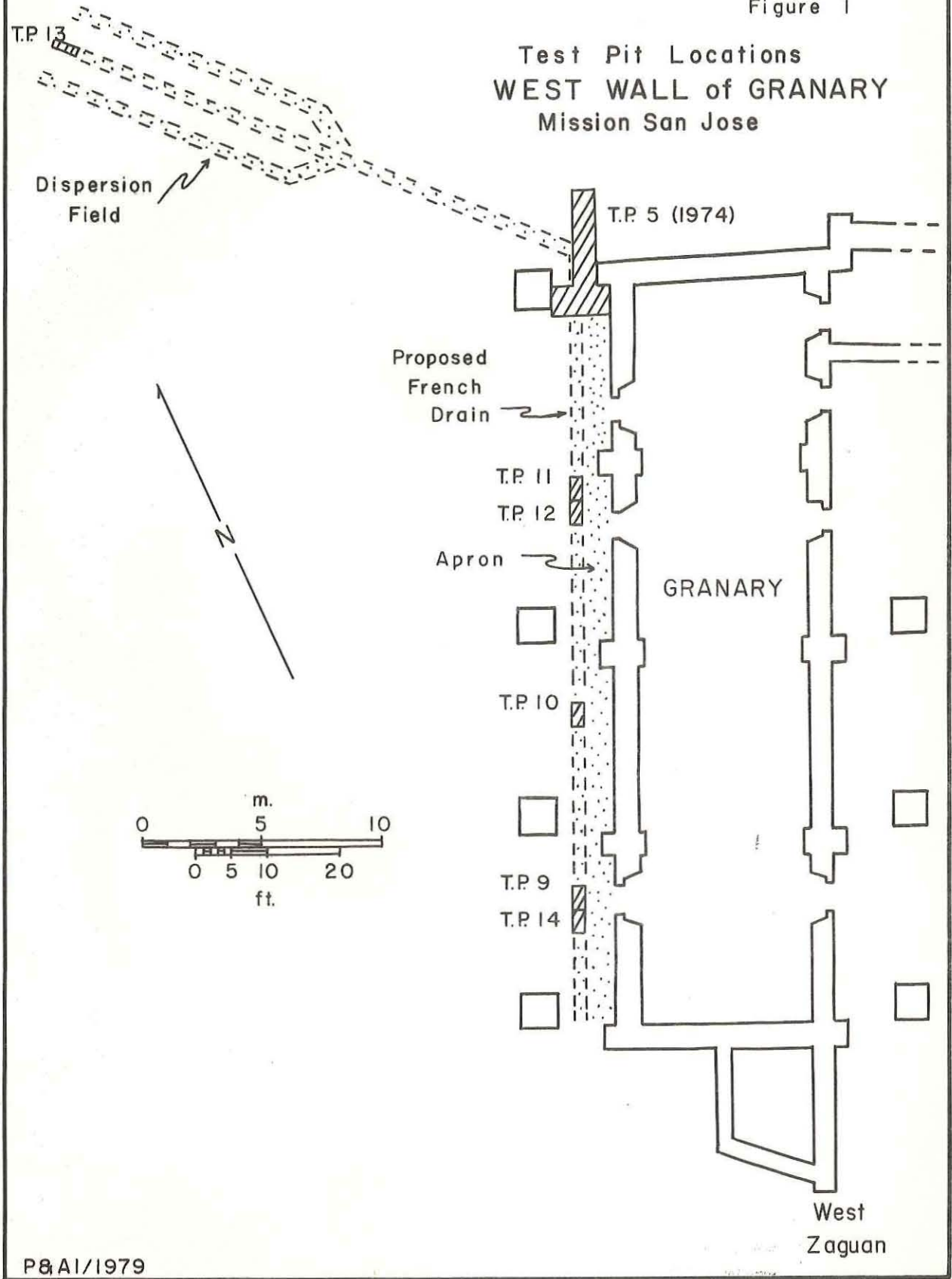
Testing Methods

Six test pits were excavated during the current investigations; five of these were placed 122 cm away from and parallel to the west wall of the granary while one was placed away from the northwest corner of the granary in a proposed dispersion field. Each of the test pits

Figure 1. Location of Test Pits along the west side
of the Granary.

Figure 1

Test Pit Locations WEST WALL of GRANARY Mission San Jose



was 0.5 by 1 meter in dimensions; those near the granary wall were oriented north-northeast/south-southwest, and the single unit in the dispersion field was oriented north-northwest/south-southeast to coincide with the proposed drain placement.

Excavation unit designations were assigned numerically and continued the system used during the 1974 excavations; the first pit excavated this season was labelled Test Pit 9 since numbers 1 through 8 were assigned during 1974. Succeeding numbers (through 14) were assigned as test pits were initiated. See Figure 1 for locations of the currently excavated units.

Vertical controls were maintained by excavation in 20 cm levels as measured from the existing ground surface at the southeast corner of each test pit. At the conclusion of the fieldwork, the elevation of these points were calculated in relation to an existing USGS benchmark near the granary. Variations in the 20 cm levels were made in some instances; these included the occurrence of wall and floor features and when the archeologically sterile Patrick clay was encountered.

Excavated fill was passed through 1/4 inch mesh hardware cloth to retrieve relevant artifacts and debris. Materials recovered were placed in paper bags labelled with appropriate provenience information to include project, site name and number, test pit number, level, date and excavators. The artifacts and debris were cleaned as appropriate; most were washed, but iron items were dry brushed.

Documentation of the excavations conforms to standard archeological procedures. Included are a daily journal, unit and level notes, measured floor plans and profile drawings, sack log, photographic logs, and both black and white and color photographs. Provenience data for the

materials recovered were maintained by the assignment of catalog lot numbers keyed to a specimen inventory. Lot numbers continue the sequence used for the 1974 excavations; however, one lot number (37) was omitted to provide a distinct separation between the two projects.

