## EL ZURDO: A SMALL PREHISTORIC VILLAGE IN WEST-CENTRAL CHIHUAHUA, MEXICO

## PART 1: INTRODUCTION AND 1991 FIELD STUDIES

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## **Correction Notice**

The initial version of this report, released in 2008, left out the appendix included here as Appendix A.

D. Phillips, Series Editor March 2009

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#### PREFACE

It was my privilege to work as a volunteer crew member at el Zurdo, and a pleasure to accept the report for the *Maxwell Museum Technical Series*. For too long, however, the report has been in limbo, through nobody's fault but my own. To break the logjam I proceeded with editorial production of the first part of the manuscript, providing an introduction to the site and descriptions of units excavated in 1991. The balance of the report will reach the light of day in 2009. In submitting the manuscript, Jane Kelley assumed that readers would have the whole thing before them. She is blameless for any problems caused by reorganization and segmentation of the report.

David A. Phillips, Jr. Series Editor

### ACKNOWLEDGEMENTS

In 1989, Joe Stewart (Lakehead University) and I visited Chihuahua to select a study area. We first traveled to Cuauhtemoc and proceeded to Namiquipa and Babícora, identifying three regions in which we wished to do archaeological survey and testing in accordance with the goals of our proposed project. From 1990 to 2000, we co-directed the Proyecto Arqueológico de Chihuahua or PAC. I take this opportunity to acknowledge Joe's support and assistance over the decades of our collaboration.

As part of our division of labor, I tended to supervise the lab work, took the lead in writing the annual *informes* to INAH, and maintained the paper records. Joe went deeply into radiocarbon dating, maintained the computer records, carried out technical analyses at Lakehead University, and initiated several of the PAC publications. In this particular enterprise I have taken the lead, but it is axiomatic that any work emanating from the PAC is heavily dependent on all of those who produced the records and offered ideas, critiques, and support.

Permission to work in the area was issued by the Consejo de Arqueología of the Instituto de Antropología e Historia, Mexico City. Over the life of the project, a cordial relationship with the regional INAH office in Chihuahua City greatly facilitated our work and brought us new friends. Rafael Cruz Antillón and Francisco Mendiola, then both of INAH's regional office, joined our project at various times; "Rafa" worked with us at el Zurdo. During our survey and other work in the Zurdo drainage, we also had permission from the authorities at Las Varas and Colonia Esmeralda. Local laborers came from Las Varas and Nicolás Bravo. Sr. Manuel García of Las Varas acted as our local contact and helped us hire several individuals for whom he could vouch. He was 86 at the time and told wonderful stories about growing up in Namiquipa, including seeing Pancho Villa there when he was eight.

We are deeply indebted to many people in the larger study area, foremost among whom are Luis Regalado Arias and Eva Aguilar de Regalado (Cuitlahuac), Grifildo Robles of Rancho San Juan (Gomez Farías; owner of the San Juan site), Nena Palacios (Cuitlahuac), Padre Daniel Camilo (Anahuac), and the municipal officers of Namiquipa, Gomez Farías, Nicolás Bravo and Las Varas. Our crew members came from the University of Calgary, Lakehead University, the University of Arizona, the University of Colorado, and the regional office of INAH.

For this report I particularly relied on the field notes, maps and reports of the Zurdo site made by Warren Hill, Loy Neff, and David Phillips, as well as on Warren Hill's M.A. thesis. Loy Neff made available his notes on the Zurdo pottery. Philip Fralick, Karen R. Adams, and Ronna Jane Bradley joined us in the field to practice their respective specialties. Sylvia Abonyi and Jeanette Smith served as physical anthropologists during the early 1990s. Abonyi conducted the isotopic analysis of the two burials from El Zurdo and on human remains from the San Juan site, under the direction of M. A. Katzenberg of the University of Calgary. Lisa Hodgetts's article in *Kiva*, her honours thesis at Simon Fraser University, her computer records of the faunal identifications, and her additional advice and expertise form the basis for the faunal discussions included here. David Phillips, John Roney and David Hill volunteered their expertise and must be regarded as honorary members of the project. Gerald Newlands, Hugh Gibbins, Danny Zborover, Veronica Pacheco, Linda Swann, Jennifer Klassen, and Dominique Cossu helped prepare the illustrations. Art MacWilliams, David Phillips and Joe Stewart offered useful suggestions on this report.

Finally, we were privileged to work in Chihuahua at a time of intellectual ferment, as a number of innovative projects began and new interpretations of the Chihuahua Culture emerged. Our interaction with individuals in these other projects formed an important part of our evolving research plans. The contributions of all of these institutions and people to our work at el Zurdo are gratefully acknowledged.

Jane H. Kelley Calgary, Canada

## **Chapter 1**

### **INTRODUCTION**

Prior to 1990, the effect of Paquimé on Chihuahua archaeology can perhaps be understood if one thinks of Arizona archaeology as if it was known only through Snaketown, or of New Mexico archaeology as if was known only through Chaco Canyon (for recent accounts of Chihuahua archaeology, see Bradley [2000], Kelley and Villalpando [1996], Minnis and Whalen [2004], and Phillips [1989]). The post-1990 diversification of Chihuahua archaeology is reflected in Bagwell's (2004:7) argument that the two Sierra Madre cliff dwellings she discusses are "more representative of the majority of archaeological sites in northern Mexico than the larger and more elaborate site of Paquimé." Although the relationship between Paquimé and outlying areas continues to interest researchers, each part of the Chihuahua Culture now needs to be understood in its own right, and current projects are filling in the blanks. The Proyecto Arqueológico Chihuahua (PAC) was designed in part to shed light on the southern edge of the Chihuahua Culture area.

We deliberately use Brand's (1933, 1935, 1943) terminology, "Chihuahua Culture area," rather than the more commonly heard "Casas Grandes area" because the former is more inclusive. It also seems better suited to the nature of recent archaeological research. Although each recent project has had its own direction, this effort to fill in our knowledge now includes work near Paquimé (Whalen and Minnis 1999), Villa Ahumada (Cruz Antillón and Maxwell 1999), Casa Chica and Galeana (Cruz Antillón et al. 2004), Cerro Moctezuma (Maxwell and Cruz Antillón 2003), the Sierra Madre cliff dwellings (Bagwell 2004), the northwest periphery (Douglas and Quijada 2004), the *serrana* near Paquimé (Gamboa Carrera 2003), and the southern zone (Kelley et al. 1999). El Zurdo (Ch-159) is one of several sites investigated by the PAC in our effort to better the southern zone. It is the site to which we dedicated the most time and effort.

Foreign projects can export certain samples but the bulk of the collections do not leave Mexico, so the artifacts from each field season were processed during that field season. As a result, problems of identification and interpretation remain that would have been reduced if not eliminated had all the collections had been fully available during report preparation. However, given the rudimentary state of knowledge of the southern zone of the Chihuahua Culture area, we felt the need to compile as full a report of the Zurdo site as possible. We hope that this effort will be useful to those who follow us.

Funded by the Social Sciences and Humanities Research Council of Canada, the University of Calgary, and Lakehead University, PAC conducted research in west-central Chihuahua during eight field seasons between 1990 and 2000. The four major study regions were the Bustillos Basin (MacWilliams 2001), the upper Santa María River valley, the Santa Clara River valley, and the Babícora Basin, with a brief reconnaissance of the Zaragoza Basin in the upper Casas Grandes drainage (Figures 1.1 and 1.2). This report deals with the site of El Zurdo and the Babícora Basin region.



Figure 1.1. Location of the El Zurdo study area within the State of Chihuahua. Reproduced from Hill 1992, with the author's permission.

#### The Babícora Environs

The Babícora Basin (Figure 1.3) is an area of internal drainage. The basin floor retains a large marshy area that varies in size and may become a shallow lake, depending on the precipitation in a particular year. The basin floor is tightly ringed with sierras; most of the drainages in the basin are short. The major exception is the Las Varas drainage, which enters the basin from the west-northwest. Some geologists regard the Las Varas Valley between the Babícora Basin and the pueblo of Las Varas as a separate basin.



Figure 1.2. The PAC research area. Reproduced from MacWilliams (2001), with the author's permission.

Today most of the land on the basin floor and margins, as well as that of the Las Varas Valley, is under cultivation or is within the area that the shallow lake can fill. In dry years, cultivation extends farther into the center of the basin. Mountains and hills rise rather abruptly from the basin floor, especially on its south side. A cross section of the basin ranges from 2330 m at the heights of the eastern sierra to 2150–2230 m at the basin floor and Las Varas Valley to 2760 m at the local crest of the Sierra Madre Occidental (INEGI 1990:58).

Figure 1.3, *top*, shows a higher water level than was the case during our fieldwork in the 1990s. The Nicolás Bravo topographic sheet (H13C31) and 1990 INEGI hydrological maps show a dry season road connecting Nicolás Bravo and Gomez Farías across the middle of the lake. The local basins can be lush and green in years of adequate rainfall, but do not escape the throes of drought. Historically, visitors saw the basin as extremely hospitable after the rigors of crossing the sierra to the west or the Chihuahuan Desert lowlands to the northeast. Di Peso quotes the account of Baltasar Obregón (chronicler of the 1565 Ibarra expedition), in which the Spanish enter what Hammond and Rey identify as the Babícora Basin:



**Figure 1.3.** Satellite images of Laguna Babícora. Top: NASA image taken in 2000, in a time of unusually high water. The Las Varas Valley extends northwest from the lake. From the head of the valley, above the village of Las Varas, the Arroyo Las Varas continues to the NNE. Bottom: Google Earth image downloaded in 2008. The northern tip of the laguna is now an isolated pond, and the main part of the lake has shrunk to a series of channels.

We could see large, splendid, and fertile valleys covered and enriched with very beautiful meadows, prairies, springs, rivers and streams with excellent, clear and delightful waters. The climate and nature of these temperate lands are the best I have seen. This fertile and attractive land is adorned and endowed with fine mountain ranges, hills, and tablelands, where, as we were informed, bears which ate the fowls and the ears of corn from the from the houses of the natives live and flourish. Here are large madrone trees, many very tall and nutbearing walnut trees, Castile prune trees, and wild grapes. We began to discover abandoned houses of two and three stories ... The army went on through plains and valleys inhabited by many deer, stags, hares, rabbits, and all sorts of game and birds [Hammond and Rey 1928:197–198; quoted in Di Peso (1974, Vol. 3: 820–821)].

If the Babícora Basin is correctly identified (and there is some question about this; the area being described may have been farther north), it would have been the home of the Querechos, who had received Alvar Núñez Cabeza de Vaca in 1536 and who had just lost a battle with the Cumupa to the west (Di Peso 1974, Vol. 3:819).

The valley of Arroyo El Zurdo is well-defined for some 8 km from the Puerto El Zurdo (Pass of El Zurdo) on the north to the point where it emerges into the Las Varas Valley. The arroyo's course weakens there, and maps disagree on its course through the larger valley, but the weakened course can be traced on NASA images: another 5 or 6 km take it to the main floor of the Babícora Basin. In other words, the Zurdo does not join the Las Varas, but follows it own path to the main basin along the north side of the Las Varas Valley.

Local ecological zones range from basin floors, with their grasses and marshy areas, to the oak zone (with piñon and juniper) on the flanking hills, to tall pines encountered at the El Zurdo site and at higher elevations. According to Brown (1994), the El Zurdo locality falls within the Madrean Evergreen Woodland.

### **Previous Work**

The Babícora Basin was the only part of the PAC study area to have received the concerted attention of earlier archaeologists. The region was visited by American archaeologists in the 1920s and 1930s when the area was part of the Hearst Ranch, owned by William Randolph Hearst, long before the introduction of *ejidos* and *colonias*. The Las Varas ranch headquarters of the Hearst Ranch was a landmark for all visitors, and the ranch manager doubled as a guide to archaeological sites (as Sayles' archived field notes, trip logs, and letters to Harold Gladwin make clear [Sayles n.d.]). The ranch (or more properly, ranches) stretched from Las Varas to the modern town of Oscar Soto Maynez in the Santa María valley, with other headquarters at San José Babícora and Santa Ana Babícora (now Oscar Soto Maynez). The American employees of the Hearst ranches knew about local mound sites and were instrumental in providing local guides. Sayles was taken to known sites in both the Babícora Basin and the upper Santa María Valley by ranch employees.

Pre-World War II archaeological authors noted three site clusters around the periphery of the basin. These were usually identified as the Las Varas, San José Babícora, and San Juan groups of sites. Brand (1943), however, listed the Las Varas, San José Babícora and Arroyo Chavez groups. We believe his Arroyo Chavez group is the same as the San Juan group, as older maps identify the arroyo on which Rancho San Juan is located as the Arroyo Chavez.

The Las Varas group received almost all of the early professional archaeological attention, from Kidder in 1924 (1939), Carey in 1928 and 1929 (1931), Brand in 1930 and 1931 (1933, 1943) and Sayles in 1933 (1936, n.d.). Brand (1943) noted more than 20 mounds in the Las Varas group in a 10 km stretch of the river between the Hearst headquarters at Las Varas and a point below Rancho San Marcos. Kidder (1939) located the site he dug in 1924 between Carey's Mounds 2 and 5 on the west bank of the Arroyo Las Varas near the Hearst Las Varas ranch house. Carey did not note this site on his map, so Kidder wondered if the site had been swept away by the arroyo, which was eating at the site in 1924. Sayles listed nine sites (Chihuahua I:9:1 to I:9:9) in much the same area. Carey (1931) showed 5 mound sites in which he excavated in the vicinity of Las Varas.

The lesser population centers of San José de Babícora and San Juan did not receive as much attention as Las Varas. Carey (1931:360) noted two mounds at San Jose Babícora and 10 mounds at San Juan. Sayles (n.d.) recorded six mounds in the San Juan mound group in 1933.

The most extensive of the early excavations were by Carey, who noted that the house mounds of the Babícora Basin were smaller than ones to the north. He excavated a six-room structure at his Mound 3, finding two occupations indicated by separate floors. The pottery from the lower floor was distinct from that from the upper floor in that it lacked polychrome designs. Mound 4 was a 14-room with a large L-shaped room and a trapezoidal room. Doorways were rectangular and T-shaped. Fire pits were usually on adobe platforms. Even today, Carey's plan of Mound 4 is the most complete plan of a room block available for the southern Chihuahua Culture (Figure 1.4).

Sayles excavated at Chih I:9:1 and I:9:5 of the Las Varas group, and at I:9:11, which we believe was the San Juan site (Sayles n.d.). He made observations and collections at all of the sites he reported, including Chih. I:9:10 (a Medio period site 14 km east of Las Varas, roughly where the Arroyo Las Varas enters the main Babícora basin). Most of these sites had standing house mounds 6 to 8 feet (1.8–2.4 m) high; midden deposits were often noted as being 12 to 18 inches (30–45 cm) deep. External hearths, ground stone, and pottery were recorded. Site diameters were given as 100 to 400 feet (30 to 122 m). Sayles's collections from these sites are housed at the Arizona State Museum, and his Babícora sites are described in Appendix A.

Photographs taken by Sayles, as well as his site description, allowed us to identify PAC Ch-159, El Zurdo, as his Chih I:9:6 with complete assurance. It was distinguished from the other eight sites he recorded in and near Las Varas by being on a spring-fed side creek rather than in the main valley, and by the amount of rock construction (as opposed to the more common use of adobe). Carey may have visited the site in 1928 or 1929; his map (Carey 1931: Figure 3) shows a "large group of mounds" in hilly land just east of the Las Varas Valley.



**Figure 1.4.** Carey's 1931 map of Mound 4. Reproduced from Carey (1931: Figure 21) with the permission of *American Anthropologist*.

Brand counted the most mounds in the Las Varas group, mentioning that "more than 20 mounds occur in a six mile stretch between the Hearst headquarters ranch at Las Varas and a point about two miles below Rancho San Marcos" (Brand 1943:148). This pioneering work ended prior to World War II (Kelley and Villalpando 1996:70) and it was decades before archaeologists again turned their attention to the area.

### The PAC Babícora Survey

Efforts to relocate previously reported Medio period sites in the main Las Varas Valley were partly successful: we located five mound sites. It is unclear whether the number of mounds found in the early 1990s reflects major destruction of the mounds reported by Brand and Sayles (following Kidder's suggestion that the site he excavated might have been destroyed by the time of Carey's work), the spotty coverage of our surveys, or the fact that we did not define sites in the same way. We know, for example, that PAC Ch-179 combined Sayles's sites I:9:4 and I:9:5. Other Las Varas sites recorded by PAC could not be related to previous accounts with any assurance. A complete survey of the Las Varas Valley between the village of Las Varas and the west edge of the Laguna Babícora would be worthwhile.

PAC sites Ch-179, Ch-171, Ch-172, and Ch-185 were on terraces overlooking the Las Varas main channel. Two mounds reaching a height of 2 to 3 m are present at Ch-178. Ch-171 and 172 are single house mound sites. Although the two-mound site of Ch-185 was assigned a separate site number, it was close enough to Ch-171 that Ch-171 might be considered an outlier of Ch-185. All of the sites have been plowed for decades; the soil over the mounds was an ashy gray and included sherds, flaked and ground stone artifacts, burned adobe, and fire-cracked rock. There was no evidence of recent looting. These sites my contain undisturbed archaeological remains in the deeper parts of the mounds.

Sayles's sites I:9:4 and I:9:5 (recorded together as PAC Ch-179) included three mounds at the southeast end of the site group, nearest the main Babícora Basin. The three mounds, on rises overlooking the river and at the margins of plowed fields, have been severely looted over a long period and are locally regarded as "mined out." We did not attempt to locate Sayles's I:9:10 on the Babícora Basin floor.

Although PAC did not locate as many Las Varas mound sites as were previously reported, our data supported the idea that this drainage was a population center within the Babícora Basin. What was not clear was whether the sites were contemporaneous or sequential. The small pottery samples from our surface surveys in the main Las Varas Valley lacked the variability in ceramics seen in the much larger Ch-159 (El Zurdo) sample, suggesting that the main valley sites lacked the time depth of Ch-159. This is, however, merely an impression that should be tested through more comprehensive survey and excavation.

The PAC survey recorded three sites above the pueblo of Las Varas, along the upper Las Varas drainage. Ch-180 appears to be a site similar to, but smaller than, Ch-159. It has rock architecture and Viejo to Medio period pottery. Lines of rooms with stone foundations occurred uphill from the main house mound, which was quite modest in size. A large stone circle lay between the lines of rooms and the main house mound. A midden (nearly 1 m deep in places) extended around the south and southeast sides of the site. Numerous recent looters' holes had exposed the midden deposits. Because human bones were numerous on recent backdirt, we infer that burials were often interred in the midden. Viejo (Figure 1.5) and Medio period pottery occurs. Fragments of an unusual red-on-brown olla are probably also Viejo period (Figure 1.6).



**Figure 1.5.** Two Viejo period textured red-on-brown sherds from Ch-180. Lower sherds has four faint red lines descending from upper right to lower left. Digitally manipulated from PAC Photo 91C-29-06.



**Figure 1.6.** Unusual red-on-brown textured sherds from Ch-180. Design field lies below the textured neck of the vessel. Image digitally manipulated to enhance design.

Ch-234, farther up the Las Varas, had rock foundations of unknown age along a ridge, along with a widespread lithic artifact scatter. Ch-201, in a side drainage of the Las Varas leading to the Puerto el Zurdo, was probably a historic site. This site was on an unfarmed rise within the side valley. The "mound" may be natural. Lithic artifacts and prehistoric pottery were scattered over and next to the mound. Stones from modern field clearing were placed on the mound, as was modern trash.

Elsewhere in the Babícora basin, PAC crews relocated the main sites at San José de Babícora (Ch-155) and Rancho San Juan (Ch-216) that were known to all pre-World War II investigators. The number of visible mounds has been greatly reduced at Rancho San Juan since the 1930s, when six to 10 mounds were reported. Only one low mound can be seen today. We did not attempt to locate other sites in the vicinity of Rancho San Juan. We wonder whether Rancho San Juan is the principal site within the basin, given its reported size, its prominent location in the main part of the basin rather than at the edge, and the presence of artifacts (collected by the land owner) that are unique in our experience. These include three vessels found with a burial, two large chert projectile points (so similar that they appear to have been made by the same hand) that show no evidence of use (Figure 1.7), and a round stone "eye" (a layered round stone of green, white and black) with a flat bottom. The site certainly deserves more attention.

We discussed the reduction in numbers of visible mounds with the land owner, Sr. Grifildo Robles. He stated that prehistoric house mounds were locally regarded as a good and easy source for obtaining fill for whatever purpose, with the added advantage of leveling fields. He was not surprised to hear that the San Juan group previously had more mounds, but said that only one had been visible when he bought the ranch in 1982.



**Figure 1.7.** The two projectile points found by Sr. Robles at the San Juan Site in 2005.

At San José Babícora, the visible mound within the modern village has been extensively looted. PAC recorded one other site near San José de Babícora. Ch-230, El Mulato, ENE of Ch-155 and farther up the local drainage, had three small house mounds on the south terrace of Arroyo el Mulato. Two of the three mounds were eroding into the arroyo. The largest, probably containing no more than 10 rooms, was on the highest rise. The site was severely looted and, according to local accounts, recent digging obscured previously visible architectural features. It seems unlikely that previous investigators had visited El Mulato.

Two other Medio period sites were recorded by PAC within the basin. Ch-157 was in the trash disposal area for the modern village of El Alamillo. Prehistoric lithic artifacts and pottery were visible among the modern trash. Local residents identified this as a mound site. Several of the so-called mounds appeared to be natural. One recently looted "mound" in the northwest sector of the site had Medio period pottery in the backdirt, and may have been a small house-mound. Ch-160 was a small Medio period room block just off the highway between El Alamillo and Nicolás Bravo. Power equipment had been used to loot the mound, which, in 1990, appeared to have more than 20 rooms. A brief revisit in 2005 caused us to revise our estimate of site size upward by a factor of two or three.

Ch-231 was on Cerro Pelón just northwest of Gomez Farías. This prominent hill rises on the northeast side of the broad and flat basin floor. A series of rock walls on top of and down the slopes of the southeast prominence of the hill are most likely historic; no prehistoric artifacts were seen.

The short valley of Arroyo El Zurdo (Figure 1.8) is the one place for which we have full coverage of a single drainage. Twenty-three sites were recorded between the Puerto el Zurdo and the point at which the drainage enters the larger Las Varas Valley—an 8 km distance. The sites included El Zurdo (Ch-159), three small satellite room blocks dating to the Medio period, two field houses, small rock-outlined room blocks, and artifact scatters. A ridge extending into the valley from Cerro la Bandera was a major source of lithic raw material; on that ridge, a great deal of testing and initial reduction took place. A major lithic workshop was found at Puerto el Zurdo.

About 17 km<sup>2</sup> were reconnoitered in and adjacent to the Babícora Basin by the PAC. As archaeological remains were so much more visible in the 1930s, before the intervening decades of human activity, we accepted the earlier descriptions of three major Medio period population concentrations in the area. Our confirming evidence was most complete for the Las Varas drainage, and within that, the Arroyo El Zurdo survey represented complete coverage. Viejo period occupation in this region is indicated by pre-A.D.1200 radiocarbon dates from the lower levels of El Zurdo and by Viejo Period pottery from that site and Ch-180. Medio period occupation was much more widespread, to judge by the distribution of Medio period style house mounds and the corresponding pottery. The project evidence suggests that the area's Viejo period population was smaller and concentrated in fewer locations than during the Medio period, although further study of the area could easily change this conclusion.



**Figure 1.8.** Map of the valley of the Arroyo el Zurdo, with recorded sites. Reproduced from Hill (1992), with the author's permission.