Testing Results

Over 3,000 items were recovered during the excavation of the test pits; included are over 1,700 animal bones and bone fragments and over 1,300 artifacts of various materials. In addition to the artifacts and debris, seven features of various ages were encountered during the excavations. Visual stratigraphic separations within the cultural deposits were limited to the features while excavations were in progress; however, examination of the test pit walls revealed soil changes which generally coincide with the vertical sorting of the artifacts and debris. These follow the presumed order of the historic use of the granary; that is, 18th Century Spanish Colonial materials immediately overlie the Patrick clay, then 19th Century and 20th Century materials overlie the Spanish Colonial deposits in succession to the modern ground surface.

Examination of the provenience data reveals what appears to be distinct patterning in the distribution of the Spanish Colonial and the 19th Century materials. In each case, the greatest concentration of debris is toward the south end of the granary nearest the west gate (zaguan) of the mission compound. This includes both the faunal materials as well as artifacts. The pattern for the Spanish Colonial materials is as was expected based on the observations made by Schuetz (1970:8-14) and Clark (1979:78-81) near the west gate. However, it was expected that the 19th Century materials might reveal a

fan pattern related more to the windows and door added to the structure during that century. This pattern did not emerge as expected; rather, the previous pattern is repeated. Two factors may explain this distribution; one is that the presence of sheds or other add-on structures may have altered the trash disposal habits, and the other is that if the persons sporadically utilizing the granary as living quarters were indeed descendants of the original mission Indians, then they retained the trash disposal patterns of their ancestors.

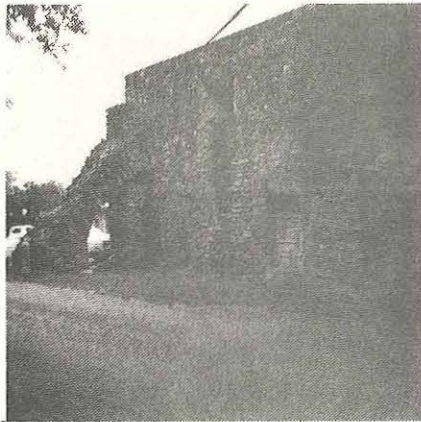
Contractual time limitations precluded any detailed analysis of the nearly 1,750 bones and bone fragments. It is suspected, however, that an analysis of the species present and the butchering techniques utilized will reinforce the suggestion of cultural continuity noted in the patterning of trash disposal. An important point regarding the pit features noted may be in order; it is felt that these features are late 19th Century in origin and they may represent a differing form of trash disposal. These pits may have been receptacles for non-durable organic trash and thus suggest a departure from previous habits. This may indicate a change in the ethnic affiliation of the occupants of the granary, or an alteration of the habits of a group of continuing inhabitants.

The wall and flagstone floor revealed in Test Pits 11 and 12 indicate the presence of a Spanish Colonial structure attached to the west side of the granary. The small segment of these two features exposed in the test pits precludes any projections of the dimensions of the apparent structure. It has been indicated that a blacksmith shop was apparently constructed adjacent to the west side of the granary during the Colonial occupation of the mission. The immediate conclusion is that the wall and floor are the remains of the postulated smithy;

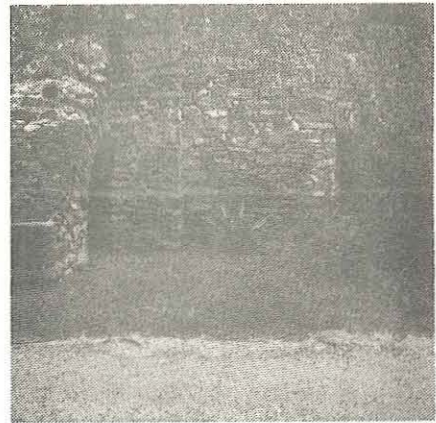
Figure 2. Views of the west wall of the Granary and the excavations.

- a. Looking northeast toward Test Pits 11 and 12 near north end of Granary.
- b. Looking east-southeast toward Test Pits 9 and 14 near south end of Granary.
- c. Wall segment exposed in Test Pit 11, looking south.
- d. Flagstone floor remnants exposed in Test Pit 12, looking north.

Figure 2



a



b



c



d

however, the associated artifacts do not lend weight to this interpretation. At the present time, it is felt that no functional conclusions should be drawn regarding this previously undocumented structure.

Test Pit 13 was placed away from the granary and revealed no evidence of either Spanish Colonial or 19th Century use of the site. Cultural deposits were shallow and relate to habitation of that area during the 20th Century.

The artifacts recovered from the excavations (excluding the faunal debris) are dominated by Goliad Plain ceramics as opposed to glass fragments which were more numerous in the 1974 excavations. Decorated ceramics form a distinct minority of the artifacts recovered on the west side of the granary, and there seems to be a general lack of other items which might signify relatively high economic status. It could be hypothesized that this reflects a low economic status for those persons who utilized the granary and its immediate environs as a habitation. This hypothesis may be tested by investigations at apparent high status sites such as the Spanish Governor's Palace (presidial Captain's house) and San Fernando Cathedral. At these latter sites, it may be expected that Mexican lead glaze and Majolica would form the dominant ceramic classes for the Spanish Colonial occupations.

An examination of the artifact frequencies reported by Fox (1977:39) for test excavations at the Spanish Governor's Palace and Fox, Scurlock and Clark (1977:31) at San Fernando Cathedral shows this to not be the case. Goliad Plain ceramics are distinctly dominant contrary to the above hypothesis. An alternative hypothesis is favored here; that is, the decorated wares were highly prized and curated while the Goliad ware (and probably the unglazed wheel thrown) ceramics were locally manufac-

tured. Consequently, these latter ceramics were relatively less expensive, more readily available, and therefore were probably more extensively employed as utilitarian wares.

SUMMARY AND RECOMMENDATIONS

Six small test pits were excavated along and near the exterior of the west wall of the granary at Mission San Jose State Historic Site. These 0.5 by 1 meter units were placed in areas proposed for disturbance during construction of a French drain designed to relieve moisture-related structural problems along the west wall of the granary. The purpose of the testing program was to determine if significant archeological remains relating to the construction and subsequent use of the granary were indeed present in the areas to be affected, to document the nature and integrity of any remains noted, and to render an opinion of whether the proposed French drain would adversely affect any such remains.

The test excavations yielded evidence that significant archeological remains do exist within the areas proposed for modifications. Rich deposits of stratified debris relatable to Spanish Colonial, 19th Century and 20th Century use of the site were documented in the test pits. Debris noted includes such items as bones and bone fragments (many exhibiting evidence of butchering); bone artifacts; freshwater mussel shell fragments; native-made ceramics; Spanish Colonial, 19th Century and 20th Century ceramics; metal artifacts of various types; recent plastic items; and lithic debris (including one gun flint). Apparent 19th Century trash pits were concentrated near the south end of the granary. These

materials and features are felt to be of significance due to their documentation of aspects of human behavior which are not necessarily contained within written documents chronicling the history of the mission complex.

Additional significant items documented through the testing includes a wall and flagstone floor near the north end of the granary. It is tempting to interpret these features as the remains of a Spanish Colonial blacksmith shop thought to have been located along the west wall of the granary. However, the associated artifactual debris does not necessarily support this hypothesis. Excavations were not extensive enough to provide the information with which the size of this apparent structure may be projected, nor are the data sufficient to allow functional interpretations of the structure. Certainly the presence of the wall and floor are significant in that they suggest previously uninvestigated facets of construction and use related to the granary.

An apparent utility trench noted in Test Pit 5 during the 1974 test excavations does not appear to extend along the wall of the granary as previously suspected. Instead, it appears the trench ends at or near the northernmost window on this side of the granary. A lime-filled trench noted in the same previous test pit appears to extend the length of the wall; this feature is interpreted as originating during the 1930s and probably represents excavations made while repointing the lower portions of the west wall of the granary.

Recommendations regarding the construction of the proposed French drain are presented as two alternatives as follows:

Alternative 1: Plans for the French drain should

be abandoned and alternate methods for relieving moisture problems along the west wall should be explored. Whatever method is chosen should be of such design that subsurface modifications extending to a depth greater than 10 cm below the existing ground surface are not necessary.

Alternative 2: Plans for the French drain should not be altered; however, extensive controlled archeological investigations should be conducted in a broad area extending the length of the west wall of the granary. These excavations should be directed toward a thorough investigation and analysis of the various ages of debris and features present as well as toward exploration and documentation of the size, nature and function of the apparent structure noted in the current test excavations.

Regardless of which alternative is selected, it is emphasized that any measures adopted to relieve the moisture problems at the granary must be designed to inflict the least amount of damage to extant archeological remains which are felt to be significant to the understanding of the historical development of the Mission San Jose complex. Further, it is felt that any future plans which may be developed for modifications or alterations of the existing landscape along the west side of the granary should be undertaken with the understanding that the two alternatives presented above must be considered prior to initiation of those plans.

EXCAVATED SOIL PROFILES

As in the 1974 excavations, two principal soil units are identifiable in the area west of the granary. These include deposits resulting from historic use of the site which overlie undisturbed Patrick clay. The descriptions

which follow will begin with the uppermost (and presumed later) depositions and will extend downward. Adjacent excavation units will be combined for these descriptions.

Test Pits 9 and 14

The surface zone in these two units is a friable light brown loam approximately 5 cm thick which contains 20th Century artifacts. This is underlain by a thin deposit of limey gravel which varies from 1 to 3 cm in thickness; it is probable that this thin layer relates to the repointing of the west wall during the 1930's restoration of the granary. A medium brown loam approximately 30 cm thick underlies the limey gravel. Artifacts are primarily 19th Century materials including ceramic and metal artifacts, animal bones, charcoal and sandstone rocks. Within this zone and about 23 cm below surface is a thin lens of ash which was encountered in the northeast corner of Test Pit 9. The lowest cultural zone consists of a dark brown friable clay loam approximately 25 cm thick; 18th Century midden debris is predominant in this layer. The culturally sterile upper surface of the undisturbed Patrick clay appears at the bottom of these two units; this very dark brown clay loam extends to an undetermined depth. Two of three pit features appear to originate from within the 19th Century deposits.

Test Pit 10

The depositional sequence in this unit is essentially the same as Test Pits 9 and 14; the primary differences are the lack of identifiable features and the occurrence of fewer cultural materials.

Test Pits 11 and 12

The general sequence of deposits remain the same for these units. Differences include a pit originating from within the 19th Century deposits at the northwest corner of the units, and a small segment of a lime-filled trench in the northeast corner; this latter feature appears to be associated with repointing of the wall during restoration of the structure. Additionally, a stone and lime mortar (cal y canto) wall segment and a portion of a flagstone (laja) floor rest upon the Patrick clay.

Test Pit 13

The surface deposit within this unit differs markedly from the previously described units. It consists of a medium brown friable loamy clay 10 cm thick and which contains only 20th Century artifacts. Undisturbed Patrick clay underlies the surface zone.

FEATURE DESCRIPTIONS

The definition of features follows the limitations stated by Clark for the 1974 investigations (1979:64). Seven features were identified during the current excavations along the west wall of the granary. These include a wall foundation, a flagstone floor, a lime-filled trench and four pits.