### **Chapter 2**

### WORKING AT EL ZURDO

Working at the site presented challenges. Because of the illegal drug trade, we were warned that "there is no law west of Gomez" and advised by some acquaintances not to live anywhere in the Babícora basin. Round-trip commuting time from El Terrero, Namiquipa, where the project was headquartered in 1991 and 1992, took up to 3 hours a day. Our attempts to find quarters in San José Babícora and Nicolás Bravo met with varying degrees of success. The crew stayed a few nights in a loaned house in San José Babícora before finding it expedient to return to El Terrero. Attempts to find a suitable hotel in Nicolás Bravo led nowhere. The project eventually rented quarters in Nicolás Bravo, though not without incident. David Phillips's pickup was stolen from a locked yard by masked and armed thieves, despite the truck's being 13 years old. The bureaucratic tangles that ensued were time consuming and frustrating.

The El Zurdo excavations were actively hampered in two different ways. One goal seemed to be purely and simply to collect resources such as wood stakes and nails. Site datums, unit corners, Easting and Northing markers, and MBD points were removed several times, as were materials used for site stabilization. Test 1, for example, was excavated into the north face of the Zurdito arroyo. Because this represented a possible new locus for erosion, backfilling included cobbles secured with posts and wire netting. The posts, wire netting, and nails were removed that very night. The second kind of vandalism involved digging in open excavation units when the crew was absent. This resulted in damage to features such as floors and burials (for example, in Unit 36). On one occasion, Spanish obscenities were inscribed in the dirt adjacent to test units.

Although the fresh back-dirt visible during our first visit to the site showed ongoing looting, the rate of disturbance seemed to have slacked off, at least to judge by the degree of self-stabilization of looter's holes and associated back dirt. At the time, local residents were of the opinions that the site had been exhausted. Our early 1990s work unfortunately inspired a new cycle of looting. Holes appeared overnight in some of our open units, backfilled units were re-opened, and new pits were dug next to our backfilled units. In this area it may be impossible to further archaeological knowledge without triggering new interest on the part of looters. Visits to the site in 2000, 2003 and 2005 showed that the scale of looting had again slowed, and although fresh backdirt was present, fewer discarded artifacts were visible on the surface.

There can be no doubt that looting has a long and honorable history in the Babícora Basin, as witnessed by the knowledge held by local ranch foremen and workers in the 1920s and 1930s. However, the Presidente of the Colonia Los Pinos (which controls the common land on which the site is located) informed us that El Zurdo was not seriously damaged until 1982, when an outsider (said to be from either Mexico City or the U.S.) dug an enormous hole in the central mound and removed a very large rock that he took away. From that time forward, the site was much more seriously and systematically looted. Neither this story nor its purported date could be verified. It is nonetheless intriguing to think of the site as being in good shape until only seven years before our first visit in 1989.

### **Opting for a Stratigraphic Approach**

In the early 1990s, Ch-159 presented an ideal candidate for defining an extended cultural sequence at a single site. The depth of the exposed cultural deposits along the Zurdito arroyo (see Chapter 3 and Appendix B), combined with the height of the mounds, turned our thinking toward stratigraphy. In particular, the field strategy were influenced by the presence of a zone of deeply buried (2 m below present ground surface) burned maize cobs at the base of the Los Elotes arroyo (found by A. C. MacWilliams in 1990). A sample of the burned cobs was collected and by the time site mapping and testing began in 1991, a date had been received (1340  $\pm$  80 BP; Beta 44458) that indicated a pre-Medio period occupation.

Two seasons of testing at Ch-159 confirmed its importance as a long-lived Chihuahua Culture site, and an exception to the rule that Medio Period sites have little trash and therefore must have been seasonal or short-term (Nelson 2004; Nelson and LeBlanc 1986). Much remains to be done with the PAC collections, and this report is only a partial look at an important site. The radiocarbon samples from the site provide an interesting temporal span, and we created a large artifact sample (including more than 28,500 sherds and roughly 10,000 stone artifacts), placed tests both inside and outside the rooms, and prepared a detailed profile of ca. 150 m of the Zurdito arroyo. Radiocarbon dates within the range of the Viejo period (and perhaps even earlier) were obtained, and Viejo period pottery was recovered in the lower levels of the cultural deposits along the Zurdito drainage, but no definite Viejo period features were found—unless Test 13, discussed below, should be so considered evidence of such.

The above-ground rooms at El Zurdo belonged to the Medio period occupation. Further research at the site, involving removing looted deposits to isolate the site's lower levels, would be useful to expose Viejo period occupations and evidence on the Viejo to Medio period transition at a single site. In the process, a great deal of information could still be salvaged about the Medio period occupation. It is unfortunate the upper levels of the site are so heavily looted and that the northwest sector of the site was completely destroyed by construction of a dirt stock tank and dam in the mid-1990s. Nonetheless, the destruction of the site has been haphazard and incomplete, and it remains an important resource for understanding the prehistory of west-central Chihuahua.

## **Overview of the Site**

The El Zurdo drainage flows southward from the Puerto El Zurdo, entering the north edge of the Las Varas valley on its route to the Babícora Basin (Figure 2.1). Ch-159, on the west bank of the main arroyo at El Paraíso del Zurdo, is the largest site in the drainage and the only known large site in this locality outside the main Las Varas Valley.

Satellite sites, consisting of a few rooms each, are located along the Arroyo el Zurdo, both north (Ch-177) and south (Ch-173, Ch-174, Ch-194) of the main site. Field houses found along the drainage are believed to be contemporary with to the occupation of Ch-159, but this should be verified. The large lithic procurement areas along a ridge paralleling the Zurdo arroyo and at Puerto El Zurdo were probably used over a longer period.



**Figure 2.1.** NASA image showing Arroyo El Zurdo and vicinity. Taken in 2000, the photo shows the pueblos of El Alamillo (upper right), Nicolás Bravos (bottom) and Las Varas (upper left). The broad Las Varas Valley dominates the lower left part of the image. The Arroyo el Zurdo (white arrow) flows south.

The surface evidence was obscured by the extensive looting. Only the patio area in the north part of the site appeared to be minimally disturbed. All of the mounds had been looted, probably many times. Even so, the surface indications were of three large mounds, each derived from a multi-room structure (see Figures 2.2–2.4 for a visual summary of the site).

Smaller mounds appeared to have been present among and west of the large mounds. It was not clear whether the smaller mounds were separate structures or were byproducts of disturbance. An absence of structural remains along some 150 m of the Zurdito arroyo indicated that the rooms in the south part of the site were completely separate from those to the north.



Figure 2.2. Plan of Ch-159 (El Zurdo Site), as of 1992. From Hill (1992), with the author's permission.



**Figure 2.3.** Profile of the central room block. From Arroyo los Elotes to Arroyo Zurdito, along the axis of the 1992 long trench. (A newly rendered version of this profile will be provided at a larger scale in Part 2 of this report.)



**Figure 2.4.** Two views of El Zurdo. Top: central mound, looking to the NNE from south of the Zurdito arroyo, which visible in the foreground (PAC Photo No. B/W 92-18-01). Bottom: looking ESE across the central mound and El Zurdo arroyo; photo taken from one of the pine trees at the north edge of the site (PAC Photo No. B/W 92-18-11).

In addition to the house structures, the built landscape included a large walled patio or compound area in the northeast portion of the central mound. The patio measured about 16 m along the complete east wall and 15 m along the complete north wall. The northwest corner of the compound was clearly defined, but most of the west wall was no longer visible. Rafael Cruz's sketch map indicated that the north wall abutted a small room block on the west. The south wall abutted the east wall of the central room-block. The compound thus appeared to be an area of limited access next to the central room block. Tests within the patio/compound, along its north edge, revealed stone-lined pits with evidence of burning as well as a bell-shaped storage pit.

Cruz's sketch map suggests that another long exterior wall extended north-south along the west edge of the south part of the east mound. If this is correct, the enclosed area could have been a long, narrow enclosure along the west side of the southern part of that room block, or it could have been an outside wall of the room block. The 1991 survey map showed two walls, perpendicular to each other, indicating another exterior patio at the SW corner of the central mound. These two additional possible patios were not tested, but the field observations suggest that enclosed exterior spaces next to room blocks were common at the site.

Contour mapping did not delineate rooms among the extremely disturbed upper levels of the site. However, Richard Garvin (in 1990) and Loy Neff (in 1991) independently counted about 80 visible rooms. The east mound, which covered the largest area, may have had as many as 40 ground floor rooms. Presumably other rooms were not visible in 1991 and 1992, so a larger room count can be assumed.

It is not clear whether the three main mounds were occupied at the same time. Hill (1992) noted no significant differences in ceramic frequencies for the 1991 tests within the house mounds. Chihuahua Culture pottery is not very useful for fine-grained dating, however, at least not yet. The fact that the architecture of the major mounds is part of the upper levels of the site, along with late radiocarbon dates, indicates that the house mounds at least represented the latest occupation of the site.

Some evidence of room abandonment and reuse was seen in Room 1, where the plastered floor in Test 23 was cut through by a large trash-filled pit that extended to, and bottomed out on, the site's basal silt-clay deposits. Similarly, a large prehistoric pit cut into Room 3.

Because the central mound rose more than 1m from the natural surface, we postulated during our early visits that it might represent a two-story building, flanked on the south and east by one-story buildings (with smaller structures west of, and among, the three main mounds). Testing of the central mound in 1991 (Test 6), and the cross-mound profiles provided by the long trench (dug from the north edge of the patio to the top of the mound in 1992; see Figures 10 and 11) showed the central mound, at least, was a single story. Underlying the central mound was a level of cultural material that thinned with the contour of the mound. The bases of the structures in the central and eastern room blocks occurred well above the base of those cultural deposits, i.e. in fill.

Test units placed outside of the central room block did not reveal deep cultural deposits, and the three arroyos (other than Zurdito) now cutting headward to the west across the site (los Elotes on

the north; the very narrow and newly eroding arroyo Trece, on which Test 13 was located; the larger La Vaca arroyo on the south edge of the site) did not reveal cultural deposits with the depth of those in and under the central room block or along the Zurdito arroyo. However, Arroyo Trece had not cut completely through Stratum B (see below).

Architecturally, Medio period multi-room structures and enclosed exterior spaces were found. Information about the interior features and roof construction of the multi-room structures was sparse, due largely to our opting for a stratigraphic excavation strategy in response to the early radiocarbon date available at the beginning of the 1991 field season. Vertical relationships were given priority over the cleaning out of rooms—a strategy we came to regret. The only reported interior feature at the site was a fire pit in Test 13. A filled-in rectangular doorway was present in the east wall of Room 2. Exterior walls appear to have been more substantially built, with a higher rock or cobble content, than interior walls, which contained more adobe. No evidence was encountered that would suggest a multi-storied building. However, the data are inadequate for a comprehensive account of architecture.

The apparent absence of internal posts within rooms, together with such room measurements as were obtained, suggest small enough spans across rooms in the central mound for the roofing timbers to rest on walls. A substantial wall enclosed the patio/compound attached to the central room block.

Thin rhyolite slabs, which we called "hatch cover" rocks, were recovered in the central mound rooms. Nine other fragments were collected during the1991 survey, in the central mound area, while 10 other small fragments, probably from the same looted piece, were found together on the slope of the central mound. Others were observed but not collected; the largest of these measured 57 to 45 by 35 to 28 cm, with a thickness of 4 cm. Six specimens had flaked and otherwise worked edges. The slabs could have been used as roof hatch or door covers, as flagstone floors, or to create paved work spaces on roofs. The excavated samples from Room 2 in the eastern room block could have collapsed with the roof.

In terms of construction practices, Test 13 yielded the most intriguing results: the north wall of the room had an adobe wall base in which upright posts were set, in a pattern similar to that found in Perros Bravos structures at the Convento site (Di Peso 1974:185). This room (half of which had been eroded by the Arroyo Trece) had a small plastered fire pit with a slightly raised lip exposed in the arroyo's north wall. Carey (1931) reported that most of the hearths in the Las Varas room blocks that he excavated were on adobe platforms, so the presence of a small sunken hearth in Test 13 gave support to the idea that this room pertained to the late Viejo period, as indicated both by the pottery frequencies and the Perros Bravos style wall. Similar hearths at the late Viejo period site of Ch-254 in the Santa María valley were associated with pit structures (Kelley at al. 2000).

Information on room sizes was limited. The room exposed by Test 13 measured 2.5m by at least 1.25m (the latter distance being measured between the arroyo face and the north wall), with a probable floor area between 5 and 7.5 m<sup>2</sup>. If Test 5 actually represented a room, perhaps with a eastern *jacal* wall, it would have measured about 3.4 to 4 m by 5 m (ca. 13 to 17m<sup>2</sup>). Similarly, the structure in Tests 25, 26 and 27 might have been another room of roughly the same size as

that exposed Test 5. The most completely excavated room, Room 2 in the central room block was at least 3.5m long but only 1.5m wide (5.25 m<sup>2</sup>), with no built-in floor features (but with a diffuse burned area), and with a rectangular doorway near the south end of the long east wall. Although no T-shaped doorways were excavated by PAC, they have been found in the Las Varas sites and are still visible in nearby sites in the Sierra.

We cannot say whether there are unusual room shapes reflecting authority, as is seen in the Casas Grandes area (Di Peso 1974; Whalen and Minnis 2001a), as so few rooms have been excavated. No such evidence was seen at Zurdo. The L-shaped and trapezoidal rooms that Carey (1931) illustrated and a T-shaped room excavated by PAC at Ch-011 (the Raspadura site) in the Santa María valley can be noted.


## Chapter 3

## GEOMORPHOLOGY AND STRATIGRAPHY

## **A Buried Occupation Surface**

The top of a silt-clay deposit appeared to have been used as an occupation surface in some places. It was naturally almost level, at least in the northern part of the site, but could have been leveled in places. This deposit was first noted in various tests near the north edge of the site (at the compound north wall; inside that wall in 1991 Tests 3, 4, 10, and 11; in Tests 37, 15, and 16 of the 1992 long trench). Early exposures of this surface were thought to represent clay floors. After this kind of surface was exposed in several tests outside architecture, Warren Hill and Loy Neff considered the possibility that it was a natural surface that became an occupation surface. Phil Fralick, project geologist, confirmed this. The silt-clay level also extended into over the eastern part of the site (in the Test 2 area); it dipped to the north between Tests 25, 26, and 27 and the Arroyo los Elotes.

Similarly, a silt-clay level in Tests 17, 18 and 19, on the north side of the Zurdito arroyo, was at first thought to represent a floor (See Figure 3.1), but testing revealed it to be an uneven surface into which a basin shaped borrow pit had been dug. This silt-clay level was not continuously traced across the central room block to the one just described, but David Phillips and Warren Hill believed that it was the same level (see the discussion of the Zurdito arroyo below). Fralick also discussed this silt-clay level with regard to Tests 17 and 19.



Figure 3.1. Stratum D surface in Test 17, appearing very floor-like. PAC B/W 92-43-07.

The silt-clay level (or levels) marked the apparent base of cultural deposits. Several prehistoric pits were dug into this stratum from or near its surface. Below this surface, except in the intrusive pits, cultural materials were rare or absent. The large borrow pit recorded as Feature 92-15 was largely dug directly from the top of the silt-clay level in Units 16, 20, 28 and 30. Only the north side of Feature 92-15 was dug through a very shallow level of fill. The features in Tests 4, 10 and 11 (all on the north side of the central mound and near the north compound wall) rested in or on the silt-clay level without significant intervening cultural deposits.

The silt-clay layer proved to extend under the central mound in those units dug deeply enough to reach it. In contrast, the constructed features exposed in the patio and central room block (the patio wall; the stone-lined pit in Test 20; the walls of the upper multi-room structure visible in 1992 Tests 23, 29, 31, 32, 33, 34, and 26 of the long trench; in 1991 Test 6) "floated' in cultural fill, above the silt-clay deposit. The floor of Room 1 (Tests 23 and 24; Feature 92-18) was some 40 cm above basal cultural deposits, and the associated wall (in Test 23) bottomed out about 30 cm above the base of those deposits. Test 2, placed across the highest part of the east room block, showed that those structures were also built on cultural fill, above the silt-clay level. Clearly, part of the site was built well after initial site occupation.

Sheet deposits, both alluvial and cultural, extend over the entire site, with thicker accumulations below the lower levels of the room blocks (especially the central room block) and in the swale extending from west to east across the site that in recent years was cut by the Zurdito arroyo.

# The Zurdito Profile

Nature seldom provides a cross section of an entire site, from surface to bedrock. The Zurdito arroyo provided an east-west cross-section of that very sort, and the opportunity to make use of otherwise lamentable erosion could not be passed up (Figure 3.2). The work of cleaning the arroyo walls and creating a continuous profile fell to David Phillips (Appendix B). The south wall of the arroyo was profiled from the east end, at 396 m E, to 490 m E. The profilers then crossed over and profiled the north wall of the arroyo to its juncture with the main Arroyo el Zurdo, at 540 m E. The two sides of the arroyo did not present an unified picture, however. Each side included sediments from their own upslope areas. For this reason we cannot directly correlate strata across the arroyo, but the relationships are most convincing in the western or upstream portion of the arroyo.

Fralick estimated that the arroyo was a product of the last century. Indeed, it changed substantially after PAC members first saw it. In 1990, the upper and central parts of the arroyo were mostly characterized by more or less upright walls on both sides, except where cow paths crossed the arroyo, as seen in the upper left portion of Figure 3.2. In 1990, a burned zone was apparent at a depth of ca. 2 m below (non-arroyo) surface, at ca. 430 m E to 440 m E. That year must have seen rapid arroyo cutting. When we returned in 1991, the same south arroyo walls were collapsing into the arroyo bed in places, and the arroyo bottom had filled above the levels exposed in 1990.



Figure 3.2. The Zurdito arroyo as it was in 1990. This is where Test 7 was placed in 1991, and whence came the early radiocarbon dates  $(1340 \pm 80 \text{ and } 1150 \pm 50 \text{ BP})$  obtained in 1990. The lighter silts of Stratum A are visible at the top of the arroyo wall. The thick, dark sediments of Stratum B are also clearly visible. PAC 90C-22-13.

This sloughing of the arroyo sidewalls and the trend toward a more sloping arroyo profile, as well as filling of the arroyo bottom, continued until at least 1998. Short visits in 2003 and 2005 showed that the trend toward slumping walls and filling of the arroyo bottom continued.

# Fralick's Comments

Fralick's comments on the main Zurdo channel and the Zurdito arroyo were taken from a video of his visit to the site in 1992, made by Joe Stewart. Fralick began by looking at deposition in the main Arroyo el Zurdo away from the site, to see what nature had done without human intervention. There, he identified three key units. The upper and lower units formed outside the channel and represented different depositional processes from those of the middle unit, which formed as channel deposits containing ash lenses. The bed of the Arroyo el Zurdo contained gravels like those in the middle unit.

At the mouth of the Zurdito side arroyo, the bottom unit consisted of the lowest clays and silts seen in the Zurdo profile. These deposits showed no evidence of cultural activity and presumably predated occupation of the site. The top of these clays and silts represented the silt-clay level discussed earlier. The middle geological unit contained charcoal and other cultural materials, and

could be divided into upper and lower deposits. This unit represented channel deposits at the juncture of Zurdito and the main Zurdo channel. The top unit consisted of overlying silts.

About 30 m west of the juncture of Zurdito with the main Zurdo channel, Fralick outlined Zurdito's morphology, showing that the sides were more sloping, and tracing a point where sheet wash over the edge of the drainage caused materials to wash down the arroyo. At least the lower part of the channel had shifted, and he thought that one of the older channels was some 3 to 4 meters outside of the present channel. He believed that the channel was active at the time of site use, and made the point that deposition along the Zurdito arroyo reflected sedimentary factors such as water speed and the size of objects in the drainage and depositional system.

## Other Observations

The more detailed mapping of Zurdito (as well as other stratigraphic observations) occurred over several weeks, with frequent consultation among crewmembers. In addition to the basic profile work (Appendix B), Loy Neff, Warren Hill, Art MacWilliams and Judy Wheeler contributed stratigraphic observations, and the first three recorded stratigraphic summaries in their notes, independently of Fralick's visit. There was broad agreement on the presence of (1) a basal silt-clay, (2) middle levels bearing cultural materials, and (3) upper silts. As might be expected, the observations of those regularly on-site went on to identify sub-strata in the Zurdito deposits. The point of greatest disparity between Fralick and the various archaeologists concerned the amount of water transport of artifacts—or to phrase it differently, whether the final locations of artifacts within the Zurdito deposits were due to cultural activities or reflected water transport. All of the archaeologists, from the time of MacWilliams' initial observations, recognized some water transport of the deposits along the arroyo. The questions were: how much, how often were there stable surfaces on which to conduct cultural activities, and what were the differences in levels of fluvial activity in different segments of the arroyo?

The archaeologists thought that the middle and upper parts of the arroyo had seen stable intervals, while the lower or eastern end of the arroyo was always more active. The fact that individual lenses and sub-strata could be traced for some distance in the arroyo profile further suggested a series of depositional events separated by more stable periods. The east wall profile of Tests 7 and 7A exposed several burned zones in the lower levels, of which the one exposed in the arroyo in 1990 (providing burned maize that produced an early date) is only one, and not the lowest one at that. There is only one place where a side channel cut the otherwise fairly continuous middle deposits; this is shown on the long profile, roughly at the place where Fralick demonstrated the changed contour of the arroyo and spill over.

The strata exposed in the arroyo walls continued into adjacent test units such as Test 1, Test 7, and the area of Tests 14, 17, 18 and 19, supporting the idea that this area was a swale during site occupation. In the Test 7 complex, for example, the deposits indicated that the swale was rather broad, sloping gently downward from the south toward the future location of the arroyo. In Test 1 (across the channel from Test 7), the deposits sloped gently down from the north across the 2 m width of the test. No channel edge was encountered in either case. Instead, Stratum B deposits (see below) could be traced for at least 18m from the north edge of Test 1 to the south end of the

Test 7 group of units (assuming that the strata were once continuous across the present channel). A slight rise in bedrock in Test 7A might mark the south edge of the swale. The culture-bearing strata (Stratum B) continued across the entire site, on both sides of the Zurdito arroyo. Although the arroyo walls portrayed a complex depositional history with at least one channel, the dominant process seems to have been progressive deposition.

The stratigraphic designations proposed in 1992 by the on-site archaeologists to designate the strata exposed in the arroyo were adopted for this report. Two major strata (A and B) were visible throughout the length of the Zurdito arroyo. These fairly continuous strata dipped to the east, toward the main Zurdo drainage. The ground surface also dropped, from ca. 2 m BD at the west end of the arroyo to more than 6 m BD and the confluence of the main and side streams. The base of the arroyo dropped from 2.8 m BD to 8.7 m BD over 144 m.

The three strata were thin in the upper (western) sector, near the head of the arroyo. The upper (A) and middle (B) strata thickened between 385 m E and 470 m E, at which point the middle stratum B began to pinch out. The fourth stratum (D) represented the silt-clay level that underlay the cultural deposits. These strata were, from top to bottom (youngest to oldest):

# Stratum A

The upper deposits were light-colored alluvial sands and gravels, Fralick's "upper" unit of deposits. The deposits could exceed 1 m in thickness and were often banded, with some of the bands representing discrete flooding episodes. Artifacts and at least one large piece of charcoal occurred in lower Stratum A, most likely from reworking of older deposits. The stratum largely or entirely postdated the Medio period occupation of the site. No radiocarbon dates were obtained for this stratum, but it must postdate the latest (uncalibrated) date of  $640 \pm 50$  BP from upper Stratum B.

# Stratum B

The middle deposits were darker than Stratum A and represent the upper part of Fralick's "middle," culture bearing unit. The associated radiocarbon dates, the dark organic staining of most of the stratum, and the rich artifact content all place these deposits in the Medio period, though perhaps beginning earlier. At the upper or west end of the arroyo, Stratum B first appeared at 397 m E, as a dark stained wedge with few visible artifacts. As there was a definite western limit for Stratum B, the assumption was that the organic staining and artifacts could not be derived from farther to the west. Instead, the areas to the north and south of the present arroyo must have contributed most of the organic debris and artifacts.

Phillips saw Stratum B and Stratum C as having both alluvial and anthropogenic origins. In other words, natural alluvial processes were at work but humans also contributed to the process through deposition of sheet trash, excavation and filling of pits, and so on. Eight sub-strata were identified at different points along the arroyo, with as many as four visible sub-strata present at a given location. These varied in terms of size of sand and gravel components, bedding, and color. Uncalibrated radiocarbon ages associated with Stratum B ranged from ca. 950 BP to 640 BP.

# Stratum C

Below the dark zone (Stratum B), additional deposits with cultural remains were present in the upper and middle parts of the arroyo. These deposits extended to, or almost to, bedrock and constituted the lower part of Fralick's "middle," culture-bearing unit. It is not clear whether the geologist and the archaeologists agreed on the details of Stratum C, however. Many Stratum C lenses were water deposited but ashy lenses and burned zones were also present. In particular, the burned zone that produced the early (uncalibrated) date of  $1340 \pm 80$  BP (where Test 7 was placed in 1991) was not transported by water, but burned *in situ*, as seems to have been the case for other burned zones in that part of the arroyo also.

Except in individual ashy or burned lenses, Stratum C was much lighter (and presumably less organically stained) than Stratum B. Stratum C was more monolithic west of 460 m E; east of that point, banded deposits were more common. The boundary between Stratum B and Stratum C also became less clear at that point.

# Stratum D

As is discussed at the start of this appendix, a silt-clay stratum materials was sometimes present along the lower Zurdito arroyo. At the arroyo's mouth, Fralick identified this stratum as part of his "lower" unit. It underlay the cultural deposits in the central room block and patio/compound area, was visible in the walls of the Los Elotes arroyo just north of the long north-south trench, and underlay the eastern room block. Fralick determined that this silt-clay stratum continued for some distance from the site, as deep silt-clay deposits exposed in the Arroyo el Zurdo.

Within the confines of the Zurdito, pre-occupational sediments were thin and discontinuous. Sand and gravel lenses occurred sporadically between those strata and Stratum D (or, where Stratum D was absent, between the upper three strata and bedrock).

# Bedrock

Bedrock, exposed in the bottom of Zurdito arroyo from 420 m E to the junction with the Zurdo, was a tan tuff that often cracked into large blocks. Along the lower Zurdito arroyo, these cracks were filled with a clean yellow sand.

# Discussion

Although the deposits along the Zurdito arroyo were alluvial, the size of some sherds and the recovery of a whole vessel from the arroyo bottom sands suggested that materials need not have been transported far. Features such as a small hearth in the arroyo profile at ca. 500 m E showed that people made use of stable surfaces within these deposits. A pit in Tests 7 and 7N (just south of the arroyo), at 430 m E contained primary trash, as did the pit in Tests 17 and 19 on the north side of the arroyo. The presence of articulated turkey burials in Stratum B at various levels of Test 14, and another one in Feature 92-10 at ca. 498 m E of the Zurdito profile, showed that the area was stable enough for these burials to be made. The same is evident form Feature 92-39, a human burial eroding from the south arroyo face in Stratum B at 491 m E.

In summary, the area now occupied by the Zurdito arroyo was a swale crossing the village from west to east during the occupation of the site. It was never used for structures for the perfectly good reason that this was a drainage area throughout the history of the site (and afterwards). The upper and central parts of the swale were geologically less active, while the lower, eastern reaches were more active.

## **Arroyo Los Elotes**

After the profiling of Arroyo el Zurdito and excavation of the 1992 long trench from the north side of the patio to the top of the mound, Test 41 was placed next to the south bank of Arroyo los Elotes, in line with the long north-south trench. This allowed cleaning of the vertical arroyo wall and testing well below the limit of cultural deposits in order to expand on our stratigraphic picture of the site. Stratum B and possibly Stratum C (as defined in the Zurdito profile) were present. The underlying silt-clay level (Stratum D) extended to the base of the test.

Arroyo Los Elotes was eroding in quite a different manner from Zurdito. In 1990, the Los Elotes channel had cut to a depth of 3 to 4 m over a distance of 60 m above its juncture with the main (Zurdo) channel. The arroyo sides were vertical, with shallow cultural deposits visible at the top of the arroyo walls. Stratum B was definitely present in the south arroyo wall, but in extremely attenuated form. An eroding burial was visible in the south arroyo wall, 1 m below the surface (but was gone by the next field season). Bedrock was not exposed in the arroyo bottom. The mouth of the arroyo was at the level of the main (Zurdo) arroyo bottom, and was 4 to 5 m wide.

In 1990, at a spot north of the northeast corner of the patio wall, the arroyo stepped vertically upward, and above that point the drainage was quite shallow. The "step" was caused by a thick mat of burned plant material, including maize cobs, which was impeding the headward (westward) erosion of this arroyo. The presence of so many burned corn cobs and other organic materials caused us to call this the Arroyo los Elotes. By 1991 that impediment had washed away and the deep section of the arroyo was rapidly extending itself westward. In the mid-1990s, the dam for the stock tank built in the northwest part of the site was placed across this arroyo.

Unlike the Zurdito swale, no significant depression existed on the north side of the site at the time of occupation. Instead, the local alluvial deposits extended across what is now Arroyo Los Elotes. This arroyo therefore did not reflect intensification of an older drainage pattern. At this north edge of the site, cultural materials and organically stained deposits thinned noticeably, though surface indications of ground and flaked stone and pottery continued north of the arroyo and across an area of unplowed pastureland.

## Arroyo El Trece

This was the most recent arroyo cutting westward from the main (Zurdo) drainage. Stratum A was clearly visible along its length. The arroyo had not yet cut below Stratum B. Test 8 provides

a sense of the stratigraphy in this part of the site. The arroyo's name, Trece, was taken from Test 13—a room being cut by this arroyo in 1991.

# Arroyo La Vaca

Marking the south edge of the site, this arroyo was named after a cow that died there in 1992. The upper fluvial deposits of Stratum A were quite thin. Stratum B ("midden") was exposed throughout most of its length. Cultural materials were thinner at this edge of the site, and the "midden" rested on Stratum D.

# Chapter 4

# TEST 1

The first test (Figures 4.1 and 4.2; Table 4.1) was placed on the Zurdito arroyo directly across from, and north of, the basal burned zone that produced the date of ca. A.D. 600. Although MacWilliams traced the burned zone for a short distance under the arroyo bottom sands in 1990, the zone did not extend across the entire arroyo bottom. The north face of the arroyo was more vertical at this point, and thus a better choice for a deep stratigraphic test. We reasoned that if the zone had previously extended across the modern arroyo, it would be present on the north side, which would allow us to associate the lower strata with a dated context.

Neff's field notes anchor this unit. Neff made it clear that he used the strata visible in the arroyo face wall as a guide to excavation. Although the deposits sloped from north to south toward the arroyo, they were continuous across the unit and no channel walls were found.

Subdivisions of the three main strata outlined above occurred in this test. Levels 1 to 5 can be assigned to Stratum A, which partly or wholly post-dated the occupation of the site. Sherds were quite rare in Level 1, becoming more numerous (though still sparse) through Level 5. The lighter-colored deposits of Levels 1 through 5 are clearly visible on the photograph of the unit.



**Figure 4.1.** Test 1 at the end of excavation. Note the clear demarcation between the upper fluvial levels and the culture rich levels of Levels 6 to 10A. View to north, from the Zurdito arroyo (PAC B/W 91-2-35).



Figure 4.2. Test 1, profile of north wall.

N

50

n

M Stratum

Bock

#### **Table 4.1. Test 1.**

Lot #	Level	Depth	Description	Estimated
		(cm BD)		Volume
2015	L1	19–30	Recent fluvial episodes. 1 bone "spatula" fragment with a smoothed end.	0.43m <sup>3</sup>
2016	L2	30-69	Fine sand and silt and possible adobe outwash.	1.56m <sup>3</sup>
2025	L3	69–82	Fluvial gravels.	0.52m <sup>3</sup>
2024	L4	82–89	Silty, sandy loam and dark soil. Charcoal.	0.28m <sup>3</sup>
2029				
2030	L5	89–102	Soil more organic than L 4.	0.52m <sup>3</sup>
2031	L6A	102-123	Dark soil. First "real" cultural level with great increase in	0.84m <sup>3</sup>
2032	L6B		artifact density.	
2039	L7	123–127	Dark organic soil continued, but with an intrusion of a finer gravel soil in SE-SW axis. Some bones in S wall. Charcoal.	0.16m <sup>3</sup>
			Lenses of gravel.	
2040	L8	127-132	Dark soil. Larger rocks, burnt soil.	0.22m <sup>3</sup>
2041	L9	132–159	Organic dark soil. Bottom of dark, rich zone with ample artifacts; large stones.	1.06m <sup>3</sup>
2064	L10	159–195	Alluvial sand over bedrock. Artifacts continue through level.	1.44m <sup>3</sup>
			Burned wood common. Bedrock reached at 195 BD	(10 & 10A)
2065	L10A		Burned zone in SW corner was excavated separately, to 195	
			cm BD.	
			Total estimated volume	7.03m <sup>3</sup>

(2 by 2m unit. Depths for NE corner are Below Station A [1991 site datum].)

Levels 6 to 9 pertained to Stratum B and were characterized by dark deposits containing abundant artifacts interspersed with sands and gravels. The darker color of these deposits is clearly visible in the photograph. A substantial increase in cultural materials occurred below Level 5. Neff characterized Level 6 as forming the beginning of the "real" cultural levels. The density of artifacts from each level indicated that Levels 6 to 10 formed during site occupation. Neff believed Levels 6 through 9 were formed of melted adobe and fluvial materials probably washed down from the north and northwest. Levels 10 and 10A were assigned to Stratum C. Depth from surface (19.2 cm below the 1991 site datum near Test 6 on the central mound) was ca. 185 cm at the bottom of Level 10. The burned zone in the SW corner of Level 10 (dug separately, called Level 10A here, and assigned a separate lot number) might have been equivalent to, and was perhaps once continuous with, the burned zone at the base of the south side of the arroyo. No features were found in this excavation. No radiocarbon samples were analyzed from this unit.

#### Pottery

The pottery assemblage from this unit is critical for understanding the changes in pottery at the site, as are the assemblages from Tests 7 and 14. These tests along the Zurdito arroyo have reasonable stratigraphic depth. Tests 7 and 14 were the only test units to produce older radiocarbon dates, and represented the greatest time depth encountered at the site. Test 1 provided one of the better stratigraphic records from the site, with less disturbance than was seen

in most test units. Gross trends in the frequencies of the various categories began to emerge in this stratigraphic test. The trends seen here were to some extent echoed in other units.

More than 14 kilos of pottery came from this test, with the largest numbers and weights occurring between Levels 6 and 9. The two levels that produced the most pottery were Levels 6 (n=1,188) and 9 (n=1,058). The greatest density of sherds per cubic meter came from Levels 7  $(2,356 \text{ sherds/m}^3)$  and Level 8  $(2,236 \text{ sherds/m}^3)$ . A significant change in the frequency of textured wares occurred between Levels 5 and 6, however, the sample sizes for the upper levels was small. Levels 1 through 5 contained few sherds and represented a period that was either post-occupation (with inclusion of cultural materials through geological processes) or a period of limited occupation following the main use of the site. The percentages of plain brown sherds in these upper levels ranged from 58 to 91 (in relatively small samples). Red-slipped sherds occurred in these upper levels, but no black-slipped ware. One sherd from Level 3 was a red-on-brown. Each of the five upper levels contained from 6 to 14 percent textured ware. The only Babícora (n=2) was black-on-tan.

Tables 4.2 and 4.3 summarize the pottery; the notes for each lot number and level are also provided. In particular, the Test 1 pottery was used to look at characteristics such as vessel shape and variations of texturing.

Lot	Level	Undec	Black	R-sl	R-br	Text	Poly	Other	Comb	Total	Wt in g	Density /m <sup>3</sup>
2015	L1	6 86%				1 14%				7	20.5	16/m³
2016	L2	10 59%		2 12%		2 12%			3 18%	17	65.25	11/m³
2025	L3	25 83%			1 3%	2 7%	2 7%			30	134.75	58/m³
2029	L4	47 77%		3 5%		9 15%	2 3%			61	250.5	217/m <sup>3</sup>
2030	L5	65 92%		1 1%		5 7%				71	273	137/m³
2031 2032	L6	782 65%	1 0.08%	17 1%	25 2%	320 27%	51 4%	1 0.08%	1 0.08%	1198	5482.4	1426/m³
2039	L7	261 69%	2 0.5%	12 3%		85 23%	15 4%		2 0.05%	377	1002.4	2356/m <sup>3</sup>
2040	L8	330 67%	18 4%	11 2%		125 25%	4 0.8%	2 0.4%	2 0.4%	492	2208.2	2236/m³
2041	L9	736 68%	17 2%	7 0.6%		269 25%	33 3%	5 0.5%	10 1%	1077	1099	481/m <sup>3</sup>
2064	L10	305 60%	35 7%	8 2%	9 2%	116 23%	1 0.2%	4 0.8%	32 6%	510	3505.4	138/m <sup>3</sup> (10/10A)
2065	L10A	14 48%	4 14%		1 3%	5 17%			5 17%	29	210.1	
Totals %s		2581 67%	77 2%	61 1.5%	36 0.03%	939 24%	108 3%	12 0.3%	55 1%	3869	14251.5 gms	550/m³

 Table 4.2. Pottery from Test 1 by Level, from Lab Records.

Lot	Level	Paint	Poly/	Ramos	Madera	Bk/R	Other	R/brs	R/text*	Text	Total
			Bab	poly	B/r					Total	
2015	L1	0								1	1
2016	L2	0								2	2
2025	L3	3	3							2	5
2029	L4	2	2							9	11
2030	L5	0								5	5
2031	L6a	16	16							24	40
2032	L6b	48	33			15				274	322
2039	L7	6	5			1	1			53	59
2040	L8	16	12	1				2	1	130	176
2041	L9	34	27		1	3	1	6	2	255	293
2064	L10	17	10		2			1	4	124	141
2065	L10A	2						1	1	9	11

 Table 4.3. Summary of Neff's Notes on Painted and Textured Pottery for Test 1.

2031, L6: 2 sherds recorded in the lab as having red paint were not painted.

2039, L7: "Other": Escondido Polychrome

2041, L9 (1) One thin, well made sherd had dark gray paste; (2) three of the Babícora rims were textured.; 'Other': Escondido Polychrome. Also, Neff noted that 4 sherds classed in the lab as red-slipped were painted instead of slipped—one of these was a small Babícora with red paint only.

## Notes from the Lab

2015, L1: The textured sherd was scored.

2016, L2: "Combo": Three rims from the same vessel. The vessel had a black slip band on the exterior of the lip, while both interior and exterior were red slipped. In Textured: One sherd had irregularly placed horizontal and vertical incisions; the other was incised/corrugated.

2025, L3: Textured: one sherd had parallel incised lines; the other was corrugated with further alteration (punctate?). Both of the Babícora sherds were black-on-tan. The single Red-on-brown had red paint on a buff colored background (slipped?); the design was not drawn or described.

2029, L4: the only two Babícora sherds were black-on-tan. The textureds included two scored, four incised, two rubbed corrugated, and one punctate. There were three red-slipped.

2030, L5: the red-slipped sherd had a brown interior and a red-slipped exterior. Textured: three were incised and two were too small to ascertain the type of texturing.

2031/2032, L6: "Other": a gray, direct, thin rim. "Combo": a corrugated exterior with a red slipped interior sherd. Within Babícora: 26 were polychrome, 22 Black-on-tan, and three Red-on tan (but see note with Figure 4.3). The single black sherd had an interior black slip and brown exterior. In textured: zoned corrugated, corrugated, altered corrugated, brushed/striated, various kinds of incised, fingernail-impressed-corrugated, and, most importantly, one cord-marked sherd. Six rims had interior red slip bands on lip interior; three of these were on plain brown pottery (Pilón Red Rims) and three were on rims with textured exteriors.



**Figure 4.3.** Polychrome sherds from Lot 2041, Level 9, Test 1 (PAC 91C-34-09). The bowl rim on the left was recorded as Babícora Polychrome, but reexamination of the photograph suggests that the assignment was inappropriate. It could be Dublan Polychrome. The assignment of the sherd on the right as Babícora is not convincing either.

2039 (Level 7): "Combos": two sherds had red-slipped exteriors and black–on-brown interiors. Of the Babícoras, 15 were polychromes and one was black-on-tan. Textureds: altered corrugated, corrugated, scored, incised, zoned scored/corrugated, zoned corrugated with altered corrugated.

2040 (Level 8): "Other": one Ramos Polychrome and one white-slipped sherd. "Combos": redon-tan combined with scoring, and one sherd with a black exterior and red interior. A red-slipped "false rim" or flanged sherd was recorded from this level.

2041 (Level 9): "Others": (1) two black-on-reds (suggested by Neff to be Madera Black-on-red), (2) two red-on-terracotta colored backgrounds, and (3) one sherd with a white-slipped interior. "Combos": unusually abundant in this level, they included: (1) one incised Babícora Polychrome, (2) two rims with interior black slip bands on brown, (3) one sherd with zoned incisions with red paint or slip in the smoothed area, (4) one corrugated exterior with a black interior, (5) a body sherd and a rim with red interiors and black exteriors, (6) one sherd with a black interior, (7) a black rim with a red slip band, and (8) one sherd of a black slipped and polished altered corrugated jar. There was one definite Pilón Red Rim (on a plain brown rim), and a red slip band on a black rim representing the same idea. See Figure 60 for two of the sherds tabulated as Babícora Polychrome that would probably be better placed in other polychrome categories.

2065 (Level 10): "Other": (1) two painted sherds too burned to detect the color of the paint; (2) one Black-on polished dark brown sherd with a flag-like black design; and (3) one whitish, cream-colored sherd. "Combos": (1) 27 sherds with polished black exteriors combined with scoring, (2) one zoned incised sherd with an eroded red slip over the exterior, (3) one zoned corrugated with four broad red lines, and (4) three altered corrugated with broad red lines. This level had only one Babícora Polychrome rim, although one of the red-on-tans could be a

Babícora. Four rims carried interior red slip bands (two Pilón Red Rim, and two textured). One of the light tan but undecorated, rims could be from a plate or fairly open vessel. A miniature vessel made of pinched coils with 2 coil lines visible was crudely made.

2065 (Level 10A): "Combos": (1) three altered corrugated with black exteriors, (2) one scored textured sherd with red paint on the interior, and (3) one scored sherd with a polished black interior. There were no polychrome sherds from this level. In Textured: altered corrugated, incised/altered corrugated, and scored. There was one Pilón Red Rim.

## Discussion

Black-slipped ware occurred in Levels 6 to 10A, and red-slipped ware in Levels 6 to 10. Although these two categories were represented by small samples, it is interesting that red-slipped appears to have increased in importance through time, while the black ware decreased in frequency.

A marked change in the frequency of textured wares occurred between Levels 5 and 6, though the sample sizes for the upper levels were small. Textured wares maintained a steady frequency (between 23 and 27 percent) in the lower levels.

Babícora sherds occurred in Levels 3 through 9. If one wishes to argue that Levels 10 and 10A belong to Stratum C, and that the burned zone in Level 10A could be equivalent to the 2m deep burned zone exposed across the arroyo in 1990, the presence of "Babícora" in Level 10 becomes problematic. That sherd exhibits a black zigzag design on a dark brown slipped and polished vessel exterior. It certainly did not conform to designs or colors of Santa Ana polychrome or any of the Viejo period red-on-browns. The dark brown background made it a poor candidate for Babícora (but see the discussion of dark brown background polychromes in the preliminary notes above, and in the discussion of Test 7). Nonetheless, the design was more like Babícora. Level 10A, at the bottom of the test unit, has only brown, red-slipped and textured sherds—all of which fit nicely into a Viejo period assemblage.

Babícora sherds (including polychrome, red-on-tan and black-on-tan) are numerous enough in Levels 6 through 9 to accept them as a regular part of the assemblage, though the sherds need to be reexamined to ascertain if any should be classed as non-local Viejo or Medio period polychromes, or as Santa Ana polychrome. One Babícora Polychrome sherd from Level 9 was incised. In Level 6, the two Babícora polychrome rims had quite different designs. One was a bowl rim sherd with spaced, alternating diagonal lines of red and black; this sherd lacked a framing line below the lip. The other, a small jar, had horizontal black lines under the rim. Also from Level 6 was a Babícora bowl sherd with painted black designs on both interior and exterior.

A single Ramos Polychrome sherd was tabulated from Level 8, which was unexpected in terms of stratigraphy.

The "combo" sherds included the following combinations of attributes that otherwise tended to cluster in the major "local" categories, emphasizing the "mix-and-match" quality of the pottery.

Variations included black and brown slip bands on lip interiors, and combinations of red or black slips and/or paint with various kinds of texturing. The "combos," clustered in Level 9 and below, included the following: red slipped exterior with slip carried over onto brown interior as a slip band with a black band around exterior of rim (L2), black slip on rim interior with a brown lip and unslipped exterior (L6), red slipped exterior with black interior on brown interior (L7), black exterior and red interior (L8 and 9), black with a red slip band on rim (L9), black/red (L9), brown slip band on brown rim (L9), zoned incision with red in non-incised areas (L9 and 10), corrugated exterior with red interior (L9), brown rim with black slip band on interior (L9), black exterior with incisions (L9), black-on-tan exterior with black interior (L10), black slipped and polished exterior over smoothed corrugations (L10), broad corrugations with broad red lines (L10), altered corrugated with red lines (L10), polished black with brushed and striated exteriors (L10A), brushed and striated exterior (L10A).

Test 1 yielded 11 rims with red slip bands on the interior: six in Level 6 (three Pilón Red rims and three on textured wares), four in Level 10 (two on brown [Pilón Red Rim], one on incised, and one on a zoned incised sherd with an eroding red slip), and one in L10 A (Pilón Red Rim). These did not include vessels that were red slipped on either the interior or exterior, with the red slip carried over onto the opposite surface, giving much the same effect a Pilón Red Rim.

Textured sherds included variations on corrugations, scored, incised, punctate, cord marked and combinations of techniques. Corrugation was the dominant form of texturing. Corrugated sherds exhibited various degrees of rubbing or smoothing, as well as banded, zoned and fingernail impressed corrugations. Incised sherds included single lines, parallel lines, zoned incisions, and patterned incisions. Sherds exhibiting two kinds of texturing included zoned corrugations with zoned scoring, scored with incisions, punctate with incisions, and corrugation with incisions; these are the dual combinations in the following table. Table 4.4 does not include any of the textured sherds with slips or painting noted above.

Level	Corrugated	Scored	Incised	Punctate	Cord	Dual	Total
L 6	207 (67%)	53 (17%)	36 (12%)	11 (3.6%)	1 (0.3%)		308
L7	48 (61%)	10 (13%)	17 (22%)	2 (3%)		2 (3%)	79
L8	57 (46%)	14 (11%)	36 ((30%)	6 (5%)		10 (8%)	123
L9	174 (59%)	31 (10%)	74 (25%)	12 (5%)		5 (2%)	296
L10	31 (48%)	3 (5%)	28 (44%)	1 (2%)		1 (2%)	64
L10A	2 (33%)	3 (50%)				1 (127%)	6
Totals &	519	114	191	32	1	19	876
Av. %s	(59%)	(13%)	(22%)	(4%)	(0.1%)	(2%)	

Table 4.4. Major Textured Categories, Test 1, Levels 6 through 10A.

One of three cord-marked sherds found at the site came from Level 6 in what was clearly a Medio period deposit. Another cord-marked sherd was reported for Test 13.

Neff identified more possible imports and/or named types than did the original analysis (Table 4.5), and one of the rims originally classified as textured in 1991 was reclassified by Neff as a red-on-brown with texturing. The possible presence of Escondida needs to be verified through re-examination of the collection. He identified Anchondo Red-on-brown (on which the painted broad red-line design has been polished over) from the two most productive levels in this test.