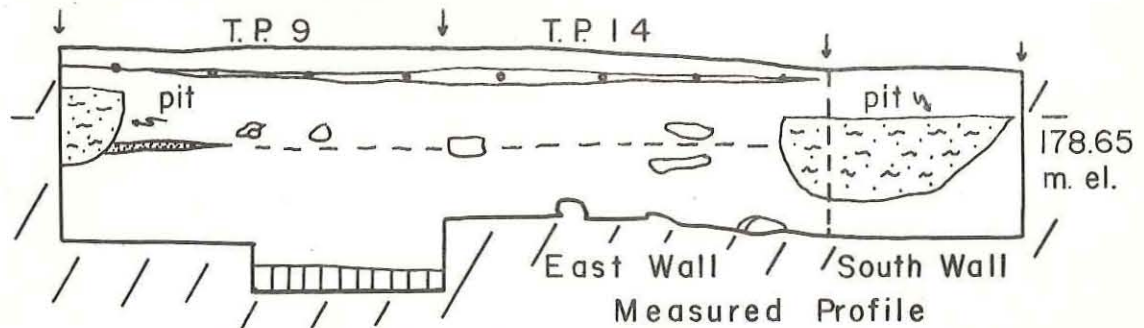
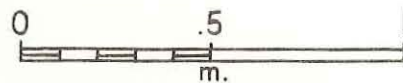
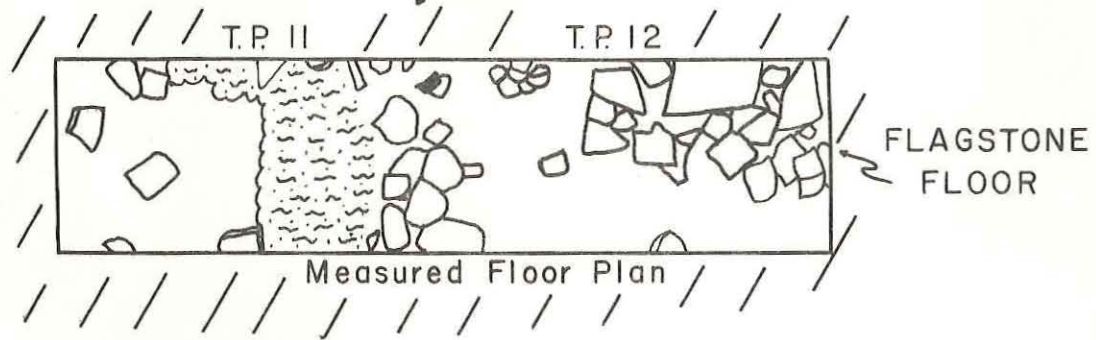
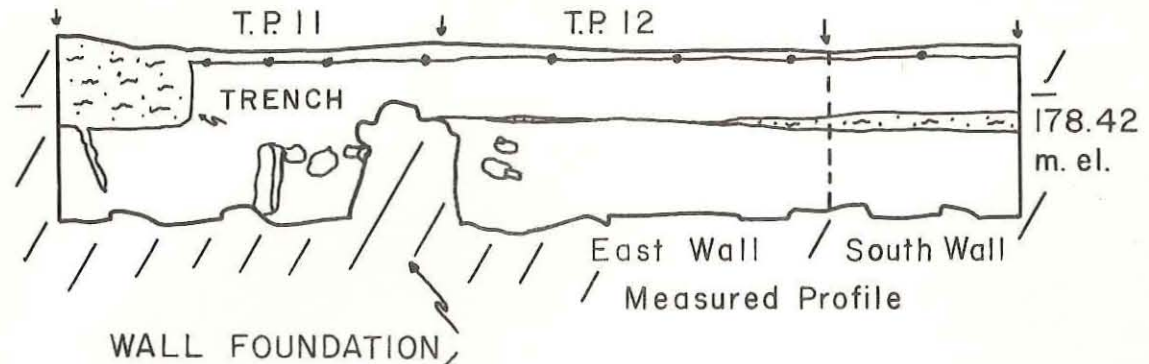
Wall Foundation

A segment of a stone and lime mortar (cal y canto) wall was encountered at the juncture of Test Pits 11 and 12. Limestone and sandstone cobbles are set in a poorly

Figure 3. Floor plans and profiles of test pits.

Figure 3

Floor Plans and Profiles
WEST WALL of GRANARY
Mission San Jose



- LEGEND:
- ▣ = sherd
 - ◊ = rock
 - = gravel
 - ⋯ = lime
 - ⊙ = ash
 - ||| = Patrick clay
 - /// = unexcavated

slaked gravelly mortar; at a depth of 40 cm below surface, the apparent full width of the wall was encountered. Measuring approximately 50 cm in width, the lower portions of the wall foundation consist of a bed of mortar overlain by uncoursed cobbles set in a mortar and clay mix. The orientation of the wall foundation is at a right angle to the granary wall.

Flagstone Floor

Adjacent to and immediately south of the wall foundation in Test Pit 12 are the remnants of a flagstone floor composed of sandstone slabs (lajas). The top of the floor is 40 cm below surface. Portions of this floor have been removed (particularly adjacent to the wall) and only patches remain intact. The floor remnants appear to be resting on the surface of the Patrick clay.

Lime-Filled Trench

A small section of a lime-filled trench was encountered in the northeast corner of Test Pit 11. The description of the trench is the same as that given for another segment of the same trench in Test Pit 5 during the 1974 investigations (Clark 1979:70). This feature is associated with the repointing of the west wall of the granary during the 1930's reconstruction work.

Pits

Four apparent pits were identified during the current excavations; one was noted in each of Test Pits 9 and 11, and two were noted in Test Pit 14. The single pit identified in Test Pit 11 originates at 18 cm below surface in the 19th Century deposits and extends downward into the floor of the unit (excavations ceased at 47 cm below surface).

The fill of this pit consists of mottled dark brown and medium brown soil; no artifacts were noted in the feature.

Two of the pits, one in the northeast corner of Test Pit 9 and one in the southeast corner of Test Pit 14, contain matrix which consists of medium brown loam mottled with lime. Both lacked apparent artifact associations and both originated in 19th Century deposits. The one in Test Pit 9 extends from 10 to 25 cm below surface while the one in Test Pit 14 extends from 12 to 30 cm below surface. Meaningful horizontal dimensions of these two pits and the one in Test Pit 11 are not possible since only small segments of the features were encountered.

The fourth pit is located in Test Pit 14 and differs considerably from the previous three. No visible outline of the pit could be detected since the fill appeared to be the same as the surrounding matrix. The existence of this feature is shown by the presence of mixed Spanish Colonial and mid-19th Century artifacts. This pit probably extended to a depth of 40 cm below surface where an area of mottled dark brown clay loam and limey pebbles was noted. The lack of visible outlines precludes specific observations of the horizontal dimensions of this feature. The mixed nature of the artifacts suggests it originated from within the 19th Century deposits.