Level	From 1991	From Neff
	tabulations	
L6		Escondida polychrome (?); Anchondo Red-on-brown (?)
L7		
L8	Ramos	Ramos (local variant?)
L9		Escondida polychrome (?); Anchondo Red-on-brown
		Red-on-brown? A Red-on-blackpossibly Madera Black-on-red; Ramos
		Black (?)
L10		Mata polychrome (?); Madera Black-on-red; Ramos black (?) Victoria
		Red-on-brown textured (?)
L10A		Unnamed Red-on-brown

 Table 4.5. Neff's Possible Imports and Other Named Types from Test 1.

Vessel forms were often not easy to identify, and the recording of this information was quite uneven. The most consistent information came from the coded rim forms, but even there the attribution of form was often a "best guess" accompanied by a question mark. When rims were not entered on the rim forms, it was difficult to tell assign vessel form. The following information (Table 4.6) came from the coded forms for Levels 8 through 10A and included all designations (including those followed by a question mark).

Table 4.6	. Vessel forms,	Test 1, Levels	8 through 10A.
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Level	Total rims	Bowls	Jars	High/straight	Plates	Tecomates	Unknown
				necked jar			
8	31	4 ((13%)	16 (52%)			1 (3%)	10 (32%)
9	71	16 (23%)	14 (20%)		1 (1%)	2(3%)	38(54%)
10	43	14 ((33%)	20 (47%)	1 (2%)	1 (2%)	2 (5%)	5 (5%)
10A	3	1 (33%)					2 (66%)

This data suggested that bowls and jar sherds were present in at least Levels 8 through 10, and probably in all Test 1 levels. If we total the numbers of bowls and jars, it would appear that jar sherds slightly outnumbered bowls. Two possible plates (extremely everted rim sherds), a straight, high neck of (presumably) a tall necked jar, and five incurved bowls or *tecomates*, one of which has a very small aperture or mouth (Level 10) were noted. A body sherd of a small, coiled miniature vessel also came from Level 10.

Figures 4.4 and 4.5 illustrate some of the rims and texturing displayed by the sherds from Test 1.









**Figure 4.4.** Rims and corrugated sherds from Test 1, Level 9. Lots: PAC 91B/W-9-6 and 91B/W-13-9.



**Figure 4.5**. Corrugated and partly corrugated sherds from Test 1, Level 10. Lots: 2064 (PAC 91B/W-13-11 and 91B/W-13-13).

## Other Ceramic Items

In addition to the tabulated pottery discussed above, Test 1 yielded an unusual number of modeled pieces and sherd disks.

2031, L6: a sherd disk (3.5 by 3.2 by ? cm, 10g)

2032, L6:

1) A small, modeled foot (2.4 by 2.1 by 1.8 cm, 0.8g) attached to a vessel wall, retaining a small portion of the vessel interior wall on the piece.

2) A modeled paw; the end of the paw was 1.2 cm wide; the paw narrowed to 0.7 cm and the whole piece was 1.7 cm long (0.8g). It was not clear if this was attached to a vessel wall.

3) A fragment of a modeled piece that probably served as a hollow vessel support. Fairly crude and unslipped, it was 3.5 cm tall, with an estimated ca. 3 cm diameter.

4) Another modeled fragment (2 by 2.3 by 0.6 to 1.1 cm, 5.5g) that may also have been a part of a vessel support. This one had an attachment surface.

5) A brown sherd disk fragment (2.7 by 2.0 by ? cm, 3.8g) with a biconical drill hole (estimated diameter of 0.9 cm). The piece was broken across the hole. The edges may have been worked.

6) A brown sherd disk fragment (2.2 by 1.4 by ? cm, 2.0g) with a biconical hole (estimated diameter of 0.8 cm). The piece was broken across the hole. The edges were unfinished, and the piece may have broken in manufacture.

7) A brown sherd disk fragment, not drilled, had a well ground edge (2 by 1.6 by ? cm, 33.6g).

2039, L7: a small, brown modeled piece described as "an appendage" was tapering and cylindrical (2.2 by 1 by 0.7 cm, 2.0g).

2040, L8:

1) A round handle or support (4.8 by 2.7 by 1.0 cm, 12g) was probably part of a crude ladle.

2) 20-40-1: a small, crude ladle bowl did not fit with the possible ladle handle from this same level (Figure 43, left). Made of unslipped brownware, it appeared to be fire blackened on the bottom (3.9 by 2.9 by 1.0 cm, 16.1g).

2041, L9:

1) 2041-15: a small modeled piece that may represent a detached piece of appliqué (2.0 by 0.6 by 0.6 cm, 0.6g).

2) 2041-10: a possible broken pot lid (?) fragment with a ground edge was made on a large piece of Babícora Polychrome (6.5 by 5.8 by 0.8 cm, 47.3g).

3) 2041-11: a brown sherd disk (3.8 by 3.5 by 0.8 cm, 3.3g), not drilled.

4) 2041-12: a fragment of a subrectangular brown sherd disk (3.0 by 2.2 by 0.8 cm, 6.4g).

5) 2041-13: a red-slipped modeled piece that may have formed part of a solid support or handle (3.2 by 2.35 by 1.0 cm, 8.4g).

6) 2041-14: a fragment of a crudely modeled piece of brownware that could have been part of a very small neck or a vessel support (3.0 by 1.2 by 0.7 cm, 2.5g).

## Summary of Pottery

Hill's (1992) analysis assigned Levels 3, 4, 6 and 7 to the Medio period and Levels 9 and 10 to the Viejo period.

Textured wares were consistently frequent below Level 6, as were brown wares. Although samples from Levels 1 through 5 were small, both textured wares and black wares decreased, as did Babícora Polychrome. Red-on-brown or tan vessels are usually primarily associated with the Viejo period, but we have previously argued (Burd-Larkin et al. 2004) that the red-on-brown tradition did not die out in the southern Chihuahua Culture as it appears to have done in lowland zones.

Red-on-browns clearly occurred in Medio period contexts in Levels 3, and also in Level 6 (where 25 are recorded). Viejo period red-on-browns were definitely present in the lower levels, but the demarcation between Viejo and Medio period deposits was not clear cut. In evaluating Hill's (1992) postulated trend of increasing frequencies of plain ware through time, and decreasing textured wares, we looked at the lab tabulations. These indicate that textured wares and plain wares were fairly stable from Level 6 through Level 10, that plain wares increased in the upper levels, and that textured wares decreased, as Hill predicted.

The ceramic items that stood out in the Test 1 assemblages were the flanged Babícora Polychrome, the Ramos Polychrome (whether or not it is a local variant), the possibility of Escondido Polychrome (following Neff), and the cord-marked sherd. The number of modeled pieces from Test 1 was unusually high, and a substantial proportion of such pieces from the site were found here. This evidence suggests that appliqués were more common on vessels than our collections have shown, or that modeled figurines were present but have not been recognized (with the exception of a possible modeled torso from Test 7). The small, crude, unslipped ladle fragment was one of only a few such pieces found by the PAC.

Several modeled pieces suggested the possibility of legged vessels. Although we had no good examples of legged vessels in our collections, the whole pot found in the bottom of Zurdito arroyo in 1990 (Lot # 1292) had scars for a head, a tail, and four legs, showing that legged effigy vessels occasionally occurred. Whether they belonged in Viejo period contexts, as Level 9 seemed to be, is dubious.

### Flaked stone

Flaked stone from Test 1 is shown in Figures 4.6 and 4.7. Based on the Excel file, cores represented 7.7 percent of the total flaked stone count (Table 4.7). Shaped tools plus utilized flakes accounted for only 3.7 percent of the total. The frequencies suggest that the Test 1 area, along the Zurdito swale, was sometimes a lithic reduction area.

### Table 4.7. Flaked Stone from Test 1.

Lot	Level	Flakes*	Blades	Cores	Used	Tools	Total	Weigh	Density	Sherd:Lithic
								in gms	/m <sup>3</sup>	Ratio
2015	L1	10					10	8.05g	23	1:1.42
		100%								
2016	L2	7		113%			8	86.25g	5	1: 2.12
		87%								
2025	L3	12				1	13	24.7g	25	1.7:1
		92%				8%	-	0	-	
2029	L4	11				1	12	18g	46	5.4 : 1
		85%				`5%		-		
2030	L5	17		2			19	32.8g	17	3:1
		89%		11%				_		
2031	L6	511		26	6	2	545	1327.03g	649	2.1:1
2032		94%		5%	1%	0.4%				
2039	L7	104		8	2		114	364.4g	712	3.3:1
		91%		7%	2%			_		
2040	L8	94		4			98	360.5g	445	5:1
		96%		4%				_		
2041	L9	222		34	14	4	274	1068.9g	258	3.9:1
		81%		12%	5%	1%		_		
2064	L10	130		14	13	3	160	792.9g	122	3:1
		81%		9%	8%	2%		_	(10 &	
									10A)	
2065	L10A	12		2	1		15	76.8g		2:1
		80%		13%	7%					
Totals		1130	0	91	36	11	1268	4083.53g	180/m <sup>3</sup>	3:1
& av. %		89%		7%	3%	0.9%		]		

### (from Excel file)

\*Including shatter





**Figure 4.6.** Flaked stone from Test 1, Levels 6 and 10. Top left: Level 6, 2031-15 (PAC 91C-27-08). Top middle: Level 6, 2031-11 (PAC 91C-27-9). Top right: Level 6; the middle piece is 2031-6, and the others (left to right) are 2031-2, 1, 7, 4 and 3. (Pac 91C-27-11). Bottom: Level 10: 2064-4, 2064-3, 2064-2 (PAC 91C-26-01).



**Figure 4.7.** Flaked stone from Test 1, Levels 8 and 10. Left to right: from Level 8, 2040-2 (PAC 91C-35-01) and from Level 10, 2064- 5, 6 and 7 (PAC 91-26-04). The three points on the right are also illustrated in Figure 54.

According to the lithics catalogue, seven projectile points came from the unit (one from Level 3, one from Level 4, two from Level 6, one from Level 9 and two from Level 10). Other entries suggested that more expedient forms may have functioned as points, or were point performs. Most of the catalogued items were used or retouched flakes. No classic bifaces were recovered, but one specimen had good bifacial edge retouch.

The largest numbers of flaked stone pieces were associated with Levels 6 through 9. The density of flaked stone roughly parallels the density of sherds, except for the higher density of flaked stone in Level 6.

In general, the flaked stone was small. The largest piece, a core, weighted 69.9 g, but many of the pieces weighed less than 1 g. The average weight was slightly more than 3g.

# Notes from the Lab

More complete information about the shaped pieces was available in the Lithics notebooks.

2025-1 L3: a complete projectile point made of fine-grained black basalt, with side notches, a convex base, and finely serrated edges (2.1 by 1.0 by 0.3 cm, 0.5 g). This point was subjected to immunological testing and tested positive for rabbit (see Faunal Remains, below).

2029-1 L4: a projectile mid-section made of fine-grained black basalt was broken across the (broad) stem. It was either asymmetrically corner- or side-notched (1.9 by 1.3 by 0.3 cm, 0.8 g).

Twenty catalogued pieces of flaked stone came from Level 6, Lots 2031 and 2032.

2031, L6: the information in the Lithics notebook (16 items catalogued for Lot 2031) did not agree with the coded information (two shaped tools and 6 used flakes). It may be that some retouched flakes and gravers were counted as "other" flakes in the coding sheets. Eleven of the fifteen catalogued items are illustrated in Figure 63. The following relies on the Lithics notebook.

2031, Level 6A:

1) 2031-1: a complete side-notched, concave-base projectile point made of black basalt (1.2 by 0.9 by 0.2c m, 0.4 g) (Figure 63).

2) 2031-2: a retouched flake of fine-grained black basalt could have been a point broken in manufacturing (1.9 by 1.2 by 0.3c m, 0.5g). (Figure 63).

3) 2031-3: a small fragment of a projectile point of fine-grained black basalt retaining one side notch could also have been broken in manufacture (0.9 by 1.2 by 0.3 cm, 0.2 g) (Figure 63).

4) 2031-4: a retouched piece of red/cream-mottled chert might also have been part of a point at one time (1.8 by 1.4 by 0.6 cm, 0.9 g) (Figure 16).

5) 2031-5: a possible graver made on a small, sturdy flake of fine-grained black basalt (1.9 by 0.5 cm, 0.7 g).

6) 2031-6: a possible flake graver made of a snapped flake of grainy basalt on which it is difficult to detect retouch (2.1 by 0.9 by 0.4 cm, 0.8g) (Figure 63).

7) 2031-7: a possible unfinished point, unnotched, rather leaf shaped, that was never tipped, made of salmon/white mottled chert (1.5 by 0.9 by 0.3 cm, 0.4g) (Figure 63).

8) 2031-8: a flake of mottled white/translucent chert with some cortex. One angular corner opposite the striking platform appears to have been used as a graver (3.5 by 2.5 by 0.5 cm, not weighed).

9) 2031-9: a used, roughly triangular spall of white chert with retouch and a possible graver tip (2.2 by 2.2 by 0.6 cm, 2.0 g).

10) 2031-10: a sturdy white chert flake with a graver end (2.3 by 0.7 by 0.5 cm, 0.8 g).

11) 2031-11: a retouched flake of translucent chert, with a large striking platform, a 2.2 cm retouched edge, and smaller areas of possible edge bites (3.6 by 2.1 by 0.7 cm, 4.1 g) (Figure 63).

12) 2031-12: a utilized, roughly triangular flake of white chert with a possible burin (2.3 by 1.8 by 1.0 cm, 2.3 g).

13) 2031-13: A "plug" of infilled chert that may have been used for incising or engraving (1.5 by 0.5 by 0.5 cm, 1.5 g).

14) 2031-14: a retouched flake or burin/graver (?) of yellow chert with some cortex (1.4 by 1.5 by 0.6 cm, 0.95 g).

15) 2031-15: a core of yellow chert with cortex on both top and bottom. This item had a steep unifacial scraper edge and bifacial flaking along another edge (5.8 by 3.7 by ? cm, not weighed) (Figure 63).

16) 2031-16: a possible graver of fine-grained black basalt (1.8 by 0.5 by 0.5 cm, 0.6 g). Very much like specimens 2031-5 and 10.

2032, Level 6B:

1) 2032-1: a black basalt worked flake with a broad striking platform (2.0 by 2.2 by 0.5 cm, 2.5 g).

2) 2032-2: a black basalt bifacial fragment that is almost diamond shaped (2.9 by 2.4 by 0.5 cm, 2.8 g).

3) 2032-3: a black basalt used flake (2.0 by 2.3 by 0.8 cm, 3.6 g).

4) 2032-4: a black basalt used flake (2.4 by 1.6 by 0.6 cm, 1.7 g).

2039, Level 7:

1) 2039-1: a sharp black basalt point tip fragment broken across the side notches (1.3 by 0.6 by 0.2 cm, 0.1 g).

2) 2039-2: A fine-grained black basalt biface with edge retouch around the two distal edges on the ventral surface, retaining a broad striking platform, and with edge retouch around the tip of the dorsal surface (2.6 by 1.7 by 0.4 cm, 1.9 g).

2040, L8: 2040-2: a pink chert triangular projectile point or biface with a concave base. Broken at each basal corner (1.9 by 1.3 by 0.4 cm, 0.7g) (Figure 64).

2041, Level 9:

1) 2041-1: probable flake scraper, material not designated, (4.2 by 2.8 by 1.1 cm, 10.3 g).

2) 2041-2: a fine-grained, black basalt used flake, possibly bifacial. Possibly a stemmed point base of Archaic style (2.1 by 1.7 by 0.6 cm, 2.3 g).

3) 2041-4: a possibly used black basalt blade retaining cortex on the distal end (2.8 by 1.0 by 0.5 cm, 1.2 g).

4) 2041-4a A fine- grained black basalt blade (3.2 by 1.0 by 0.7 cm, 1.7 g).

5) 2041-5: a basalt flake scraper retaining cortex (5.7 by 5.4 by 2.1 cm, 6.2 g).

6) 2041-6: a used black basalt flake (1.8 by 0.9 by 0.3 cm, 0.6 g).

7) 2041-7:a black basalt utilized blade that might have been a projectile point perform (2.2 by 1.1 by 0.35 cm, 0.7 g).

8) 2041-8: a black basalt retouched flake or possible triangular, minimalist projectile point with fine retouch along one lateral edge. Concave base, broken tip (1.9 by 1.3 by 0.3 cm, 1.8 g).

9) 2041-9: a black basalt projectile point with asymmetrical side notches and a concave base (1.8 by 1.3 by ? cm, not weighed.) (Figure 53).

2064, Level 10:

1) 2064-1: a flake of fine-grained black basalt, with retouch along a slightly concave area adjacent to the striking platform (1.7 by 2.7 by 0.4 cm, 2.8 g).

2) 2064-2: a blade of fine-grained black basalt. Lateral retouch; additional retouch around the distal end (3.4, by 1.1 by 0.6 cm, 1.9 g) (Figure 63).

3) 2064-3: fine-grained black basalt flake with bifacial retouch (2.2 by 1.0 by 0.4 cm, 0.7 g) (Figure 63).

4) 2064-4: felsite gray flake with one edge bifacially flaked and utilized (4.3 by 3.8 by 0.9 cm, 15.9 g) (Figure 63).

5) 2064-5: projectile point of fine-grained black chert. A bit of cortex remains on one corner of the base. The other corner of base is broken. Point probably triangular. Tip broken (1.5 by 0.9 by 0.25 cm, 0.1 g) (Figure 64).

6) 2064-6p Projectile point tip with a bit of cortex remaining along one lateral edge. Base is broken (1.2 by 1.0 by 0.2 cm, 0.1g) (Figure 64).

7) 2064-7: a complete triangular projectile point made of fine-grained black basalt (1.5 by 1.2 by 0.2 cm, 0.2 g) (Figure 64).

2065, L10A, 2065-1: a unifacially worked flake of fine-grained black basalt, roughly triangular. Retains striking platform on one corner (2.1 by 1.3 by 0.4 cm, 1.4g).

## **Ground Stone**

The few pieces of ground stone from this unit came from Levels 9 and 10. Two of 11 axe fragments from the site were from the lower levels of Test 1.

2041-16, L9: a small ground stone fragment (3.3 by 2.8 by 1.1 cm, 7.8 g) with one ground surface.

2041-17, L9: a sidewall fragment of a shallow trough metate (20.2 by 17.3 by 10.5 cm, 2,610 g) was made of vesicular rhyolite. The exterior of the sidewall was roughly shaped. The remaining grinding face ran the length of the piece and was between 7.6 and 3.3 cm wide.

2041-18, L9: a mano fragment (ca. 7/8) made from an oval vesicular basalt cobble, with one well-worn and nearly flat grinding face (10.7 by 6.6 by 4.8 cm, 604.5 g).

2064-9, L10: the butt end of a ground axe retained a remnant of the groove (5.2 by 4.0 by 1.4 cm, 22 g). The piece was subsequently flaked around the rounded bit. The groove configuration could not be determined.

2064-10, L10: a grooved axe reused as a bifacial chopper retained a broad groove and a section of one ground face (6.8 by 6.3 by 2.9 cm, 159.5 g). The groove configuration could not be determined.

## **Botanical Remains**

Adams' (1992) report gave botanical information from both macrobotanical specimen recovery and flotation. The absence of botanical remains from the upper levels (Table 4.8) was not remarkable, as these were mostly flood deposits thought to date largely or entirely after village occupation.

Several plants presumably acquired for wood were represented in the lower levels. *Zea mays* was present in Levels 9, 10 and 10A; cheno-ams were present in level 10. *Physalis*, a domesticated tomatillo able to persist in the wild, was found in Level 8 and could be counted among the food items.

## Table 4.8. Botanical Materials from Test 1.

Lot number is given under Level number. "F" represents flotation samples; "M" represents macrobotanical samples.

Plant	L6	L7	L8	L9	L10
	2031	2039	2040	2041	2064
	2032				2065
Arcto/Arbustus	F			F	F
Cheno-am					
Juniperus	F		F/M	F/M	F/M
Quercus	Μ		F	F/M	F/M
Physalis			F		
Pinus	М		F	F/M	F/M
Zea mays			F/M	F/M	F/M

## Faunal Remains

Faunal remains occurred from Level 5 to Level 10, being most numerous in Level 8 (Table 4.9). Seventeen of Hodgetts's categories (other than the unknowns) were present among the 57 elements, of which 54 percent were unknown. As was the case for most samples from this site, bird bones were common. Bobcat and badger bones were rare. One of the lithic specimens submitted for immunological analysis came from this test. Specimen 2025-1, a side-notched projectile point from Level 3, reacted positively to rabbit anti-sera.

## Bone Tool

2064-8: a rib or long bone fragment of spatulate shape, with use striations across the spatulate end, was noted in the lab catalogue, and by Hodgetts in the faunal spreadsheet (4.4 by 1.8 by 0.3 cm, 3.2g).

## Table 4.9. Faunal Remains from Test 1.

Identifications	L5 2030	L6 2032	L7 2039	L8 2040	L9 2041	L10 2064 2065	Totals
Med. Artiodactyl		1		1		2003	2
Badger		_		_		1	1
Bobcat				1			1
Canis						1	1
Med Carnivore						1	1
Small Carnivore						1	1
Jack rabbit			1	1	2		4
Rabbit/hare					1		1
Turkey			1				1
Large bird						1	1
Medium bird						2	2
Small bird (robin sized or smaller)				2		1	3
Mallards and relatives				1			1
Small Anseriforme waterfowl, smaller than mallard		1		1			2
American Coot				2			2
Quail				1			1
Geese and swans				1			1
Unidentified elements	1	2	3	16	2	7	31
Totals	1	4	5	27	5		57

(Lot numbers are placed under level numbers. Tallies indicate numbers of specimens.)

## Summary of Test 1

As the artifacts were so sparse in the upper five levels (and botanical materials non-existent in those levels), one can recalculate the artifact density for the lower deposits by subtracting 194 specimens from Levels 1 through 5. In 3.72m<sup>3</sup> of lower deposits, an estimated 1,330 artifacts/m<sup>3</sup> were found—a dense concentration. Faunal materials, on the other hand, averaged only 15 elements/m<sup>3</sup> for the lower levels. The vertical distribution of artifacts shows a pattern of sparse occupation in the lowest levels, gradually increasing to Levels 6 to 9.

This test represented one of the cleaner stratigraphic records from the site. The levels contained fewer than usual visible rodent holes, and there were no complicating pits, structural features, or pot hunters' holes. The major strata were clearly differentiated in the three profiles (the south side of the test was open on the arroyo side), and continued visibly across the test. It is unfortunate that none of the radiocarbon dates come from this test.



# Chapter 5

# **TEST 2 GROUP**

A segment of floor at 121 cm BS, exposed in a recent, fairly straight sided, oval looter's pit in the east house mound led to the placement of Test 2, a 3 by 1.5 m unit (Figure 5.1). The unit was later expanded by means of the Test 2 Extension and Test 9.

Sporadic patches of one or more floors occurred across Test 2. Surface rocks extending across the west end of the trench were initially thought to represent a wall, but the alignment could no longer be seen by Level 2 and was regarded as more likely to be wall fall. Test 2 Extension (3 by 1.5 m) extended the trench to the east. Toward the east end of Text 2 Extension, an adobe wall stub paralleling a stone wall was located. Test 9, a 1 by 1 m unit, was extended south from the Test 2 Extension in order to expose more of the two walls (Figure 5.2).



**Figure 5.1.** Test 2. Left: looter's pit before excavation (PAC 91 B/W-2-31). Right: after excavation (PAC 91-B/W-8-2).

This group of tests was initially believed to cross several rooms. However, no convincing cross walls were found, even though numerous rocks and adobe chunks occurred in the fill. It seems likely that extensive digging by looters had destroyed walls. The total excavation, a 6 by 1.5 m trench, plus the offset Test 9, exposed a complex picture of plaster floor remnants, looters' pits and backdirt, ash concentrations, adobe and rock wall fall, and the two walls. A profile of Test 2 recorded 9 strata dipping across the unit from west to east. The layers curled upward next to the west unit wall, with Strata H and I almost vertical against the west wall. The strata in the Test 2 Extension were patchy and probably included an older looter's hole, but otherwise they were much more horizontal. At the east end of Test 2 Extension, two superimposed mud plaster floors were separated by 2 to 8 cm of fill.



Figure 5.2. Wall bases exposed by Test 2 group.

Tables 5.1–5.3 summarize the units. Cultural remains occurred under the floors and below the bottom of the walls, as did ash lenses. Sub-floor tests in the southwest corner of Test 2 showed that fill continued to a depth of ca. 1.6 m, with one sherd of Babícora Polychrome in the lowest level (140 to 163 BD). The cultural deposits underlying the room block must have pertained to an earlier part of the Medio period than the room(s) partly exposed in these excavations. Stratum D may underlay the cultural deposits. The lower deposits were described as changing from dark silty clay to soil to, finally, lighter-colored soil and sand. Augering to bedrock (at 243 BD) produced no other cultural materials.

#### Features

The various floor remnants and the two walls in the east end of Test 2 Extension and in Test 9 provided minimal architectural information. The deteriorating adobe wall contained cimientos, and the stone wall was a single stone wide and stood two to three courses high. This dual wall was similar to one encountered in Test 13 (where the two walls are assumed to represent different construction phases), although there was not enough information from either test unit to understand why two walls were placed so close to each other.

Table 5.1	. Test 2 (.	3 by 1.5 m).
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Lot	Level	Depth cm BS	Description (all depths BS)	Estimated excevated vol
2054	Surf., Dist.	11–32	Mostly backdirt; finds included sherds, lithics, charcoal.	0.94m <sup>3</sup>
2055	L1	32–38	Unit laid out around pothole, with rocks across unit toward west end. This level extended until a darker soil encountered at ca 37 cm. W side of unit had a lot of backdirt from older looting. Metate fragment at 31 cm as part of W stone wall. Above the metate was a concentration of human bone. Soil, fine grained with gravels, became darker at ca. 30 cm.	0.27m <sup>3</sup>
2056	L2	36–123	Rocks suggestive of a wall at west end of unit disappeared and were reevaluated as wall fall. Six remnants of plastered floor encountered (two at 120 cm, two at 121 cm, one at 119 cm, and one at 115 cm) in east end of trench at or near the bottom of Level 2 and the top of Level 3—one of which was an expansion of the floor remnant initially seen in the pot hole. Human cranium fragment on one of floor remnants against N wall of unit. Large corrugated/incised rim found near a floor remnant at 115 cm, 130N 144E. Other fragments of same pot in association. Fine ash (6 cm deep) at 88 cm. Numerous rodent burrows. Much charcoal. Possible roof beam	3.9m <sup>3</sup>
2090	L3	120– 145	Some sherds near S wall. Some animal bone from screen. Just under floor in NW corner, soil was burned orange. A 50 by 50 cm test in SE corner of unit placed into subfloor levels revealed mostly a dark brown soil with some gravel.	0.62m³
2105	L4	145– 165	Within the 50 by 50 cm test begun in L3, a smaller 10 by 10 cm sounding put down to 195 cm. Only a few sherds at top of L4. Sterile brown clayey silt began at ca 150 cm.	0.03m <sup>3</sup>
			1 otal Estimated volume	5./0m <sup>3</sup>

# Table 5.2. Test 2 Extension (3 by 1.5 m)

Lot*	Level	Depth	Description
2169	L 1	None given, but	Extension added to E end of Test 2 to follow floor at E end of Test 2. At
		at least to 111 cm	east end of Extension, an adobe wall, some 22 cm thick, extended 50 cm
		below unit datum	from the S wall. A parallel rock wall found some 10 to 20 cm east of the
			adobe wall stub. Both were burnt orange in color.
2129	Fill	None given	An unplastered floor or occupation surface was present to the east of the
			rock wall. Burned orange layer encountered at 50 cm N and 550 cm E and
			83 cm BD appeared to be melted daub. Human bone mixed with dog bones
			encountered at 75N and 460E at 111 BD. No looter's pit evident here.
			Human scapula taken off screen.
2134	Floor	None given	The human bones and charcoal recovered off the floor were given a
			separate lot number.

## Table 5.3. Test 9 (1 by 1m)

Lot	Level	Depth	Description
None	1	Not given	Wall trenching to trace adobe wall stub and stone wall. The adobe wall
			continued intermittently across Test 9, but was in very poor condition Small
			chunks of burned adobe present throughout unit. The rock wall located
			parallel to and immediately east of the adobe wall stub along W side. Feature
			91-J designates the adobe wall.

Two superimposed plastered floor levels were encountered in the Test 2 Extension, at depths of approximately 60 to 65 cm BS. At a lower level and ca. 1 m to the east, in the Text 2 Extension, a stone paved area, what may have been a lower floor (closer to the level of the lower floor remnants in Test 2), was encountered. Ashy patches were present under the superimposed plastered floors of the Test 2 Extension. Other patches of floor occurred throughout this series of tests. However, the exact floor levels were difficult to identify throughout much of Test 2, as wall debris appeared to continue to depths of ca. 1 to 1.2 m. The floor remnants and the lower deposits were often oxidized a bright orange, making it clear that this group of rooms burned. Fragments of charred wood in disturbed fill might represent fallen roof timbers.

## Human Remains

At this location, looters' backdirt and the site surface yielded human bone from multiple burials disturbed by looters. From backdirt (Lot 2046), seven fragments of cancellous bone, one proximal end of a radius, and six unidentifiable fragments were recovered. Some were calcined.

From Level 1 (Lot 2055), the human remains included a femur head, part of a left pelvis, and an incisor. The incisor, missing its root end, was shovel shaped and carried a black stain on the labial surface. There was slight wear on the occlusal surface; there was no evidence of calculus.

A human calavarium fragment came from Level 2, Lot 2056. This was an almost complete left side of the cranium. The left occiput had separated from the left parietal along the lambdoidal suture. The mastoid process had been scraped off. There was no zygomatic arch, and no face. This was a male on whom a thickening of the parietals was visible. The individual may have had porotic hyperostosis, but if so, it was not severe at death (although it seemed to have caused some remodeling). A second entry for Lot 2056 listed (a) a facial bone (right zygomatic with a little of the maxilla) from an adult, in a good state of preservation; and (b) two rib fragments from an adult, possibly burned but also in a fair state of preservation.

From the Test 2 Extension, fill, Lot 2129, came the bones of at least three different individuals, perhaps more. Dentition and mandible and maxilla fragments from each of the three individuals were mixed together. One individual was 35 to 45 years old, one was 25 to 35, and the third was about 5 years  $\pm 16$  months. No evidence of pathology was visible on the bones, which included two right scapula fragments (one robust and one gracile), left and right mastoid processes, an external auditory meatus, a right zygomatic temporal process (probably male), the lateral border of a right orbit, and assorted small cranial, vertebral and phalange fragments. When the human

bones were first encountered, the burial protocol was implemented, but when it became apparent that the bones were not from an intact burial, no feature number was assigned. The level record noted that human bones were found mixed with dog bones 75 cm N and 440 cm E in this level. This could not be checked because no faunal remains were listed for Lot 2129 in Hodgetts's faunal database.

From the plastered floor level of the East Extension, Lot 2134, a fragment of human occiput rested on what appeared to be an undisturbed section of plastered floor. The bone fragment appeared to be charred, and was found with charcoal.

## Pottery

Neff did not examine sherds from Test 2. Most of the pottery recovered from this excavation came from Test 2 itself rather than from the extension, and no pottery was recorded from Test 9, which largely consisted of wall and wall fall (Table 5.4). The backdirt/surface pottery appeared to be from fairly recent looting, and a substantial number of sherds were recovered from these contexts. The greatest concentration of artifacts was in Level 2, which was the level of fill just above the floor or floors. Only textured and plain sherds were recovered close to the floor, including a reconstructable corrugated jar (2057-1; Figure 5.3). Babícora Polychrome and Babícora Black-on-tan sherds were recovered from the upper fill and from subfloor levels, however. Textured sherds accounted for 14 percent of the total from these units.



Figure 5.3. Reconstructed corrugated vessel from the floor of Test 2. Lot: PAC 91C-28-12.

Lot	Level	Undec	Black	R-sl	R/br	Text	Bab	Comb	Total	Wt./g	Density
											/m <sup>3</sup>
2046*	Surf	92	4			9	11	1	117	1187.9	124/m <sup>3</sup> for
		79%	3%			8%	9%	0.8%			2046/2054
2054*	Surf	22	7			5		1	35	234.9	
		63%	20%			14%		3%			
2055*	L1	40	2			7	3	1	53	282.3	196/m³
		75%	4%			13%	6%	2%			
2056*	L2	264	36	4	3	38	26	6	377	2789.9	102/m <sup>3</sup> for
		70%	10%	1%	0.7%	10%	7%	2%			2056/2057
2057*	Floor	16				10***			26	279	
		62%				39%					
2090*	L3	15	24			26	1	1	67	220	107/m <sup>3</sup>
		22%	36%			39%	1%	1%			
2105*	L4	1	2						3	53.3	0.525/m <sup>3</sup>
		33%	66%								
2169	Ext L1	52	18		1	11	1	2	85	172.8	?
**		61%	21%		1%	13%	1%	2%			
Total		502	93	4	4	106	42	12	763	5220.1	138/m³
%s		66%	12%	0.5%	0.5%	14%	5.5%	1.6%		grams	

Table 5.4. Pottery from Test 2 and the Test 2 Extension.

\*Test 2

\*\*Test 2 Extension

\*\*\*Reconstructable corrugated pot (2057-1); see Figure 66.

No imports were recognized in the Test 2 assemblages, but a white slipped sherd in Lot 2054 could have been from an undecorated section of a Villa Ahumada or Escondida Polychrome. Given the size of the Test 2 sample (848 sherds), the absence of common imported wares (or their local variants) suggests that the east mound might have been different in age than the central mound and patio. The percentages of Babícora sherds and textured wares are similar to those for other test units placed in the Medio period mounds, however.

# Notes from the Lab

Lots 2046 and 2054 (the looters' backdirt pile and site surface): "Combo": (1) a brown rim with a black slip band on the lip interior, and (2) an altered corrugated with red painted exterior.

Lot 2055, Level 1: a corrugated rim sherd with vertical incisions across the corrugations (a dual textured example). A sherd with a Babícora Black-on-tan design is shown in Figure 20.

Lot 2056, Level 2: rims and several body sherds of a plain brown jar with a sloping shoulder. "Combos": (1) a corrugated exterior with a polished black interior, (2) an altered corrugated with a polished black interior, and (3) three scored sherds with polished black interiors. Textured sherds included corrugated, incised corrugated, incised, scored, and punctate. The Babícora included seven polychrome, four black-on-tan and two red-on-tan. A Babícora Polychrome with a checkerboard design is shown in Figure 17. Three red-on-tan sherds from this lot did not appear to be Babícora, and were better classed as Red-on-browns. One of the Babícora rims had
a silvery gray interior and was exported for identification of the pigment, which proved to be iron based. One black rim had a red slip band on the interior. One rim with a black interior might have burned out black paint on the exterior. One drilled brown sherd from Lot 2056 is listed below.

Lot 2057a and b, Floor: 10 of the textured sherds were from the same reconstructable, altered (scalloped) corrugated vessel with a red slip band on the interior of the rim (Figure 66). The jar measured 16.7 cm at widest diameter, stood 14.7 cm high, had a maximum rim diameter of 12 cm, and a minimum neck diameter of 9.8 cm.

Lot 2090, Level 3 (50 by 50 cm subfloor test): a sherd with a polished black exterior also had a pre-firing hole suggestive of a colander (one of two such sherds in the PAC collections from the site). All of the 26 textured sherds were altered corrugated.

Lot 2169, Level 1 (Test 2 extension): "Combo": (1) a corrugated with a polished black interior, (2) a corrugated with splotchy red paint over the corrugations. A black rim belonged to a tecomate form. The red-on-brown sherd exhibited fine red lines on the exterior, and did not appear to be in the Babícora family. Including the red-on-brown sherds mentioned above, four red-on-brown sherds were reported from this Medio period context.

## Other Ceramic Items

Included in the above listing was a brown sherd disk (2056-6, from Level 2) with a central biconical hole.

### Discussion

Only Level 1 from Test 2 was included in Hill's cluster. Lab tabulations do not correspond to the frequencies given in Hill's chart. Babícora sherds go from a single sherd in Level 3 to 26 sherds in Level 2, and so increase in frequency from below the floor to above it. In spite of the lack of imported sherds, and in spite of the apparent lack of fit with Hill's data, the room belonged to the Medio period. Through time, plain wares increased and textured wares decreased, with the floor level as a dividing line.

### Flaked Stone

No information was available from Test 9. The greatest accumulation of cultural items (both ceramics and lithic artifacts) came from Level 2 (Lot 2056) of Test 2—the above-floor level of post-occupation fill (Table 5.5). The lithic:sherd ratio for Test 2 was much lower than for Test 1—reflecting the processes involved in the two kinds of accumulating deposits. Cores represented 8 percent of the total Test 2 assemblage, while shaped and used flakes accounted for 14 percent of the coded lithic artifacts (the percentage would be higher if the Lithic notebook catalogued figures were used), contrasting markedly with the Test 1 findings.

## Table 5.5. Flaked Stone from Test 2 and the Test 2 Extension.

Lot	Level	Flakes	Blades	Cores	Used	Tools	Totals	Sherd: Lithic
2046	Backdirt	13		1			14	8.:1
2054	Surf	9		1			10	3.6 : 1
2055	L1	19		1	1		21	3.1 : 1
2056*	L2	40		5	13		58	6.5 : 1
2057	Floor						0	26:0
2090	L3	7			1		8	8.3 : 1
2105	L4						0	
2169	L1 Ext	2		1		1	4	1:1.3
Totals		90		9	15	1	115	

(From the Excel file and 1991 Lithic Notebook)

\* 2056-3, 4 and 5 are recorded in Excel database, but in Lithics notebook, the two catalogued pieces are 2056-10 and 11. I elected to follow the Lithics notebook, and I classified both of these pieces as "Used flakes", although one was described as an unfinished point.

#### Notes from the Lab

2056-10, Level 2a: a broad flake with a finely retouched edge that may be bifacial (drawing is not clear).

2056-11: a used flake described as a projectile point blank or perform (2.6 by 1.0 by 0.6 cm, 2.2 g).

2169-1, Level 1 Extension: a triangular, side notched point with a deeply concave base was made of fine-grained black basalt (1.5 by 1.2 by 0.2 cm, 0.1 gm).

### **Ground Stone**

Two manos and a small fragment of ground stone (from a mano?) were found in Test 2.

2056-7, Level 2: fragment of a basalt mano (7 by 9.2 by 1.7 cm) with a flat, very worn grinding face with cross striations.

2056-8, Level 2: mano fragment (6.7 by 8.2 by 1.4 cm) of vesicular basalt, with one flat grinding face and some use on the opposing or upper surface.

2056-9, Level 2: ground stone fragment of minimally vesicular basalt, with one convex ground surface and one ground/worked edge (4.1 by 3.4 by 1.7 to 2 cm; 34g).

#### **Botanical Remains**

Although three float samples were examined from Test 2 (one of them from a burned area on the floor [Lot 2057] and two of them from Level 2 [Lot 2056]), none produced botanical remains. No macrobotanical remains were reported directly during excavation.

#### **Faunal Remains**

The faunal assemblage from these units was characterized by diversity of taxa, with few elements of any one kind (Table 5.6). Artiodactyls, lagomorphs, and rodents were present. Waterbirds were somewhat less numerous in this unit than elsewhere, and none of the rare animals (such as badger, bear or fox) occurred. Eleven of Hodgetts's categories were present among the 123 elements, of which 80 percent were unidentified.

Identifications	Surface/ Backdirt Lot 2046	L1 Lot 2047	L2 Lot 2056	Floor Lot 2134	L3 Lot 2090	Totals
Medium mammal (deer or smaller size)			2			2
Medium artiodactyls				3		3
Jack-rabbit			2			2
Cottontail		1	2			3
Pocket gopher			1			1
Small rodent			2			2
ANFlg waterbird of goose size or larger					1	1
Med Birdmallard size or smaller		1	6			7
Sm birdrobin size or smaller			1			1
Turkey			1			1
American Coot			1			1
Unidentified	2		25	72		99
Column Totals	2	2	43	75	1	123

 Table 5.6. Faunal Remains from Test 2.

Birds, cottontails and jackrabbits, a medium-sized artiodactyl, and a rib from a medium sized mammal were represented, as was a single turkey bone. Bones were scarce in the surface materials and in Level 1, and were most numerous in Levels 2 and 3. It was interesting that so many unidentified bones came from Lot 2134, the floor level—possibly a result of fragmentation due to trampling.

#### Shell

An incised *Glycimeris gigantea* bracelet fragment (2129-5) with a zigzag design was found in the Test 2 Extension and identified by Ronna Jane Bradley. It is one of the few pieces of non-fresh water shell encountered at the site. A Gulf of California species, the piece could have come from one of the disturbed burials in this part of the site.

#### **Summary of Test 2 Group**

In this group of tests, 10 m<sup>2</sup> were opened. As completed level depths were given only for Test 2, the density of artifacts can be calculated only for that unit—which contained a large looter's pit that lowered the artifact count by an unknown amount. The greatest density of artifacts came from Level 1 (802/m<sup>3</sup>), which was surface material and looter's backdirt. Level 2 had an average artifact density of 120/m<sup>3</sup>; Level 3, 120/m<sup>3</sup>; Level 4, 100/m<sup>3</sup>. Overall density for the unit was 144/m<sup>3</sup> for artifacts and 21/m<sup>3</sup> for faunal elements. The low artifact densities suggested that little or no trash was deposited in this structure. Perhaps occupation of this sector of the East Room Block occurred late in the history of the site. Previous digging undoubtedly lowered artifact recovery, however, making it difficult to rely on the numbers provided.

This test was not successful in delineating rooms due to the amount of disturbance, but it did provide some architectural and artifact information for the east room block. Human burials were present in this sector of the site, but we could not determine whether the burials were from above or below the floors. The post-occupational fill, the structures, and the sub-floor deposits from this group of tests all pertained to the Medio period.

# Chapter 6

# **TEST 3 GROUP**

This group of tests included Test 3 (Table 6.1) and the Test 3 Extension (Table 6.2).

# Table 6.1. Test 3 (2 by 2 m).

Lot	Level	Depth	Description	Estimated
	(cm BD)			Volume
2047	1	6–24	Patio corner at N edge of site. Uncovered NE wall corner with north and east walls extending to edges of unit. Unit located so that the two walls form the N and E boundaries of the unit. A number of scattered rocks (rock fall?) around south and west sides of unit, but the middle of the unit was almost rock free. Soil was mixed loam and gravel with some orange clay	0.72m <sup>3</sup>
None	2	to 38 cm	Beginning at soil change, the whole unit was excavated to ca. 27–30 cm BD. Excavator Neff focused on central, rock-free area. At 36 cm BD, a pit outline was encountered.	0.56m³
2086 2087 2103	pit fill	to 96 cm	Excavation of bell shaped pit (Feature 91-A). Artifacts from entire pit fill were collected as a unit (Lot 2103). Lots 2086 and 2087 are soil samples.	0.46m <sup>3</sup>
Total v	olume			1.74m <sup>3</sup>

# Measurements from SE corner. Unit datum is NW corner.

# Table 6.2. Test 3 Extension (1 by 2 m).

Located immediately N of Test 3. Unit datum same as for Test 3.

Lot	Level	Depth	Description	Excavated
				volume
2059	1N,	1–54	Possible rockfall mapped and removed. Gravelly soil became	0.9m <sup>3</sup>
2079	1 <b>S</b>		darker, sandy and more fine-grained with some small rocks. In	
			SE corner of this extension, soil changed to light colored clay	
			like material directly behind or north of a probable wall stone at	
			depth of 52 cm BD. Rocks covered much of unit. One was a	
			metate fragment.	
2102	2	to 79 cm	Three dark, almost circular stains appeared in SE part of	0.25m <sup>3</sup>
			extension, with charcoal in each. They turned out <b>not</b> to be	
			postholes or other features, but irregularities in lower layers.	
			After removing rest of level to expose underlying dark zone, the	
			stains (ca. 83–87 cm BD) disappeared and a layer of ash and	
			charcoal emerged. Only E half (1 by 1 m) excavated for L2.	
2101	L3	to 116 cm	Only E part excavated. Top of level is the ash/charcoal stratum.	0.37m <sup>3</sup>
			Although the ash layer was only ca 4 cm thick, charcoal	
			continued throughout level.	
Total v	olume			1.52m <sup>3</sup>

Test 3 was a 2 by 2 m test placed in the northeast corner of a patio/compound early in the 1991 field season, in order to investigate the interior space defined by the visible walls. A single bell-shaped pit was found in the middle of Test 3, very near the compound's inner corner (Figure 6.1). Test 3 Extension was a 1 by 2m unit immediately north of Test 3; the extension contained what was presumed to be wall fall from the north patio/compound wall.



Figure 6.1. First indication of Feature 91-A, the bell shaped pit in Test 3. PAC 91 B/W 5-10.

### Feature 91-A

A bell-shaped pit was present near the center of the Test 3 unit (Figures 6.1–6.3). This slightly undercut pit measured 120 cm at the greatest diameter, 12–15 cm above the base of the pit. The depth of the remaining pit was 70 cm; the opening was 95 cm in diameter. The first few cm of the pit upper wall and rim had probably been destroyed; it is likely that the pit began higher up in the deposits and had a smaller orifice. The pit was dug through sheet trash of the Medio period. The bottom of the pit at first seemed to be clay lined, but a reexamination showed that the supposed clay lining was in fact Stratum D. The walls were clay lined, however. Pit fill was trashy and seemingly continuous with the trashy fill that extended across the pit opening. This late Medio period exterior storage pit was within the confines of a patio, only 25 cm from the east patio wall.



**Figure 6.2.** Feature 91-A, the bell-shaped pit in Test 3. Looking east after excavation. PAC 91 B/W-8-4.



Figure 6.3. Profile of Feature 91-A. Redrawn from field notes.

#### Pottery

The assemblage from Feature 91-A was the sample that most clearly came from a bounded context at the site, and was the sample most likely to represent a fairly limited time span, in spite of the lack of a clear break between the pit and overlying deposits.

For the unit as a whole, the pottery fit comfortably within the Medio period. The following information is from the original tabulations; Neff did not re-examine these lots. Plainware decreased in frequency from Feature 91-A through Level 1 and the surface/backdirt materials. Textured frequencies were higher in the lower levels. Babícora Polychrome was found in all levels. Possible imports included some black-on-red sherds and sherds with white slips that could represent Villa Ahumada polychrome lacking painted designs.

Level	Lot	Undec	Black	R-	R/br	Text	Bab	Other	Combo	Totals	Wt.	Density
				slip							in gms	/ m <sup>3</sup>
L1	2047	293	6	6	5	24	13	2	1	350	1388.7g	486/m <sup>3</sup>
(Surf)*		84%	2%	2%	1%	7%	4%	0.6%	0.2%			
L1N **	2059	365	22	5	1	36	20	5	2	456	2145.4g	638/m³
		80%	5%	1%	0.2%	8%	3%	1%	0.4%			for 2059
												& 2079
	2079	93	2	2		10	12			119	487.2g	
L1S**		78%	2%	2%		8%	12%				_	
L2**	2102	152	18	3	2	28	15	8	1	227	1191.45g	908/m <sup>3</sup>
		67%	8%	1%	0.8%	12%	7%	3.5%	0.4%		_	
L3**	2101	42	8	1	11	8	1	3	2	76	277g	205/m³
		55%	10.5%	1%	14%	10.5%	1%	4%	3%		_	
Fea. 91-A	2103	131	33	10	2	29	15	3	4	227	1324.2g	493/m <sup>3</sup>
fill*		58%	15%	4%	0.8%	13%	7%	1%	2%		_	
Totals		1076	89	27	21	135	76	21	10	1455	6813.95g	328/m³
		74%	6%	2%	1%	9%	5%	1%	0.7%		_	

 Table 6.3. Pottery from Test 3 and the Test 3 extension.