THE ARTIFACTS

Relative to the limited extent of the test excavations carried out during this project, a substantial quantity of artifacts and debris was recovered. A total of 1,303 items were collected; these materials are of ages which span the range of time during which the mission has been located at its present site. Broad artifact categories

remain the same as was presented in the report of the 1974 testing program. These categories are: Spanish Colonial, 19th Century, and 20th Century. Subdivisions into more specific categories based on parent material are used as necessary within the larger categories. Brief descriptions of each group of artifacts are presented in this section.

SPANISH COLONIAL ARTIFACTS

Ceramics

Bricks (112 specs.)

These are fragments of locally manufactured bricks generally found to be associated with Spanish Colonial sites within the area.

Goliad Plain Earthenware (188 specs., Fig. 4,a,b)

These specimens are fragments of native-made coiled ceramics with clay paste and bone tempering. Rim sherds, body sherds and a few handle fragments are represented. Detailed descriptions of Goliad Plain are contained in Clark 1979 (75-77).

Unglazed Wheel Thrown (17 specs.)

These sherds clearly exhibit striations which are characteristic of Mexican wheel thrown ceramics (Clark 1979:77).

Burnished Red (3 specs.)

A burnished exterior surface distinguished these specimens from the previous group.

Lead Glazed (33 specs.)

These specimens generally have an orange or dark brown paste and exhibit a clear lead glaze, a slip and

clear lead glaze, or are painted various colors with a clear lead glaze (Clark 1979:77).

Olive Jar (1 spec., Fig. 4,d)

The single sherd of this type found during the current excavations is a thick sherd with a light gray-brown granular paste which exhibits heavy throwing striations. A green glaze is on the exterior surface.

Tin Glazed Majolica (38 specs., Fig. 4,f)

Majolica has been divided into several recognizable types (Tunnell 1966:2; Barnes and May 1972). Included in the present group are San Augustine Blue on White (7 specs.), San Elizario Polychrome (12 specs.), Puebla Blue on White (3 specs.), Aranama Polychrome (2 specs.), miscellaneous late polychrome (1 spec.) similar to that described by Clark (1979:82-83), and plain (13 specs.).

Metal

Iron (2 specs.)

These include a small forged hook and a lump of slag.

Brass (3 specs., Fig. 4,g)

Two of these specimens are relatively thick pieces of sheet brass. The third is a small nesting scale weight; it is in the form of a truncated cone. Striations around the rim indicate the weight was lathe-turned from a casting; adjustment to the desired weight is indicated by file marks on the base. This specimen is similar to examples described and illustrated by Arnold and Weddle (1978:292-295) from shipwrecks and from Ecuador. The present specimen weighs 55 grams, the walls are 0.4 cm thick at the rim, the rim diameter

is 3.8 cm, the base is 2.6 cm in diameter, and the maximum height is 1.8 cm. It appears this nesting weight is for 2 pesos value.

Copper (2 specs., Fig. 4,h,i)

One specimen is an amorphous lump of congealed copper slag. The other is a riveted handle fragment.

Bone

Button (1 spec.)

This shirt-size single-hole disc of polished bone is similar to 18th Century bone buttons found on the east coast.

Lithics

Gun Flint (1 spec., Fig. 4,e)

A spall type gun flint of brown chert was recovered from apparent disturbed midden deposits; this is probably a Dutch flint (Withoft 1967:25-28), but it could also be native-made.

Chert Flakes (31 specs.)

Chipping debris of native cherts which are scattered through the deposits may represent natural inclusions within the soil or may be related to the activities of Colonial period mission Indians.

Plaster

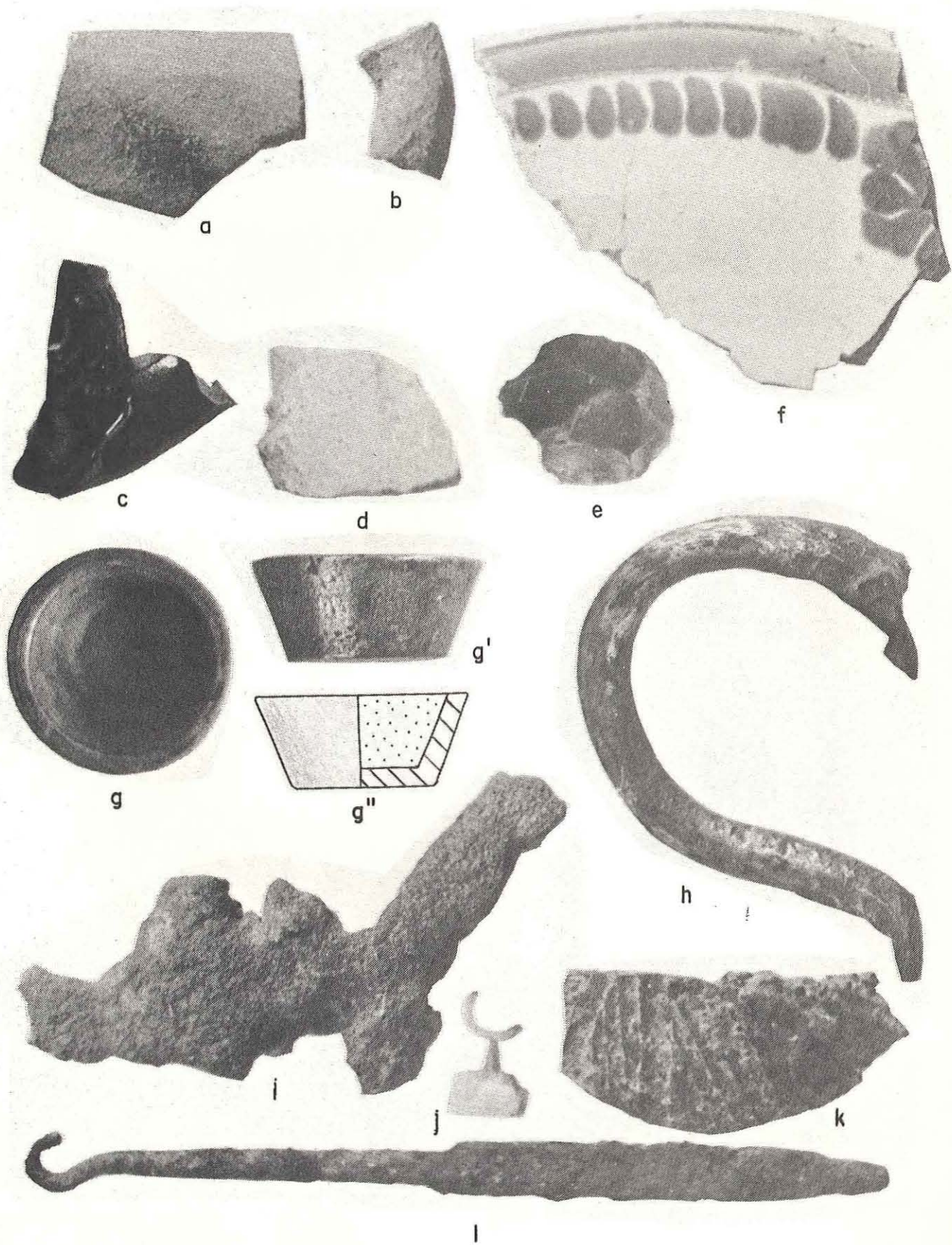
Whitewashed (7 specs.)

These are small fragments of lime plaster which exhibit a coating of whitewash.

Figure 4. Selected Artifacts.

- a. Goliad Plain rim sherd
- b. Goliad Plain handle fragment
- c. Clay Pipe fragment
- d. Olive Jar sherd
- e. Gun Flint
- f. San Elizario Polychrome Majolica sherd
- g. Brass Nesting Weight
- h. Riveted Copper Handle
- i. Congealed Copper Slag
- j. Pewter (?) object
- k. Coffee Grinder
- l. Button Hook

Figure 4



0 1 2 3
cm.

NINETEENTH CENTURY ARTIFACTS

Ceramics

Bricks (3 specs.)

These are fragments of very hard fired bricks commonly referred to as fire bricks due to their use in hearths and fire walls.

Stoneware (4 specs.)

These gray paste stoneware sherds are typical of the 19th Century Texas ceramic industry.

Sewer Pipe (2 specs.)

Both specimens are fragments of sewer pipe typical of the 19th Century.

Hard Paste Earthenware (166 specs.)

Plain (93 specs.)

All of these sherds are typical of what is generally referred to as ironstone or pearlware.

Sponge or Stencil Decorated (31 specs.)

Sherds of a common ware widely reported from military, mission and residence sites which date during the general 1845 to 1860 era.

Hand Painted (19 specs.)

The polychrome floral motifs of this group are common to the 19th Century.

Banded Slipware (8 specs.)

These sherds are typical early to mid-19th Century specimens.

Blue Transfer Printed (10 specs.)

These represent a common decorative technique of the period from about 1850 to 1880.

Black Transfer Printed (1 spec.)

This type generally preceded the reproduction of blue transfer printed wares in the early 19th Century.

Blue Edge Molded (2 specs.)

Commonly called blue feather edge or shell edge, these sherds are a typical style popular during the 1830s and 1840s.

Luster Ware (1 spec.)

The lustrous metallic glaze on this specimen represents a mid to late 19th Century decorative technique.

Semi-Porcelain (1 spec.)

This specimen is characterized by a vitreous hard paste.

Clay Pipe (1 spec., Fig. 4,c)

Common during the mid-19th Century, this molded specimen exhibits a floral design on the bowl similar to the smoking pipes manufactured at Pamplin, Virginia (Hamilton and Hamilton, 1972).

Porcelain (5 specs.)

Plain (3 specs.)

These are sherds of a 19th Century ware with a Pearl Ware-like glaze.

Button (1 spec.)

This appears to be a small dress button.

Chinese Blue Painted (1 spec.)

This hand painted sherd may be of Chinese origin, and may possibly date to the 18th rather than the 19th Century.

Glass

Window Pane (105 specs.)

Clear Unbleached Bottle (44 specs.)

These sherds exhibit the characteristic green tint similar to that of modern Coca-Cola bottles, but is slightly lighter.

Clear Manganese Bleached Bottle (55 specs.)

These represent a pre-World War I bleaching method.

Brown Bottle (33 specs.)

It appears these are sherds of beer bottles, snuff bottles or similar items.

Green Bottle (129 specs.)

A variety of sherds which may range from the 18th to the 20th Century may be represented; most, however, appear to be of 19th Century origin.

Blue Bottle (3 specs.)

These specimens are undiagnostic.

Manganese Bleached Mug (2 specs.)

These represent large drinking vessels which have vertical ribs on the exterior of the cylinder. !

Cup Fragment (1 spec.)

A segment of cup handle of manganese bleached glass.

Milk Glass (2 specs.)

Both are bottle sherds.

Milk Glass Button (1 spec.)

This appears to be a dress size button.

Pressed Glass (1 spec.)

A fragment of a thin bowl which was pressed into a mold; a diamond point pattern covers the exterior.

Metal

Iron (110 specs.)

Nails (40 specs.)

Machine cut nails common from the 1830s to the 1870s are represented by 23 specimens. The remaining 17 are too rusted for identification. Some may be of 20th Century origin.

Barrel Strap (2 specs.)

These are fragments of common barrel straps.

Glaziers Point (1 spec.)

A small diamond shaped metal point used for setting window panes in wooden mountings and frames.

Iron Chunks (2 specs.)

These are small amorphous pieces of iron which are too rusted for identification.

Machine Bolt (1 spec.)

Specimen is a long cylindrical shaft with a round head over a square shank on the proximal end and with threads on the distal end.

Sheet Iron (41 specs.)

Miscellaneous fragments of iron which probably represent the remnants of rusted cans.

Wire (16 specs.)

Short segments of small diameter wires appear to be represented.

Coffee Grinder (1 spec., Fig. 4,k)

A portion of the grinding surface is represented by this fragment.

Button Hook (1 spec., Fig. 4,l)

This linear object has a hook on the distal end, a cylindrical shank and flat sides suitable for mounting handles on the proximal end. Common in the late 19th Century, these items were used for lacing shoes and the like.