\*Test 3, \*\*Test 3 extension

### Notes from the Lab

Lot 2047, Surface/backdirt: "Other": (1) a sherd with a white slipped exterior; (2) a black-on-red sherd; (3) an unknown polychrome. "Combo": a black sherd with texturing. In Babícora: five were black-on-tan and six were polychromes.

2059, Level 1: "Combos": a rim with a polished black exterior and brown interior, with an incised line below and parallel to the lip on the exterior. "Other": (1) three white-slipped; (2) two possible Madera Black-on-red. Not included in the above count is a rectangular worked sherd having thin red lines on a gray exterior with a tan paste. We did not get this sherd identified, but the description and drawing do not exclude it from the Mata group. It was a red-on-gray to brown that was not Babícora. One Pilón Red Rim had a red slip band on the interior of a brown rim.

Lot 2079, Level 2: one of the brown body sherds had a ground edge (see below). Another of the brown sherds had a crackled exterior. Five of the probable Babícora Polychrome sherds were burned/darkened. One of the Babícora Polychrome sherds had a horizontal thickened band across the sherd, changing from 5 mm to ca. 1 cm at the bulge. Painted lines were present above and below the bulge.

Lot 2102, Level 2, Test 3 Extension: "Other": (1) five sherds were tabulated as painted, but were not described or drawn; (2) two red-on-gray sherds could be discolored Babícora Red-on-tan; (3) a brown rim sherd had a red slip band on the interior of the lip (Pilón Red Rim). Textured sherds from this unit showed great and imaginative variation, including:

- polished brown exterior with patterned incisions similar to Playas Incised;
- incised fan-like designs
- zoned incision with remnants of corrugation in between;
- a heavy rim of a fairly straight-sided bowl with slightly out-curved lip, with a heavy orange to brown slip that was cracking on the exterior, and with textured diagonals 7 to 10 mm wide descending from the rim (made with the fingers?) on the exterior;
- a thickened and indented rim with L-shaped patterned corrugations below (on the exterior of the vessel), while the vessel itself was estimated to have had a rim diameter of 20 cm.

Lot 2101, E quarter of Level 3, Test 3 Extension: "Other": (1) a polished red-on-black of unknown type; (2) a polished black handle or lug (see below); (3) a brown body sherd with a modeled paw appliquéd on the exterior (see below). "Combos": (1) A brown sherd with external appliqué in the shape of a human hand and arm; (2) a sherd with a corrugated exterior and black polished interior and an altered corrugated sherd with a black polished interior. One of the brown rims may have belonged to a *tecomate*.

Lot 2103, storage pit fill: "Combos": (1) a sherd with a smooth brown exterior and a brushed and scored interior; (2) an altered corrugated sherd with short incisions at various angles across the corrugations; (3) a sherd with an exterior combining black areas with zoned polished and rough areas. "Other": (1) two haphazardly painted black-on-brown sherds; (2) a black-on-cream or black–on-gray sherds with a cream-to-gray interior (could be an import—possible Villa Ahumada? Its vertical lines and wider L-shaped vertical area did not look local); (3) two black-on-red sherds were thin (4.0–4.5 mm thick), had a distinctive red slipped interior and exterior, and could be Madera Black-on-red. Also, one of the red-on-tan sherds (1 cm thick) had a broad line and an elongated triangular area painted in a rusty red. It did not fit well in the Babícora group and was classed as red-on-brown. The Babícora group included seven polychrome sherds, seven black-on-tan sherds, and one red-on-tan sherd. Vessel shapes included bowls, jars, a possible plate (very everted rim sherd), a possible colander (one of two such sherds from the PAC collections from the site), and a *tecomate*.

# Other Ceramic Items

Included in the above listings were: (1) 2059-9, L1, a rectangular fragment of a red-on-gray worked sherd with very thin parallel red lines (Mata Red-on-brown?); (2) a brown body sherd

with a ground edge, from Level 2 (2070); (3) a black lug handle from a polished black vessel (2101-1), from L3E.

From the pit fill of Feature A (2103), one worked brown sherd (2.5 by 1.9 cm) was not included in the above table or notes. It was ground on three edges and broken on the fourth edge.

### Discussion

No Ramos Polychrome came from the Test 3 group. Two black-on-red sherds from Lot 2103, Feature 91-A fill, might be Madera Black-on-red; three other black-on-red sherds could be Madera or Ramos Black-on-red. The white-slipped sherds may have been from Villa Ahumada Polychrome vessels. In addition to jars and bowls, a plate and a *tecomate* were noted, as was a colander sherd. Two Pilón Red Rim sherds were reported. Worked sherds occurred in two lots. The red-on-brown sherds did not appear to belong to the Babícora types, and, as in other cases of red-on-brown sherds in Medio period assemblages, deserve fuller study.

Hill placed Level 3 in the Viejo period and Level 2 in the Medio period. The amounts of plain and textured wares in Level 3 place that lot near the upper limit of his Viejo period cluster, and Level 2 near the bottom or earlier part of his Medio period cluster. The possible imports in Level 3 need to be reevaluated (and explained, if that was indeed a Viejo level). Test 3 does not appear to be among the latest parts of the site.

#### Flaked Stone

There were no Excel entries for any Test 3 lots other than for Lots 2059 and 2079. At the end of the 1991 field season, C. Williams did bulk lithic tabulations in order to complete the processing of lithic artifacts. These were recorded in the 1991 Lithics notebook, along with the individual entries for catalogued items. Neither pottery nor lithic artifacts were tabulated for Lot 2086 (L2) or Lot 2087 (L3). The reported assemblage (Table 6.4) is dominated by flakes, with a significant number of cores from upper levels. The substantial number of used flakes and tools are mostly from above Feature 91-A.

Sherd:lithic ratios were similar to those from Test 1, less similar to those from Test 2.

### Notes from the Lab

Lot 2047, Surface: the catalogued items in the 1991 Lithics notebook entry for this Lot included only eight pieces, suggesting a selective collection process.

Lot 2047-1: a chert flake with some cortex on the dorsal side and possible edge retouch (3.6 by 2.8 by 1.0 cm, 10.5 g).

## Table 6.4. Flaked Stone from Test 3 and the Test 3 Extension.

Lot	Level	Flakes	Blades	Cores	Used	Tools	Totals	Sherd: Lithic
2047	Surface				8		8	
					100%			
2059	L 1 N	103		16	19	3	141	3.2:1
		73%		11%	13%	2%		
2079	L 2 S	46		4	6		56	2.1:1
		82%		7%	11%			
2102	L 2 Ext	69		2	1		72	3.1:1
		96%		3%	1%			
2101	L 3 Ext	31			1	2	34	3.5 : 1
		91%			3%	6%		
2103	Pit fill	78			1		79	2.8:1
		99%			1%			
	Totals	327		22	28	5	382	3.78:1
		86%		6%	7%	3%		

(from Excel entries and the Lithics notebook)

Lot 2047-2: a basalt flake with possible retouch (4.9 by 3.0 by 1.0 cm, 12.4 g).

Lot 2047-3: a basalt flake with possible edge retouch (4.0 by 1.9 by 1.5 cm, 12.5 g).

Lot 2047-4: a fine-grained black basalt flake with use wear along the long edge (2.2 by 1.9 by 0.6 cm, 2.0 g).

Lot 2047-5: black basalt flake with possible retouch (2.3 by 1.4 by 0.6 cm, 2.1 g).

Lot 2047-6: black basalt flake with possible retouch (1.9 by 0.6 by 0.25 cm, 0.5 g).

Lot 2047-7: broken black basalt flake with retouch (1.2 by 0.9 by 0.3 cm, 0.3 g).

Lot 2047-8: black basalt flake with steep, distal end retouch (2.9 by 2.1 by 0.9 cm, 4.1 g).

Lot 2059-1, Level 1 N Extension: a sturdy cortical flake of fine-grained black basalt, with a broad end that was rounded and polished with use (2.2 by 0.6 by 0.5 cm, 0.8 g).

Lot 2059-2: a thin cortical flake that may have been used (2.3 by 0.8 by 0.2 cm, 0.6 g).

Lot 2059-3: a black chert (?) sliver that may have been used as a graver (1.7 by 0.7 by 0.2 cm, 0.3 g).

Lot 2059-4: a white translucent chalcedony flake with use "bites" out of the thin edge. The backed edge had some retouch (4.2 by 2.2 by 0.6 cm, 7.5 g).

Lot 2059-6: a black basalt flake with retouch along two long edges (2.4 by 1.5 by 0.3 cm, 1.0 g).

Lot 2059-7: a small black chert (?) flake with possible retouch (1.6 by 4.0 by 0.5 cm, 0.3 g).

Lot 2059-7: a crudely made asymmetrical point broken across one basal corner, retaining a single side notch and a slightly convex base (1.4 by 0.8 by 0.5 cm, 0.2 g).

Lot 2101, the Test 3 Extension, produced three points.

No. 2101-1: a small, slightly asymmetrical triangular point with a concave base and a broken tip (1.05 by 1.0 by 0.2 cm, 0.1 g).

No. 2101-2: a projectile point with an extremely convex base, with broken tangs and tip (1.8 by 1.0 by 0.3 cm, 0.4 g).

No. 2101-3: a corner notched point with a convex base (2.1 by 1.4 by 0.5 cm, 1.1g).

Lot 2103, Test 3 Feature A Pit Fill: a single rhyolite scraper (3.6 by 4.5 by 1.3 cm.)

The Test 3 group produced a number of definitely and possibly worked flakes—mostly in better quality materials such as black basalt, chert and chalcedony—as well as multiple projectile points.

# **Ground Stone**

A single axe fragment was recorded. Lot 2059-5, L 1: the axe fragment retained a remnant of the groove. The remaining section was split longitudinally, and spalls had detached from the bit end, across the ground surface (5.0 by 4.0 by 1.0 cm, 32.9 g).

The level record for Test 3 Extension, Level 1 (Lot 2059) noted a metate fragment in the rock fall that mostly covered the unit, but this specimen was not recorded in the Ground Stone records.

# **Botanical Remains**

All of the flotation results for this group came from Feature 91-A. From Lot 2086 (fill in Feature 91-A, 40–50 cm BD) came *Pinus* and *Quercus*. From the lower part of the Feature 91-A pit fill, Lot 2087 (75–85 cm BD), Adams identified Gramineae, *Juniperus, Pinus, Quercus*, and *Zea mays*. Two macrobotanical specimens of *Zea mays* were identified from Lot 2079 (Level 2, south half of unit), and one from Lot 2101 (Test 3 Extension, Level 3, east quad). Thus the three main local woods, a grass, and maize were found.

#### **Faunal Remains**

In Table 6.5 the diversity of species represented, the number of elements that could not be assigned to a taxon, and the small size of the recovered elements were characteristic of faunal remains at the site as a whole. The small rodent remains might be culturally or naturally introduced. The small canid from Level 3 (Lot 2101) represented two refitted pieces of a scapula. Turkey and waterfowl were present. The medium mammal was probably an artiodactyl.

<b>Identified Elements</b>	Level 1	Level 2	Level 3	Fill	Totals
	20059	Lot 2102	Lot 2101	Lot 2103	
		(Extension)			
Dog/wolf/coyote canid			1		1
Small canid			1		1
Medium mammal			1		1
Small mammal		1			1
Pocket gopher			4		4
Deer mice/voles Muridae			1		1
Small rodent			8		8
Squirrel			1		1
Jack rabbit		2			2
Cottontail				1	1
Turkey	2				2
Geese/swan		1		1	2
Bird: mallard or smaller		1	1		2
Unidentified elements		8	9	2	19
Totals	2	13	27	4	46

Table 6.5. Faunal Remains from the Test 3 Group.

### Bone Tools

Hodgetts noted that an awl tip made on a split long bone (from Level 2, Test 3 Extension, East, No. 2102-1) was probably from an artiodactyl (6.7 by 1.7 cm by 0.5 cm thick at the base). No. 2103-2, from the pit fill of Feature 91-A, was a long bone splinter that may have had a beveled end (5.4 by 1.5 by 0.5 cm). The faunal spreadsheet noted that one of the unidentified bones from Lot 2102 (Level 2), probably from an artiodactyl, had been worked to a point.

#### **Density of Artifacts and Faunal Elements**

Some 3.26 m<sup>3</sup> were excavated in this 3 by 2 m area inside the patio and across the north patio wall. The volume to be subtracted because of wall fall and the rock wall is not easily calculated. Combining all the recorded ceramics, flaked stone, ground stone, and bone tools yielded a total of 1841 artifacts —an average of 565 artifacts/m<sup>3</sup> with no correction for the rock volume. Using an arbitrary deduction of 1 m<sup>3</sup> for the wall and fallen rock, the artifact density would have been

815/m<sup>3</sup>. Some 15 faunal elements were recovered per cubic meter, using the uncorrected volume figure.

# Summary of the Test 3 Group

This group was primarily external (uncovered) space within the northeast corner of the patio. A large, bell-shaped storage pit was found near the corner of the patio wall. The Test 3 extension was placed across the patio wall. All ceramic assemblages from this unit pertained to the Medio period.

# Chapter 7

# **TEST 4 GROUP**

The Test 4 group consisted of Test 4, the Test 4 Extension, and Tests 10 and 11.

When the crew members encountered a silty to clay-like level, they interpreted it as a floor and used these units to trace the "floor" (designated Feature G; Figure 7.1) throughout this part of the patio compound. Rock patterns on the surface and in the upper levels initially suggested the presence of walls, but convincing walls did not materialize as the excavations progressed. The initial unit, Test 4, measured 3 by 1 m (Table 7.1). The Test 4 Extension was a 1 by 1 m unit south of, and at the west end of, Test 4. The level forms for the extension were either not prepared or were lost. Test 10 was a 1 by 1 m unit west of Test 4 (Table 7.2), while Test 11 was a 1 by 1 m unit immediately south of Test 10 and west of the Test 4 Extension (Table 7.3). In all, 6 m<sup>2</sup> were opened up.



**Figure 7.1.** Test 10, Level 2, showing Feature G. This natural clay level was first thought to be a floor (PAC 91B/W-11-16).

### **Human Remains**

From Level 1, Lot 2089, a right maxillary of a juvenile individual was recovered. It included the lower border of the orbit, the maxillary portion of the zygomatic, the lower margin of the nasal aperture, and teeth. Only milk teeth had erupted. The central and later incisors as well as the canine were missing post mortem. The milk premolar and milk M1 and M2 were just erupting. There was considerable wear on the M1. The state of the eruption of the teeth indicated an age of 6 years  $\pm$  24 months. It appeared to be in undisturbed soil rather than recent looter's backdirt.

### Table 7.1. Test 4 (3 by 1 m).

Lot	Level	Depth	Description	Estimated Excavated
2084 2089* 2135	L1	24 cm to 44 cm BD	Ashy/charcoal and burned earth lens found at 20 cm BD. Darker soil in east side of unit excavated until soil color changed to a more compact, lighter grayish-brown. West half of unit was backdirt from previous pot-holes. Few cultural materials. Beneath backdirt, soil was the same as the rest of unit—i.e. burned earth and ash. Slope of deposits is from NNW to SSE-unlike other placesbecause of proximity to wall? Note on plan shows a human maxilla fragment found next to a macaw stone (2089-1).	0.6m <sup>3</sup>
2104 2126 2143	L2	59 cm	2 ashy deposits at top of L2 in NE corner and in W of unit. Angular rocks with ground stone and ash appeared to form a circular pattern. Notes described several centimeters of 'burned adobe, hard and flat' that turned out to be Stratum D. At its edge were some badly degraded rocks that could be a wall stub (?). Removal of rock concentration in center of unit revealed soft fill capping Feature B that was covered by a layer of horizontal flat rocks.	0.45m <sup>3</sup>
2128	Feature B	59 to 81 cm BD	Excavation of bowl-shaped, rock-lined and rock-filled hearth.	0.14m³
				1.19m <sup>3</sup>

Unit datum was NW corner of unit. Depths given from NW corner.

\* In the Lot book, for 2084 (Test 4 L1), two bags of sherds, three bags of flaked stone, three bags of bone, and two bags of flotation samples were recorded for 20/6/91. The Lot book for 2089, also for Test 4, L1, noted pottery, flaked stone, ground stone and human bone for the same date. There were no sherd tabulations for 2084, and only the ones for 2089. A correction was probably made in the lab and all materials from this level combined into 2089, but there was no documentation of this. The level record entries regarding scarce artifacts did not jibe with the lot notation of three bags of flaked stone.

#### Table 7.2. Test 10 (1 by 1 m).

Depths from SE Corner. Unit datum at SW corner was 24.5 cm above Test 4 datum.

Lot	Level	Depth	Description	Estimated
				Excavated
				Volume
2217	L1	19 to 49 cm BD	Unit west of Test 4 extended Test 4 by 1m to the west. Looter's back dirt removed before beginning L1. Human mandible fragment in looter's back dirt in S wall of unit. Rocks, and 2 adobe blocks mapped.	0.30m³
2218	L2	To 76 cm BD	Stratum D appeared at 62 cm in NW ¼ of unit, and at 76 cm BD along south wall of unit, and in patches elsewhere. Four large rocks occurred along the east and central parts of the unit.	0.27m <sup>3</sup>
				0.57m <sup>3</sup>

# Table 7.3. Test 11 (1 by 1 m).

Lot	Level	Depth	Description	Estimated
				Excavated
				Volume
2219	L1	19 to 43	Began beneath pothunter's backdirt. Purpose was to continue	0.24m <sup>3</sup>
		cm BD	search for 'floor' (Feature G), and floor features.	
2222	L2	To 65	Soil texture changed to more compacted lighter brown soil with	0.22m <sup>3</sup>
		cm	adobe.	
2223	L3	To 74	'Floor' (or Stratum D) encountered at 74 cm BD. Augering to 124	0.09m <sup>3</sup>
		cm	cm BD showed continuation of clay. Possible pit or feature proved	
			to be illusory.	
				0.55m <sup>3</sup>

Depth from SE Corner. Unit Datum was 10 cm W of NW corner, 25 cm above datum for Test 4.

A sub-adult metacarpal in good condition came from Test 4, Level 2 (Lot 2104).

Looters' backdirt in Test 10, Level 1 (Lot 2217) yielded the left half of a juvenile mandible, with only milk teeth. Root formation was consistent with an age of 5 to 8 years. This could be part of the individual represented by the partial mandible in Test 4, and both are probably from a disturbed burial placed beyond the boundaries of the test units.

#### Features

Areas of large rocks in a dark soil, at 57 to 70 cm BD, penetrated the clay in Test 10 in an L-shaped pattern and may have represented a wall base or some other cultural feature that could not be further defined. Although pit features cut into Stratum D, the fill and the pits all pertained to the Medio Period.

Feature 91-B, a basin-shaped, rock-lined hearth, was found in the center of Test 4 (Figures 7.2 and 7.3). Dug into the clay (Stratum D) level, it measured 82 by 95 cm in plan and about 20 cm at the deepest point (ranging from 66 to 81 BD). Fairly clean soil overlay the bottom rocks. This was, in turn, overlain by rocks in such a way that a small cairn resulted. The rocky fill included broken ground stone. A full-grooved maul was found under the slab lining of the basin at a depth of 90 cm BD.

A second slab-lined, basin-shaped pit was designated Feature 91-H (Figure 7.4). Found in the northeast corner of Test 4 (120 cm east of Feature 91-B, center to center measurement) this pit was unusually small, measuring only 16 by 17 cm across and 9 cm deep. Surrounded by burned clay or adobe, this feature was dug into the Stratum D surface to serve the patio. Auger tests within these units indicated that Stratum D continued more than 50 cm below the exposed clay level, and was sterile.



Figure 7.2. Feature 91-B, a rock-lined pit in Test 4. PAC 91 B/W8-8.



Figure 7.3. Sketch of Feature 91-B.



Figure 7.4. Test 4, Feature 91-H. PAC 91B/W-8-16.

# Pottery

The sherds from the Test 4 area, within the patio or compound, were similar to the those found in the Test 3 group, also within the patio or compound (Table 7.4). Levels 1 and 2 of Test 4, the Test 4 extension, and Tests 10 and 11 represented the most concentrated deposit of artifacts. Some of the sherds from these upper levels came from overburden or backdirt from looters' pits.

Lot	Level	Undec.	Black	R-sl	R-br	Text	Bab.	Other	Combo	Totals	Wt in g	Density
2000	TT 4 T 1	245	07	1	2	22	10	10	2	207	0150.0	/ <b>m</b> <sup>3</sup>
2089	14 L1	245	27		3	23	12	13	3	327	2159.2g	1021/m <sup>3</sup>
		/5%	0%	0.5%	0.9%	1%	4%	4%	0.9%			10r 2089
2125	TA LICW	176	41	4	2	12	15	2	1	206	1774.60	a 2155
2155	14 LI-SW	6204	41	4	5 10/	45	15	5 10/	1	200	1774.0g	
2104		162	14%	1 %0	1 %0	11%	12	1 %0	2	248	1250.20	
2104	14 L2	103 66%	12%	4	4	20	15	5 2%	5 1%	240	1250.2g	
2126	T4 I2	22	7	2 /0	270	1070	J /0	270	1 /0	3/	78.2 g	6/10/m3
2120	'Floor'	65%	21%	3%			12%			54	70.2g	for
	(Str. D)	0.570	2170	570			1270					2104
	(3412)											2126 &
												2143
2143	Fea B	2	2							4	21.2g	
	Under cap	50%	50%								0	
2128	Fea B under	4				1		1		6	16.3g	43/m <sup>3</sup>
	base	66%				17%		17%			_	
2217	T10 L1	45	4	1		5	10	1		66	203.5g	220/m <sup>3</sup>
		68%	6%	1.5%		8%	15%	1.5%			-	
2218	T10 L2	56	3		1	11	8	7		86	398.6g	319/m <sup>3</sup>
		65%	3%		1%	13%	9%	8%				
2219	T11 L1	23				2	1	2		28	189.5g	117/m <sup>3</sup>
		82%				2%	1%	2%				
2222	T11 L2	48	11		1	7	4	5		76	No wt.	345/m <sup>3</sup>
		63%	14%		1%	9%	5%	7%				
2223	T11 L3	12	5		1	2		4		24	271.6g	267/m <sup>3</sup>
		50%	21%		4%	8%		17%				
Totals		795	128	11	13	120	67	41	7	1182	7224g	512/m <sup>3</sup>
		67%	11%	0.9%	1.0%	10%	6%	3%	0.5%		(+Lot	
											2222)	

 Table 7.4. Pottery from the Test 4 Group.

In Test 4, plainware decreased from bottom to top. Textured frequencies were in the low to medium ranges. Imported wares were relatively numerous and found in most levels. Neff did not re-study these assemblages. Hill placed the three Test 4 collections included in his study in the middle range of his Medio period cluster.

# Notes from the Lab

Lot 2089, T 4 L1: "Other": nine black-on-red sherds (probably Madera Black-on-red) and three Ramos Polychrome sherds (one with a "bull's eye" painted on a red area, with thin black lines on tan, that were in turn enclosed in broader black lines). "Combo": (1) two body sherds with red-slipped interiors and textured exteriors; (2) a scored/incised sherd with red linear decoration on the exterior. An unusual polychrome rim had red and black painted designs and a red slip band on the lip interior, on a polished black (interior and exterior) background. A rim with a red slipped interior carried the red slip over the lip to form a slip band on the polished brown exterior. Of the brown rims, two are from one vessel and five were from another vessel, indicating deposits with multiple sherds from the same vessel.