Stove Lid (1 spec.)

Consisting of a thick flat sheet of cast iron, this item is probably a fragment of a stove lid.

Cocoa Can Lid (4 specs.)

These are fragments of rectangular lids which have disc shaped central openings.

Brass (7 specs.)

Included in this category is one specimen each of the following items: strap spacer, cylindrical sleeve, rivet strap button, pocket knife and copper tab. The button is a shirt size face of a compound decorative type common the 19th Century. The pocket knife consists of the haft portion of a small pen or pocket knife.

Bone (2 specs.)

Included in this category is a small rectangular segment of a turtle shell which has been carefully polished on the two flat surfaces. The long lateral edges have been trimmed straight while the short edges exhibit vertical striae. The second specimen is a small flat piece of polished ivory (?); it is formed into an isocetes triangle with blunted corners.

Shell

Button (1 spec.)

This is a very small sleeve size dress button.

Miscellaneous

Slate (6 specs.)

Sheet slate typical of 19th Century school slates are represented by 4 specimens. The other two specimens are fragments of a single slate marking pencil.

Coal (1 spec.)

One small piece of apparent coal is present.

TWENTIETH CENTURY ARTIFACTS

Ceramics

Hard Paste Earthenware (7 specs.)

This group includes 4 sherds of floral design decalcomania and 3 fragments of electric light bulb fixtures.

Glass (33 specs.)

Specimens in this group include 3 light bulb fragments, 24 clear selenite bleached bottle sherds, 3 flat glass mirror sherds, and 3 clear selenite bleached drinking glass sherds.

Metal

Iron (47 specs.)

Nails (36 specs.)

Included in this group are 24 common wire nails, 11 short galvanized roofing nails, and a galvanized masonry nail.

Crown Bottle Caps (3 specs.)

These are common soft drink bottle caps.

Water Pipe (1 spec.)

A small segment of a one inch diameter water pipe is represented.

Plastic Covered Strap (1 spec.)

No function has been determined for this specimen.

Meat Can Key (4 specs.)

These popular opening devices are commonly used with canned lunch meats, fish, shortening and the like.

Pivot Loop (1 spec.)

This item consists of a small tear shaped wire loop attached to a pivot.

Swing Chain (1 spec.)

A segment of double twisted wire links suitable for children's swings, porch swings and the like is represented by this item.

Brass (7 specs.)

Items in this category include 4 flash bulb bases, a grommet, an electric light bulb base, and a jewelry box hinge fragment.

Aluminum (6 specs.)

Four pieces of foil and 2 ring pull tabs are represented.

Pewter (?) (2 specs., Fig. 4,j)

These two fragments of a single object are made of a white metal which appears to be pewter. One fragment consists of a small ring and an attached tab while the other consists of a ring fragment with a tab and a wedge shaped element opposite the ring.

Miscellaneous

Plastic (32 specs.)

This group includes one fragment of a toy lion, 21 pieces of PVC tubing, 3 pieces of flexible tubing covering electrical wire, a hard plastic bowl fragment, a section of monofilament line, 3 pieces of sheet plastic and 2 pieces of hard white plastic.

Hard Rubber (4 specs.)

These are fragments of disc phonograph records.

Other (42 specs.)

Included in this group are a fragment of cellophane, a piece of linoleum, a fragment of green painted plaster, 15 fragments of roofing felt and 24 globules of solidified roofing tar.

FAUNAL REMAINS

Bone (1,748 specs.)

Substantial quantities of bones were found in all of the test pits except Test Pit 13 which was located away from the granary in the proposed dispersion field. Most of the bones appear to represent butchering debris

from domestic animals; however, some fish bones are present as are rodent bones. Time and contract limitations preclude a detailed analysis of the species represented and the butchering techniques utilized.

Mussel Shells (23 specs.)

All of these freshwater mussel shells are either too fragmentary or eroded for species identification.

Snail Shells (37 specs.)

Five species of snails appear to be represented. These include 10 Rabdotus dealbatus, 10 Rumina decollata, 4 Mesodon thyroidus, 9 Polygyra texasiana and 4 Mesodon arboreus.

Marine Shell (1 spec.)

This fragment is too small for species identification.

TABLE 1. Provenience of Artifacts and Faunal Remains.

Description	Provenience*																	Totals
	T.P. 14		T.P. 9			T.P. 10				T.P. 12				T.P. 11			T.P. 13	
	L.1	L.2	L.1	L.2	L.3	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.1	
ARTIFACTS																		
<u>Spanish Colonial</u>																		
Ceramics																		
Brick	5	14	8	24	2	10	6	10	2	7		6	6	7	3	2		112
<u>Goliad Plain</u>	20	46	5	65	36	1	1	3	1				3	1	4	2		188
Unglazed Wheel Thrown	1	6		7	1		1	1										17
Burnished Red		1		2														3
Lead Glazed	6	6	1	16	2			1						1				33
Olive Jar								1										1
Majolica																		
San Augustine Blue on White	1	2		1	1							2						7
San Elizario Polychrome				5	7													12
Puebla Blue on White		3																3
Aranama Polychrome			2															2
Misc. Late Polychrome	1																	1
Plain		7		5				1										13
Iron																		
Forged Hook				1														1
Slag				1														1
Brass																		
Sheet										2								2
Nesting Weight			1															1
Copper																		
Slag															1			1
Cauldron Handle												1						1

*Test Pits are arranged in sequence from south (left) to north (right).

TABLE 1. (cont'd.)