Lot 2104, T4 L2: some of the black sherds were quite thin (3 mm thick), highly polished, and well made, suggesting an import such as Ramos Black. "Other": (1) one Ramos polychrome in which the red was outlined in black, with a larger black design; (2) four Madera Black-on-red. "Combos": (1) a sherd of red on polished black; (2) a Babícora Black-on-tan with a polished black interior; (3) a rim that probably belonged to this same vessel. A Babícora Polychrome body sherd had a red open circle in a black frame, with additional red and black lines. Another Babícora Polychrome had a gray to black background (heat altered?).

Lot 2135, SW Extension of Test 4, Level 1 (parallels Test 4, Level 1 in depth): "Other": (1) one Ramos Polychrome; (2) one Madera Black-on-red. "Combo": patterned incisions with red paint. Of the Babícora sherds, nine were polychromes and five were black-on-tans, one of the latter having a polished black interior.

Sherds became less frequent in the lower levels, but a Ramos Polychrome came from Lot 2128 (under the fill of Feature B), and, as noted above, a Babícora Polychrome was found at the very bottom of the cultural deposits, overlying the clay level of Stratum D.

Lot 2217, Test 10, Level 1: "Other": one Madera Black-on-red.

Lot 2218, Test 10, Level 2: "Other": (1) two Ramos polychromes (one identified by Gloria Fenner); (2) one possible Madera Black-on-red; (3) a black on polished dark brown with burned out paint; (4) a sherd with a black-on-gray exterior and gray interior; (5) a sherd with polished black over a dark brown interior, and a red-on-black exterior; (6) two sherds with polished black interiors and possibly painted exteriors (if so, the paint is very faint).

Lot 2219, Test 11, Level 1: "Other": brown sherds with burned out paint (presumably black). The background color of one of these was a polished dark brown, while the other was a medium brown.

Lot 2222, Test 11, Level 2: a large tan sherd, probably the bottom of a Babícora vessel, was tabulated with the undecorated sherds. The estimated diameter of this vessel exceeded 36 cm. A micaceous sherd from the undecorated count was probably from the same vessel as worked sherd No. 2218-2. Black sherds tabulated from this unit ranged from black to dark brown and may have belonged to a single vessel. "Other": (1) a Madera Black-on-red; (2) four polished dark brown sherds with burned out paint. The single sherd classed as red-on-brown was a crude red-on-gray that should be looked at again. The field tabulations did not elaborate on this. An unusual, undecorated sherd with a rather sharp angle could have represented the angle between the base and the wall of a bowl, or it could have come from another kind of a vessel.

Lot 2223, Test 11, Level 3, produced few sherds. Four undecorated sherds belonged to the large vessel from the overlying level (probably the undecorated portion of a very large Babícora jar). The black sherds were probably better classed as blackened browns. The only two textured sherds were incised. The painted sherds were quite unusual. An aberrant polychrome had a step design in a large solid black zone, reminiscent of Lincoln Black-on-red, but also had red outlined in black, suggesting Ramos. A red-on-tan sherd was probably not Babícora but needs to be reevaluated. One of the dark polished browns with burned-out paint presumably was from a black-on-brown vessel. Red on dark polished brown was also present.

## Other Ceramic Items

The following are not included in the above listings and tabulations.

Test 4, Level 2: two modified sherds. No. 2104-1: an undecorated brown sherd with a single straight worked edge. No. 2104-2: a Babícora Polychrome *malacate* (biconically drilled, shaped sherd) with ground edges. The central hole is quite large (ca. 0.8 cm diameter).

Test 4 extension, Level 1: three modified sherds. No. 2135-1: a sherd scraper made on an undecorated brown sherd had been thinned or beveled, with use striations on both faces. No. 2135-2: a complete asymmetrical shaped disk of polished black with ground edges. No. 2135-3: an asymmetrical sherd disk with shaped edges was made on a sherd of polished brownware.

Test 10, Level 2: three sherds. No. 2218-2: a sherd with a perpendicular edge. No. 2218-3: a sherd with a beveled edge. Also, an undecorated jar rim had a small, coiled handle attached from the lip to the body, leaving an aperture 6 to 7 mm in diameter.

### Discussion

Two black-on-red sherds (Madera?) came from this group, as did two Ramos polychrome sherds and the possible Ramos polychrome from Lot 2223. This unit, therefore, had more convincing imports and or local variants of imports than did Tests 2 and 3. Several red-on-tan sherds would repay closer examination. Polished dark brown jars with black or burned out paint (presumably black) were well represented, and probably represent heat altered Babícora pottery (Neff did not look at this unit, but I suspect he would call these sherds heat altered). Sherds from the same vessel were noted from different units but at similar depths, suggesting that the deposits had some coherence.

Looking just at Test 11, there was an increase in plainwares from Level 3 to the top. The shift in frequency of plainwares was less convincing for Tests 4 and 10. Textured wares were present in modest amounts in all levels; though the decrease through time was uneven, it did occur. There was no shortage of imported wares and neither Hill nor I had any hesitation in dating this group of tests to the Medio period.

## **Ground Stone**

Two manos or mano fragments, a ground stone fragment (mano?), a grooved maul fragment, and a "macaw stone" came from this unit.

No. 2124-3, Feature F, Level F-1: a ground stone fragment (mano?) came from the upper level of the borrow pit. One surface is ground, while the opposite surface has use wear over about half of the face. The broken end has been flaked (9.7 by 5.0 by 3.4 cm; 360 g).

No. 2126-1, T4 Extension, basal level in contact with Stratum D at 48–50 cm BD: a complete mano made on a thin, fairly flat cobble of vesicular basalt with an almost flat grinding face. The mano was heavily used and heavily weathered (17.3 by 8.3 by 2.1 cm, 485 g).

No. 2217-1, L1 of T 10: A large part (ca. 7/8) of a mano (13.5 x 9.5 x 2.3 cm; 392.7 g) made of vesicular basalt was mildly ground on two opposing faces.

No. 2128-1, beneath Feature 91-B: a full grooved maul fragment with intact butt end had a fractured and flaked bit end (8.2 by 7.4 by 5.1 cm).

No. 2089-1, T4, L1: a "macaw stone" fragment of "flowstone." The aperture is 12 cm wide at the break. The aperture is unusual in being straight sided (perpendicular to the face of the stone) and squared rather than rounded. The outside dimensions of the artifact are 45 by 20 by 7 cm. It was one of two recovered from excavations at the site. Others were surface finds in the general area of the central mound and between the central and eastern mounds. Given the amount of disturbance in this plaza or compound area, the stone's vertical position may not be significant. An enclosed courtyard would not have been a bad place to put macaw pens, if this was indeed a macaw stone.

### Hammerstone

No. 2135-4: a well-rounded hammerstone was found in the upper level (L1) of the Test 4 extension (6.3 by 5.6 by 6.3 cm, 298 g).

#### **Flaked Stone**

No formal tools were found in the Test 4 group, and only three utilized flakes and three cores. Some of the 158 unmodified flakes undoubtedly had been used, but our analytical approach was not oriented toward recognizing such usage.

Lot	Level	Flakes	Blades	Cores	Used	Total	Sherd: Lithic Ratio
2089	T4 L1	20		1	1	22	14.7 :1
2104	T4 L2	65		3	1	69	4.1 :1
2126	Basal					0	
2128	Fea B	3				3	2:1
2143	Below Fea B	4				4	1:1
2217	T10 L1	5				5	13.2 :1
2218	T10 L2	45			1	46	1.8 :1
2219	T11 L1					0	
2222	T11 L2	9				9	8.4 :1
2223	T11 L3	6				6	3.8 :1
Totals		164	0	4	3	164	Combined 7.2:1

Table 7.5. Flaked Stone from the Test 4 Group.

### **Botanical Remains**

No macrobotanical remains were recorded. Flotation samples yielded the following results.

Lot 2084, Level 1: Juniperus, Pinus, Quercus, and Zea mays.

Lot 2151, Feature H, Level 2: Zea mays.

Lot 2088, Level 2, burn zone, Pinus, Quercus and an unknown seed.

#### **Faunal Remains**

Few animal bones were recorded from this unit, but they showed a fair degree of species diversity. Eight of Hodgetts' categories were present among the 27 or 28 specimens<sup>1</sup> from this group of tests.

<sup>&</sup>lt;sup>1</sup> Lot 2084 was listed in the Ch-159 faunal database as coming from T4 L1. In the Lot book, 2084 was from T4, L1, but from another site (Ch-151). Both 2084, from Ch-151, and 2089, from T4, L1, at this site, were collected on the same day. Since 2084 was in the database, it is included here. The faunal database did not include anything from Lot 2089, suggesting that this faunal sample might be from Test 4, Level 1. Only one specimen was involved.

Identification	T4 L1	T4 L1	T4 L2	T4	T4 sub	T10	T11	T11	Total
	2084*	SW	2104	Fea. G	Fea. B	L1	L1	L3	
		2135		2127	2128	2217	2219	2223	
Med. Mammal	1					1			2
Sm rodent		3							3
Jackrabbit								2	2
Cottontail				1					1
Bird robin sized or				1			1		2
smaller									
Bird, larger than								1	1
mallard									
Turkey						1			1
Bird						1			1
Unknown		4	2	1	1	1	5	1	15
Totals	1	7	2	3	1	4	6	4	28

 Table 7.6. Faunal Remains from the Test 4 Group of Units.

### **Density of Artifacts and Faunal Remains**

For the 6 m<sup>2</sup> (roughly 2.86 m<sup>3</sup>) of the Test 4 group, 1,352 artifacts are recorded, yielding an average of 472 artifacts/m<sup>3</sup>. Both botanical and faunal remains were scarce; faunal density was approximately 10 elements per cubic meter.

### **Summary of Test 4 Group**

This part of the patio clearly contained materials dating to the Medio period. Imported or possibly imported pottery (such as Ramos, Villa Ahumada and Madera) was more numerous in this group of tests than elsewhere. Flaked stone artifacts were not as numerous, relative to ceramics, as elsewhere, but ground stone was more common. Features 91-B (the stone-lined hearth) and 91-H (the smaller hearth) were the only features encountered in this group of tests.

## Chapter 8

# TEST 5

A rock-walled room on the west side of the central room block was almost completely exposed by looters. It seemed a good candidate for retrieving architectural information and thereby salvaging something from the omnipresent looting (Figure 8.1; Table 8.1). It was difficult to estimate the volume of excavated material, and no such estimate is given.



**Figure 8.1.** Test 5, after looted room was cleaned out. PAC 91C-13-04.

### Table 8.1. Test 5 (Looted Room).

Unit Datum is NW corner of unit.

Lot	Level	Depth	Description
2110	Backdirt	?	Initial cleaning of potted room by removal of loose backdirt. Near NE
			corner, darker soil stained area. Human fibula and phalange taken from
			backdirt.
	L1	?	Feature C is the plastered clay floor of the room
2114	L2	To 44 cm	A 1 by 1m unit in NW corner of room. Stone cap over burial in this level.
2115	L3	To 65 cm	Continued 1 by 1m unit in NW corner of room. Burial. Area to E of the 1x1
			was also cleared. Matrix was gravelly, sandy tan soil. The adjacent area
			contained more artifacts.
2183	L4	To 110 cm	Exposure of double burial. See Features L1 and L2 descriptions. C14 date
2184			from the upper female burial (Fea. L-1) was 670 ±50, while the C14 date
2185			from the lower, male burial (Fea. L-2) was $600 \pm 50$ BP.

#### **Room Details**

Although rocks had been removed from the walls, the structure of the walls was apparent as a single row of rocks embedded in adobe or puddled mud (containing artifacts), standing roughly two courses high on three sides of the room. No east wall was detected but the presence of wall plaster and a plaster floor indicates that this was an enclosed room measuring about 4 by 4.5 m.

No floor features such as a hearth or postholes were encountered; the degree of looting does not allow us to assume that such features were absent. Remaining floor plaster remnants were laid over hard-packed fill containing gravel (i.e., this floor was not built on deep cultural fill). The floor was designated Feature 91-C.

Wall plaster was visible at intervals on both the west and north rock walls. A number of stone slabs in the fill may have been "hatch covers" or paving stones. A double burial, described below, was the most important feature from this unit.

### Human Remains

### Remains Above the Floor

Scattered human bones were present on the exposed surface of the northeast corner of the room, on looter's backdirt beside the room, and in the northwest sector of the room.

In the Level Record for Test 5, Level 1 (June 24, 1991), the excavator notes: "Numerous human bone fragments were encountered at 72 cm BD, 70 cm E from West wall of room and 240 cm from South wall. The positioning of the bones indicated that [the body was] interred in a flexed position. Part of the pelvis, including the acetabulum, was exposed first, followed by the capitlum of femur (forea cap?) and the medial malleous of tibia is visible. Navicular and other bones of ankle/foot were found in position. All bones in correct anatomical position to form a flexed leg." The remains were so fragmentary and in such poor shape that no feature number was assigned. This level was assigned to Lot 2110.

Burial notes for Lot 2110, said to be from the northeast part of the room, state: "Portion of burial that was intruded upon when the walls of Test 5 were being straightened." Fragments of the left humerus, left radius, left ulna and left fibula were from a very robust individual; portions of metacarpals, two rib fragments and six miscellaneous fragments are also listed.

The Level Record for Test 5, Level 1, noted: "In the NE corner near juniper bush, human bone was encountered; soil stained darker but bone was not excavated. Human fibula and phalange were retrieved from the backdirt."

The list of bones from the disturbed burial in the northeast part of the room is not identical to that for the flexed leg in the northwest part of the room. What is not clear is the possible relationships between the different groups of human bones, and whether one or more individuals is represented.

A rib fragment in a poor state of preservation was noted as coming from Lot 2182, Test 5, northwest corner, Level 3, east of the stone cap of the double burial.

## The Double Burial

As room cleaning proceeded, a paved area in the northwest corner of the room proved to be a stone cap (Feature 91-D) for a sub-floor double burial. The flagstones covered a roughly right-triangular area measuring 0.9 m along its west edge and 0.8 m along its north edge, with the southeast edge of the paving being the "hypotenuse" (Figure 8.2).



Figure 8.2. Stones covering the double burial in Test 5. PAC 91B/W 8-9.

After the slab cover was removed, the tightly flexed burial of a female (Feature 91-L-1; Lot 2184) was encountered. The head was to the north and the face to the west. A small pot was located in front of the face, and a larger pot under the knees (Figures 8.3 and 8.4). Three lithic artifacts in the grave may have been introduced as part of the fill. In the opinion of the physical anthropologist who excavated the burials, the woman's joints were broken in the process of tightly flexing the body. The hands and feet were missing and rodent activity was suspected.



**Figure 8.3.** Initial exposure of the upper skeleton of the double burial in Test 5. PAC 91B/W-9-7.



Figure 8.4. Pots accompanying the double burial in Test 5.

Upon removal of the woman's skeleton and the two pots, a second skeleton, of a male (Feature 91-L-2; Lot 2185), was exposed beneath the first. The dual interment represented a single funerary event. Isotopic analysis of these two skeletons is discussed elsewhere.

The radiocarbon date for the upper, female skeleton was  $670 \pm 50$  BP, while the date for the male skeleton was  $600 \pm 50$  BP. The two radiocarbon were run on collagen. The apparent 70-year difference in the reported dates was not considered significant and they overlapped substantially at the one-sigma level. These assays placed the burials at roughly the same age range as the dates from the upper levels of the Test 7 group and those from the long 1992 trench across the Central Mound.

## Pottery

As the excavations explored the architecture of a looted room, few sherds were recovered (Table 8.2). No imported sherds were recovered. Neff reviewed the pottery from this unit.

Lot	Level	Undec.	Black	R-	R/Br	Text	Bab	Other	Combo	Totals	Wt in
				sl							gms
2110	L1	1				1				2	20.1
		50%				50%					
2114	L2	8	1			2				11	87.3
		73%	9%			18%					
2115	L3	19	1			4			2	26	92.6
		73%	4%			15%			8%		
2182	L3 E	51	9			7	2	1		70	275.9
		73%	13%			10%	3%	1%			
2183	Fea L	5	1		1	3				10	36.2
		50%	10%		10%	30%	1			+2	for
		+1 pot					pot			pots*	sherds
Totals		84	12		1	17	2	1	2	119	512.1g
		+ 1 pot					+ 1			+ 2	for
		_					pot			pots	sherds.

# Table 8.2. Pottery from Test 5.

\* Weight of the brown, undecorated pot (2183-1) is 1043.8g; weight of the Babícora polychrome pot (2183-2) is 888.1g. The total weight of recovered pottery from Test 5 was 2444 gms.

# Notes from the Lab

Lot 2110, Level 1, NE corner: no painted pottery. One finger impressed corrugated with brown paste, medium coarse sand temper, low luster interior; corrugations are 0.8-1.1 cm wide (Neff).

Lot 2114, Level 2, NW corner: no painted pottery and no textured.

Lot 2115, Level 3, NW corner: "Combos": two sherds with red paint combined with textured; one of these had red paint with zoned altered corrugated, and the other had red paint on the smoothed, dark brown part below zoned corrugated. Neff called these red-on-brown textured, noting that one had dark brown paste, fine sand temper, and a matte, low-luster interior.

Lot 2182, Level 3W: "Other": a red-on-black or dark-polished-brown. The only Babícora identified in the lab from this lot was a black-on-tan. Most interesting was the presence of one of the 'false-rims' or flanged sherds in an undecorated brown sherd. Textured sherds included brushed and scored, altered corrugated, and punctate. Neff also identified three painted sherds, but placed them all in Babícora. He noted that one heat-altered body sherd with typical paste had red painted lines on a polished surface, making it Babícora in his opinion. The second he described as having tan paste, medium coarse sand temper, a matte interior, and red and black painted lines over a matte polished exterior. The third he suggested was Babícora Black-on-tan, with a tan paste, fine sand temper, matte interior, and black paint on heat-altered gray matte exterior.

Lot 2183 contained the two whole pots from the double burial (Feature L). One was an undecorated brown jar 20 cm high and 17.5 cm at its maximum diameter (Figure 8.4, left). The rim was everted and thickened. There were cracks in the rim and encircling the bottom. There was no indication that the pot was used in a fire. The second pot was a Babícora Polychrome (Figure 8.4, right) that was 14.8 cm high and 11.6 cm in diameter. The bottom half of the pot was well blackened, and the rounded bottom was pitted from usage. Small handles on either side of the pot extended from the everted rim to the upper body. Flotation failed to reveal botanical materials in either pot. In addition to the whole pots accompanying the double burial, a few other sherds were found in lot 2183. Neff changed the classification of a very small body sherd (classed in the lab as red-on-brown) to Babícora polychrome; he described it as having tan paste, medium sand temper, a matte interior, and a red line painted over a low luster polished exterior.

# Discussion

The two whole pots used as grave offerings in the double burial represented the only whole vessels recovered by the PAC (however, all the sherds of the small corrugated jar from the floor of Test 2 were present and that vessel could be reconstructed). No imports or local variants of imports were reported for Test 5 by either the original 1991 analysis or by Neff's review. The presence of a flange on an undecorated brown sherd showed that this vessel form was not confined to polychromes, and the presence of two coiled handles on the Babícora vessel showed that such handles are not confined to plain brown or textured jars.

Hill used Level 3 in his cluster analysis, and the proportions of the plotted categories are roughly the same as the lab tabulations. Samples from Levels 1, 2 and Feature L were too small to be included in Hill's study. The frequency of plain sherds was high, that of textured sherds moderate, which led Hill to place the sample toward the late end of the Medio period. The lab analysis of the pottery, as well as the radiocarbon dates, supported this inference.

#### **Flaked Stone**

No ground stone was recorded. In Level 3 of the northwest corner of the room, but not, apparently, associated with the burials, 39 pieces of flaked stone were found (Table 8.3). Item No. 2115-1 was a side-notched point with a large, convex base made of gray chert (2.6 by 1.5 by 0.5 cm, 0.6 g). Also in Level 3, but east of the cap over the dual burial, 22 additional pieces of flaked stone were noted. The fairly low sherd: lithic ratios are based on quite small samples obtained from disturbed contexts, and from the double burial, which produced few artifacts.

Lot	Level	Flakes	Blades	Cores	Used	Tools	Total	Sherd: Lithic Ratio
2110	L1*				1		1	2:1
2114	L2	3			1		4	2.7:1
2115	L3**	35			3	1	39	2.8:1
2182	L3E NW	21		1			22	3.8:1
2183	Fea. L	3					3	4:1
Totals		32		1	5	1	39	3 05.1

Table 8.3. Flaked Stone from Test 5.

\*JHK could not find a field record for the single piece of flaked stone from Lot 2110. \*\*The Excel database gives 4 utilized and 6 other flakes.

#### **Botanical Remains**

No macrobotanical specimens were recorded from this unit. A flotation sample (Lot 2185) taken from between the legs and arms of one of the burials failed to produce any botanical remains. However, Lot 2165, which was also from the burial, produced *Physalis* and *Pinus* (Table 8.4). *Zea mays* was present in Levels 2 and 3.

Plant Taxon	L2	L3	L4 Fea L
	Lot 2114	Lot 2115	Lot 2165
Pinus	1	1	1
Zea mays	1	2	
Gymnosperm		1	
Quercus		1	
Physalis			1

 Table 8.4. Flotation Results from Test 5.

### **Faunal Remains**

Four faunal specimens were recovered from this test unit, all from Level 3 (Lot 2125). Two could not be identified, one was a turkey radius, and one was a jackrabbit atlas. Also, No. 2115-1, a side-notched projectile point, tested positively to the anti-sera for dog in the small immunological test conducted in 1991 (Newman 1991).

#### Summary of Test 5

The absence of a surviving east wall in this looted room, as well as the absence of floor features, left an unclear image of the architecture. The east wall could have been a flimsier, *jacal* style wall. The area was, in any event, the scene of at least two burial episodes, of which only the double burial beneath the stone slabs was deep enough to evade looters. The two dates from a single event (the double burial) were from a tightly defined single context (see Stewart et al 2004:241).

Artifact density was not calculated because of the heavy disturbance and because only the 1 by 1 m sub-unit containing the double burial was systematically collected. Given the destruction that had occurred, sparse botanical and faunal remains were to be expected.

### **Chapter 9**

#### TEST 6

This unit near the apex of the central room block was placed to explore the architecture in this most elevated part of the site and to ascertain whether the height of the mound was derived from a two-story building. This 3 x 1.5m pit was placed along and south of the visible line of a rock wall. The east end of the trench is within a meter of the 1992 Tests 35 and 36 at the north end of the "long" trench. The rock wall formed the south wall of a room abutting Room 3 on the south, while the excavated area south of the wall belonged to another room within the central room block.

#### Table 9.1. Test 6.

3 by 1.5m to ca 150 cm BD; 1.5 by 1.5 m from 150 to 219 cm BD; datum near Station 4

Lot	Level	Depth	Description	Estimated
				Volume
2116 2137	L1 Fea E	12 cm to 150 cm	Unit designed to explore room at top of central room block. Test unit placed along a visible, E-W rock wall. Bird bone and human bone collected. Large charcoal concentration in SW corner of unit, and a large thin stone (hatch cover rock) at E wall of unit at 60 cm BD. Thin clay lenses in profile. At 130 cm BD, soil became very soft and dark. Burial at 60 cm N and 100 cm E, at ca. 150 cm BD designated Feature E.	6.21m <sup>3</sup>
2167	L1	150-170 cm.	West end of unit not excavated below the level of the human burial, but the east end $(1.5 \times 1.5m)$ continued downward. Human thoracic vertebra was an isolated find. Rodent bone. At about 160 cm BD, across E end of trench, a dark clayey burned layer was encountered that also appeared in profile of N wall of unit.	0.45m <sup>3</sup>
2168	L2	To 191 cm	Human and animal bone concentrated in SE corner of E end of unit. Human bone at ca. 178 cm BD. Ash lens in NE corner of unit at ca. 187 cm BD contained large amounts of charcoal. Ash lens was similar to lower burned zone in Test 7. Soil was very dark clay with angular gravels. Artifact density decreasing. Daub interspersed throughout unit.	0.47m <sup>3</sup>
2176	L3	To 209 cm	Corncobs at 203 cm BD in E 1/3 of unit. Rest of level produced sparse flaked stone, ceramics and bone. SE corner was very hard packed and rocky. Rest was dark clay with angular gravels.	0.40 <sup>3</sup>
*	L4	To 219 cm	Sterile except for 2 flakes. Soil lighter and more rocky.	0.22m <sup>3</sup>
*	L5	To 230 cm	Sterile layer. Two auger holes to bedrock at 298 cm BD were sterile.	0.25m <sup>3</sup>
				8.00m <sup>3</sup>

\* No lot numbers were assigned for Levels 4 and 5 because no artifacts from the levels arrived at the lab.