Description	Provenience																	Totals
	T.P. 14		T.P. 9			T.P. 10			T.P. 12				T.P. 11			T.P. 13		
	L.1	L.2	L.1	L.2	L.3	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.1	
Bone Button							1											1
Lithics																		
Gun Flint	1																	1
Flakes	5	2	2	5		1		2	1	3		2		4	1	3		31
Plaster (whitewashed)				2	5													7
TOTALS	40	87	19	134	54	12	9	19	4	12	0	11	9	13	9	7	0	439
<u>Nineteenth Century</u>																		
Ceramics																		
Brick			3															3
Stoneware			3											1				4
Sewer Pipe	2																	2
Hard Paste Earthenware																		
Plain	12	4	31	3		10	15			12	2			4				93
Sponge	8	4	4				8			5				1	1			31
Hand Painted	5		3	1		2	3			1	3			1				19
Banded Slipware	3					1	4											8
Blue Transfer																		
Printed		1	3			3	3											10
Black Transfer																		
Printed										1								1
Blue Edge Molded						1						1						2
Luster Ware	1																	1
Semi-Porcelain								1										1
Clay Pipe	1																	1

TABLE 1. (cont'd.)

Description	Provenience																Totals	
	T.P. 14			T.P. 9			T.P. 10				T.P. 12			T.P. 11				T.P. 13
	L.1	L.2	L.1	L.2	L.3	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.1	
Porcelain																		
Plain	1											1					1	3
Button						1												1
Chinese Blue Painted						1												1
Glass																		
Window Pane	27		17	6		6	10	1		7	1				5	2	23	105
Clear Unbleached																		
Bottle	9		13			2	3	1		11	1	1			3			44
Clear Manganese																		
Bleached Bottle	5		5			3				27	1		1	13				55
Brown Bottle	8		4			5	4	1		1	1			1			8	33
Green Bottle	52	1	31	4		11	15	2		4	1			5			3	129
Blue Bottle	1									2								3
Manganese Bleached																		
Mug		1													1			2
Cup Fragment											1							1
Milk Glass																	2	2
Milk Glass Button		1																1
Pressed Glass			1															1
Iron																		
Nails, Cut	3		3			3	5			5		1		2	1			23
Nails, Unidentified	4		1			1	6			3				2				17
Barrel Strap			2															2
Glaziers Point	1																	1
Iron Chunks				2														2
Machine Bolt						1												1
Sheet Iron	19					3	3	4		4				7	1			41
Wire	3					1	1			4				4	1		2	16
Coffee Grinder Fragment						1												1

TABLE 1. (cont'd.)

Description	Provenience																Totals	
	T.P. 14		T.P. 9			T.P. 10				T.P. 12				T.P. 11				T.P. 13
	L.1	L.2	L.1	L.2	L.3	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.1	
Button Hook						1												1
Stove Lid										1								1
Cocoa Can Lid																	4	4
Brass																		
Strap Spacer												1						1
Cylindrical Sleeve		1																1
Rivet																	1	1
Strap																		1
Button																		1
Pocket Knife	1																	1
Copper Tab			1															1
Bone																		
Polished Turtle Shell			1															1
Polished Ivory Triangle					1													1
Shell Dress Button				1														1
Slate																		
Sheet	1									1							2	4
Pencil																	2	2
Coal										1								1
TOTALS	167	13	126	18	0	57	80	10	0	90	11	5	1	61	6	0	39	684
<u>Twentieth Century</u>																		
Ceramics																		
Hard Paste Earthenware																		

TABLE 1. (cont'd.)

Description	Provenience																Totals	
	T.P. 14		T.P. 9			T.P. 10				T.P. 12				T.P. 11				T.P. 13
	L.1	L.2	L.1	L.2	L.3	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.1	
Decalcomania	3																1	4
Electric Light Fixture															3			3
Glass																		
Light Bulb Fragments	2					1												3
Clear Selenite Bleached Bottle Mirror			3			2	1								6		12	24
Clear Selenite Drinking Glass										1							2	3
Iron																		
Nails																		
Wire	2		1			5				7					9			24
Roofing	9														1		1	11
Masonry																	1	1
Crown Bottle Cap						1				1							1	3
1 inch Water Pipe							1											1
Strap Covered with Plastic	1																	1
Meat Can Key										1					2		1	4
Pivot Loop										1								1
Swing Chain																	1	1
Brass																		
Flash Bulb Base	3					1												4
Grommet						1												1
Electric Light Bulb Base										1								1
Jewelry Box Hinge Fragment																	1	1

TABLE 1. (cont'd.)

Description	Provenience													Totals			
	T.P. 14		T.P. 9			T.P. 10			T.P. 12				T.P. 11			T.P. 13	
	L.1	L.2	L.1	L.2	L.3	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.1
Aluminum																	
Foil	1													2			1
Ring Pull Tab			1			1											
Pewter (?), Unidentified						2											
Plastic																	
Toy Lion						1											
PVC Tubing						18	3										
Flexible Tubing with																	
Electric Wire						3											
Hard Bowl Fragment						1											
Monofilament						1											
Clear Sheet	2													1			
White Hard																	2
Hard Rubber																	
Record Fragments	3																1
Cellophane																	1
Linoleum																	1
Plaster, Green Painted						1											
Roofing Felt						15											
Tar Globules	4							4						16			
TOTALS	30	0	8	0	0	54	5	4	0	12	0	0	0	40	0	0	27
TOTAL ARTIFACTS	237	100	153	152	54	123	94	33	4	114	9	16	10	114	15	7	66

TABLE 1. (cont'd.)

Description	Provenience																	Totals
	T.P. 14		T.P. 9			T.P. 10				T.P. 12				T.P. 11			T.P. 13	
	L.1	L.2	L.1	L.2	L.3	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.4	L.1	L.2	L.3	L.1	
FAUNAL REMAINS																		
Bones	96	400	90	653	143	13	60	105	8	12	5	36	3	32	86	6		1748
Mussel Shells	2	8		6			3	1		1				1	1			23
Snail Shells																		
<u>Rabdotus dealbatus</u>						2				1							7	10
<u>Rumina decollata</u>	2	1					1							5		1		10
<u>Mesodon thyroidus</u>	1					3												4
<u>Polygyra texasiana</u>						4								1			4	9
<u>Mesodon arborens</u>	1					3												4
Marine Shell (unidenti- fied)					1													1
TOTAL FAUNAL REMAINS	102	409	90	659	144	25	64	106	8	14	5	36	3	39	87	7	11	1809
GRAND TOTALS	339	509	243	811	198	148	158	139	12	128	16	52	13	153	102	14	77	3112

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