### **Room Details**

The visible stone wall used to orient the test unit (Figure 9.1) represented the north wall of a room, and was probably the south wall of Room 4 tested in 1992, although no direct connection was made.



Figure 9.1. The stone wall in Test 6. PAC91C-13-28.

The stone wall, standing 1 m high, retained an adobe interior surface in places, with wall plaster over the adobe that was continuous with the remnants of floor plaster adjacent to the wall. The floor plaster also seemed to be laid over an adobe base. The wall and its footing continued down to 90 to 106 cm BD. The adobe wall matrix was quite clear in the west profile. A bright orange level of burned adobe (wall fall?) sloped from the west wall of the unit toward the room center. The drawn profile of the SW corner showed a large rock resting on the adobe wall base and almost against the SW corner of unit, surrounded by hard adobe matrix.

Within the limits of the excavation, no floor features were detected. One or more burials were placed well below the floor level. The floor was absent over most of the unit, and it was not clear whether the remains were buried before the room was built, or through its floor. The absence of floor over much of the unit suggested that the burial might have been related to the destruction of the floor.

Wall bases and the floor level rested on as much as 50 cm of fairly dense cultural fill (to 150 cm BD), with sparse recovery of botanical remains and flaked stone to 209 cm BD. A charred corncob came from 203 cm BD.

#### **Human Remains**

Human bones were found individually and in clusters during this excavation, and the number of individuals involved was not clear. The remains were most likely from burials scattered by rodent action. From Lot 2116 ("fill"), two adult metacarpals were poorly preserved but showed no pathologies. These elements, encountered above the floor level, probably came from two burials (Lot 2136) designated as Feature E, found beneath the floor at 140 cm BD and deeper. No sherds were associated with Feature E.

The elements were in such poor shape that the physical anthropologist reburied the remains after making such observations as she could. Two and perhaps three individuals, one a sub-adult, were interred together. The most complete individual was probably a female placed with her head to the north and face to the east, with the left arm under the face. This was a partly mummified individual, and some of the mummified tissue was collected but subsequently lost. Most of the molars were worn flat but retained the enamel layer. The three left maxilla molars showed no wear, and there was a lack of fit between these three unworn teeth and the other, badly worn teeth. However, all came from burial context and were in proper anatomical order. The teeth showed no caries. There was not enough bone left to evaluate bone absorption. The teeth showed no calculus but had a yellow stain on lingual side of right mandible, as well as a whitish discoloration on the left side maxillary teeth.

From Level 1, Lot 2167, several other fragments may or may not be from the same individual(s), including a thoracic vertebra with a small amount of osteoporosis on the dorsal margin, a lower first, right molar with incomplete root formation and no wear and a Y-5 pattern, an upper right canine with no wear, a cranial fragment, a distal phalange, and several small long bone fragments.

From Level 2, Lot 2168, an adult mid-thoracic left rib missing proximal and distal ends was most likely associated with the bones in Lot 2167, and possibly with an individual in Feature E.

### Pottery

The sherd assemblage was quite small for such a large test area (Table 9.2). The density of sherds was, by far, the lowest encountered at the site. Sherds were scarce in the fill of the room and below the floor. Sherds were most common in Level 2 confirming the excavators' impression that this was the most artifact rich level. Neff's reanalysis identified several red-on-brown sherds and one Babícora polychrome that were missed in the lab.

### Notes from the Lab

No Babícora sherds were recorded in the lab, nor were there any imports. All of the "Combos" exhibited textured exteriors combined with paint, or textured exteriors with polished black interiors, or, in one case, a black matte exterior combined with scoring.

Lot	Level	Undec	Black	R-	R/Br	Text	Bab.	Other	Combos	Totals	Wt in	Density
				sl							g	/m <sup>3</sup>
2116	Rm	1	1							2	56.5	0.32/m <sup>3</sup>
	fill	50%	50%									
2167	1	17	6			9			4	36	180.8	80/m <sup>3</sup>
		47%	17%			25%						
2168	2	18	21			9			4	52	268.4	111/m³
		35%	40%			17%			8%			
2176	3	6							3	9	94	22/m³
		66%							33%			
Totals		42	30			18			9	99	599.7g	13/m³
		42%	30%			18%			9%		Ū	

Table 9.2. Pottery from Test 6.

A red-on-brown textured sherd from Lot 2176 (Level 3) exhibited two lines of regularly spaced small round bumps or nodes showing finger mail marks around the knobs (appliqué?), with red paint below the lower line of knobs. No other red-on-brown or red-slipped sherds were reported, but the black category was well represented. No pottery was recovered from Levels 4 or 5.

For Level 1, Lot 2167, Neff reported three painted sherds. One was a small, blackened body sherd with red paint on the exterior (polished over), which he assigned to Babícora Polychrome. His other two painted sherds were red-on-tan textured body sherds. One had a corrugated exterior with pale red paint over the corrugations, while the other had vertical parallel incisions over corrugations combined with red paint.

For Level 2, Lot 2168, Neff listed one painted sherd with coarse sand and mica temper that had narrow, parallel incised lines (some 8 to 9 per cm) on the exterior, where there was also a dab of red paint. No slip was seen. Neff called this sherd "generic" red-on-tan textured.

For Level 3, Lot 2176, Neff recognized one painted sherd that he called red-on-tan textured. It had red paint above a textured area consisting of zoned rows of regularly spaced bumps or nodes (which the laboratory notes suggest could be appliqué, but Neff thought they were built up from the vessel wall).

# Discussion

Hill placed Test 6, Levels 1 and 2, in the Viejo Period cluster. Plain ware frequency was relatively low in those levels, and Level 1, at least, had a high frequency of textured. Since the central room block appeared to represent the latest occupation of the site, such a temporal placement was unexpected. Most of the artifacts, however, come from below the floor. The subfloor materials, and the partly mummified burial, could very well have belonged to the Viejo period. The red-on-brown sherds identified by Neff lend weight the notion that subfloor deposits could pertain to the Viejo period.
## **Flaked Stone**

No ground stone was recovered. Flaked Stone was sparse in Test 6, as were all artifact types (Table 9.3). No formal tools were recovered.

Lot	Level	Flakes	Blades	Cores	Used	Tools	Total	Sherd:
								Lithic
2167	L1	1					1	36:1
2168	L2	13					13	4:1
2176	L3	11		1			12	1:13
Totals		25		1			26	

# Table 9.3. Flaked Stone from Test 6.

#### **Botanical Remains**

Pinus and Zea mays were reported from lot 2176, Level 3. No flotation samples were analyzed.

## **Faunal Remains**

Test 6 yielded 26 fragments of animal bone.

Lot 2116 ("room fill" yielded two jackrabbit bones (metatarsal and radius fragments), two bones from Gruiformes or cranes (ulna and radius fragments), and 11 unidentified bone fragments. The last included three long bone fragments and an axial fragment. The fact that both ulna and radius fragments from a crane were present in this unit is noteworthy.

Lot 2176 (Level 3) yielded four bone from medium Falconiformes (prairie falcon size or larger), one bone from a medium bird (mallard size or smaller), one bone from a small *Anas* (teal sized or smaller), one jackrabbit bone, and four unidentified bones.

## **Bone Tool**

An awl fragment, 4 cm long, came from Level 2, Lot 2168.

## **Density of Artifacts and Faunal Remains**

This unit, measuring 3 by 1.5 m from surface to 1.5 m BD, with 1.5 by 1.5 m excavated to a depth of 2.19 m, involved some 7.53 m<sup>3</sup> of excavated materials from culture bearing levels, and another 0.47 m<sup>3</sup> from sterile levels. Apart from human remains, some 125 items were recorded, for an average of 16 artifacts/m<sup>3</sup>—the lowest density at the site. Faunal elements averaged 3/m<sup>3</sup>, again the lowest density at the site. Although there was a great deal of rodent disturbance, the

excavators did not recognize any signs of looting at this particular spot. The scarcity of artifacts, especially in the level above the floor, suggests that this area was not used for trash disposal after feature abandonment, or that serious disturbance removed most of the artifacts. If the unit was not used for trash disposal, it might be one of the more recent parts of the site. This runs contrary to Hill's placement of Levels 1 and 2 in the Viejo period. Unfortunately, no radiocarbon date came from this unit.

#### **Summary of Test 6**

This test examined part of the central room block and its east end was quite near the south end of long trench excavated in 1992. The room exposed in Test 6 must have been part of the room block partly explored in 1992. Independently of Hill's analysis, I would have seriated Test 6 earlier than other tests on the basis of pottery percentages. Samples sizes were small, however. The room itself was probably Medio in age. Test 6 has the lowest densities of artifacts and faunal per cubic meter of any unit that was not massively disturbed (thus omitting Tests 5 and 35 from the comparison). Most of the Test 6 artifacts came from below the floor. The fill within the room showed no signs of massive disturbance. The subfloor levels could have belonged to the Viejo period; if so, the partly mummified burial would also have pertained to that era.

# Chapter 10

# THE TEST 7 GROUP

This group included Tests 7, 7A, 7B, 7C, and 12 (Figure 10.1). Test 7 was placed to the south of Test 1, across the Zurdito arroyo, precisely where the deep burned level was observed in 1990. The goals were to extend the north-south exposure across the arroyo, and to firm up the stratigraphy in this area, including that of the lower culture-bearing unit (Stratum C). All three major strata were exposed in the arroyo profile. In 1990, some of the burned zone from which the early radiocarbon date had been taken was still *in situ* under the arroyo bottom sands. By 1991 the arroyo had changed its physical characteristics due to slumping of the arroyo walls and infilling of the arroyo bottom with deposits from the sides and upstream.



**Figure 10.1.** The Test 7 group of units, looking south from Test 1. This photograph, taken at the end of excavation, shows the south edge of the Zurdito arroyo and the exposure of arroyo deposits below the present arroyo surface. The lower part of the borrow pit in Tests 7 and 7N can be seen. Tests 7 and 7N are along the arroyo face, with Test 7A and its rock wall at the beginning of the narrower trench. Tests 7B and 7C and 12 are at the far end of the trench. PAC 91B/W-8-26.

No evidence of a channel sidewall was seen across Test 7. Strata near the arroyo sloped downward from south to north toward the arroyo (Figure 10.2). As the tests were expanded to the south, the strata trended uphill, with bedrock in Test 7 at 238 cm BD, and in Test 7A at 197 cm BD. The bedrock dipped again in Test 7C. A sterile level some 30 cm thick lay above the bedrock from about 50 cm S of the arroyo, sloping upward to about 30 cm S of the boundary between Tests 7 and 7A. At that point, the sterile layer shelved upward approximately 30 cm and might have represented an old channel edge. The bottom of the cultural deposits was some 50 cm higher south of that shelf than at the arroyo edge. If this represented the edge of an older channel, however, it was soon covered by more gently sloping deposits across the 3 m stretch of Tests 7 and 7A from the arroyo to the stone wall in Test 7A.

As Test 7 progressed, discontinuities in the lower levels were initially thought to represent a possible pit house. This belief, and the locating of several rock-lined pits in upper levels, caused Test 7 to be extended to the west (Test 7N) and south (Tests 7A, B, and C and Test 12). The final configuration of this group of tests was a 1m wide trench beginning with Test 7 at the arroyo wall and proceeding south through Tests 7A, 7B, and 7C for a total north-south distance of 7.5 m. Test 7N was a roughly 2 by 2 m test located west of Test 7 along the arroyo face. Test 7N was irregular along the north edge because of a deep depression caused by a cattle trail crossing the arroyo; the effect of the cattle trail was most severe for the upper levels of Test 7N. Test 7B had a small extension, measuring 80 by 25 cm, to the east (not shown on the site map but indicated on a sketch of the Test 7 group of units) that allowed the crew to expose the east side of a small pit (Feature 91-K). Test 12 is a 1 m by 50 cm extension to the west of Test 7c designed to allow complete excavation of a small rock-lined hearth (Feature 91-M) and a slab-lined pit (Feature 91-O). Some 10 m<sup>2</sup> were opened in this group of tests.

Botanical samples from this group of tests were selected for five of the 14 radiocarbon dates from Ch-159. Individual dates are discussed below relative to their contexts.

## Test 7

It was not clear that the lower burned zone observed in 1990 continued into Test 7 (Table 10.1), although a fairly continuous burned zone was identified near the bottom of Level 8 and several burned zones are shown on the east profile drawing of Tests 7 and 7A. Within Test 7, Level 9 (below 195 cm BD) represented deposits containing sparse artifacts in the strata underlying the burned zone. The burned zone, 1 to 2 cm deep, was cut through by Feature 91-F (discussed below) at 170 cm south of the arroyo face. Lenses of ashes overlaid the burned zone that rested in places on burned soil. Other ashy lenses continued through the lower part of Level 9.

Loy Neff executed a profile of the east wall of Tests 7 and 7A (Figure 10.2) that does not correlate easily with the levels identified in the Level Records. Neff did not show Feature F in that profile, although it clearly extended beyond that profile in the plan views. Neff also showed an intrusive pit in the profile's upper levels that extended from what is labeled Horizon B into what is labeled Horizon C, or the "Lower Midden." This pit was not detected in the excavation of Test 7, and was not given a feature number (see below).



Figure 10.2. Profile of the cast wall of Tests 7 and 7A. Redrawn from Loy Neff's 1991 profile.

# Table 10.1. Test 7 (1 by 2 m).

#### Depth measurements were made at the NE corner.

Lot	Level	Depth: cm BD	Description	Estimated Excavated
				Volume in m <sup>3</sup>
n/a	L1	Ca 41 to	NE corner eroded at arroyo wall. (SE corner surface was at	Not calculated
		66 cm	11 cm BD). Stratum A represented at least 5 flood episode	
			deposits forming a light tan level about 1/2m thick. Top of	
			level was the variable surface, and bottom of Level 1 was the	
			contact with the darker cultural deposits. No collections	
			made.	
2117	L2	66 to 88	Dark deposits. Abundant artifacts include 80 flaked stone,	0.44m <sup>3</sup>
		cm	complete mano. Charcoal.	
2118	L3	To 106	Continuation of L 2; more rocks and charcoal; 18 flaked	0.36m <sup>3</sup>
			stone.	
2121	L4	To 119	Continuation of L 2 and 3, with some adobe pieces; 37 flaked	0.26m <sup>3</sup>
			stone	
2122	L5	To 133	Continuation of above; top of borrow pit (Feature 91-F) in	0.28m <sup>3</sup>
2203			Test 7 and 7N; 30 flaked stone (in 2 lots).	
2123	L6	To 146	NW corner altered by erosion. Feature 91-F; Ground stone	0.26m <sup>3</sup>
2124	Fea. 91-F		fragment and a slightly shouldered leaf shaped point	
	L1		(Archaic dart?) in feature along with 31 other flaked stone (in	
2125	Fea.91-F		Feature F, Level 1); Feature F, Level 2 contained an	
	L2		additional 18 flaked stone. Matrix of feature is continuation	
21.5.5		TE 152	of strata seen in Level 5.	0.50
2156	L7	To 172	Below Feature 91-F1, but with a continuation of matrix.	0.52m <sup>3</sup>
0154	10	<b>T</b> 105	C14: 940±40 BP.	0.46.2
2154	L8	10 195	Lower burn zones between ca 181 and 200 cm BD at arroyo	0.46m <sup>3</sup>
			face, sloping upward to the south. Main burned zone, cut	
0164		<b>T 2</b> 20	through by Feature F, at 181 cm BD.	
2164	L9	To 238	Sparse artifacts. Bedrock at 238 cm BD along arroyo face,	Not calculated
			sloping upward to south.	2 5 0 3
				2.58m <sup>3</sup>
1	1			calculated

#### Features

A rock-lined pit, an unlined pit, and a large borrow pit were identified in Test 7.

Feature 91-I was a small, shallow, rock-lined pit, mostly in Test 7N and barely extending into the southwest corner of Test 7. It was incompletely excavated because it extended into the unexcavated area south of Test 7N. The oval pit, rather lopsided in plan view, measured 50 cm east-west, 65+ cm north-south, and 12 cm deep (the complete north-south extent is estimated at 70 cm). This pit was dug from near the top of Level 5 into the fill over Feature 91-F, and postdated it.

The pit shown on the east profile of Tests 7 and 7A, but not identified during excavation, was an irregular unlined pit dug from the top of the middle culture-bearing horizon, intruding into the lower horizon. Its visible north-south extent was 1.3 m, with the maximum depth being 40 cm. The pit contained a fill that was lighter than its matrix and resembled the horizon above in terms of color and texture. A darker soil of irregular thickness (at most 20 cm) covered the pit but did not extend beyond its edges. Neff identified a thin, hard, burned earth lens at the top of the pit that seemed to form a fairly flat surface, possibly the living surface associated with the pit. The relationship of this pit to Feature F is discussed in the section on Test 7N.

Feature 91-F extended across Test 7 and into Test 7N. At first thought to be a pit house, it was finally interpreted as a borrow pit because of the very uneven surface that formed its base, and given the absence of internal features. The pit was filled with trash that was continuous with the deposits above it. The pit itself, though cut through "midden" or "midden–like" deposits, could be clearly delineated. Larger sherds (Table 10.2) and charcoal concentrations within the lower part of the borrow pit suggested a primary trash deposit not been exposed to water transport.

Lot	Level	Av. Wt./ sherd
2117	2	6.89g
2118	3	7.30g
2121	4	9.19g
2122	5	9.44g
2203		
2123	6	9.04g
2124	Fea. 91-F L1	6.54g
2125	Fea 91-F L2	15.6g
2156	7	8.41g
2154	8	13.7g
2164	9	12.2g
	Combined	9.24g

Tuble 10. 2. Therefue the fill per blief at the form	Table 10.	2.	Average	Weight	per She	rd, Test '	7.
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The pit fill (Level 6, including Feature F-L1 and L2) contained many pieces of fire-cracked basalt in the 10–20 cm size range. As Test 7N was excavated to continue exploration of this feature, the final statement on the feature is found in the Test 7N discussion below.

## Radiocarbon Date from Level 7, Test 7

This sample was from the lower, rich cultural matrix into which the borrow pit (Feature 91-F) was dug, and therefore pre-dated that feature. Feature 91-F could be bracketed between this date of  $940 \pm 40$  BP and the date of  $640 \pm 50$  BP from the higher Feature 91-I (see Test 7 N below). This level, and this date, thus appeared to belong to the middle period of site occupation.

Had a radiocarbon sample been run from the Test 7 burned zone, the relationship to the 1990 date of  $1340 \pm 80$  BP would have been more clear. Instead we opted to maximize the spread of dates from the site, and other samples took priority.

#### Pottery

Test 7 provided a good look at the deeper strata along the Zurdito arroyo (Table 10.3 and Figure 10.3). Loy Neff was particularly interested in Tests 1 and 7 because of their deep stratigraphy and because he was involved in both excavations. As none of the laboratory personnel was familiar with Viejo period pottery during our early field seasons, Neff's 1995 identifications of some Viejo period types in the Test 7 group of units was particularly important.

Lot #	Level	Undec.	Bk	R-	R/br	Text	Bab.	Other	Comb	Total	Wt. in	Density
				slip							g	/m <sup>3</sup>
2117	L2	137	14	6		17	11	2	1	188	1295.8	427/m <sup>3</sup>
		735	7%	3%		7%	6%	1%	0.5%			
2118	L3	68	21	1	2	17	3			112	817.8	311/m <sup>3</sup>
		61%	19%	0.5%	2%	15%	3%					
2121	L4	114	37	4	2	36	8	3	1	205	1884	788/m³
		55%	18%	2%	1%	18%	4%	1%	0.5%			
2122	L5	92	38	3	1	50	13	2	1	200	1889	714/m³
		46%	19%	1.5%	0.5%	25%	6.5%	1%	0.5%			
2123	L6	124	43	3		59	12	2	2	245	2216.6	2096/m <sup>3</sup>
		51%	18%	1%		24%	5%	1%	1%			for Lots
												2123,
												2124 &
												2125
2124	Fea	102		33	2	2	37	17		193	1263.3	
	F-L1	53%		17%	1%	1%	19%	9%				
2125	Fea.	38	24			27	1	3	14	107	1673.1	
	F- L2	35.5%	22%			25%	1%	3%	13%			
2156	L7	89	19		6	39	6	2	4	165	1389	205/m³
		54%	12%		4%	24%	4%	1%	2%			
2154	L8	47	11	1	1	22	1	2		85	1166.6	185/m³
		55%	13%	1%	1%	26%	1%	2%				
2164	L9	48	14		2	21		4		89	1087.5	Not
		54%	16%		2%	24%		4%				calculated
Totals		859	221	51	16	290	92	37	23	1589	14682.7	
		54%	14%	3%	1%	18%	6%	2%	1.5%		grams	

#### Table 10.3. Pottery from Test 7.



Figure 10.3. Sherds from Test 7. Top: Sherds from Level 6, Lot 2123; Babícora Polychromes above and textured rims below; PAC 91B/W-13-21. Bottom: Babícora sherds from Level 5, Lot 2156; PAC 91B/W-13-18.

No clear-cut demarcation was noted between levels containing only Medio Period pottery and those with Viejo Period pottery. In Test 7, Medio period types were exclusively present from Levels 2 to 6 (Madera Black-on-red in Level 2 and a possible Villa Ahumada in Level 6), while Viejo Period types clustered in Level 7 and below. No imported Medio Period types were found below Level 6, unless the sherd in Lot 2124, identified only as a black-on red, is Madera Black-on-red.

Hill (1992) did not have access to the radiocarbon dates at the time he wrote his thesis. He placed Test 7, Level 7, and L 1 and 2 from Feature F (in the lower part of Level 6) in the Viejo Period based on the frequencies of plain and textured wares. Level 4 was higher in Hill's Viejo period list, while Level 2 was placed quite high in the Medio period list. The Level 7 placement seems consistent with all other evidence, including the (uncorrected) radiocarbon date of  $940 \pm 40$  BP.

More refined dating was sought by looking at the frequencies of textured and Babícora sherds. Textured sherd frequencies show a break between Levels 4 and 5, with the intrusive Feature F-L1 (the borrow pit) being intermediate but closer to the upper levels in terms of frequency. Similarities in frequencies between Feature F-1 and Levels 4 and 5 suggest that the fill in the borrow pit probably came from the time when Levels 4 or 5 (or both) were accumulating. The Lot 2325 sherds from Feature F- L 2 were different from those from Feature F-1 (Lot 2124), however, suggesting that the bottom of the feature was more closely related to the lower levels and probably represented an earlier part of the Viejo period. The higher textured frequencies were mostly associated with local polychromes and the Viejo period ted-on-browns as identified by Neff, but Villa Ahumada Polychrome occurred in Level 6. The Babícora group was best represented in Feature F-L1. Single Babícora sherds were found in Feature F-1 L2 and in Level 8, but Babícora was absent from the lowest level. In general, the lowest levels had few or no Babícora sherds but quite high frequencies of textured sherds.

The Test 7 ceramic frequencies paralleled those of Test 1, with more textured and undecorated wares lower in the stratigraphic record, where they were associated with red-on-brown sherds. Red-slipped sherds increased farther up, peaking toward the middle of the sequence and decreasing toward the upper levels. Red-on-browns continued into Medio Period deposits; our impression was that the Medio Period imports, or at least the bulk of them, tended to be found in the latest part of the Medio period. Clearly the period of most intensive deposition occurred in Level 6, including Feature F. The density per cubic meter figures approach those of Levels 6, 7 and 8 in Test 1, and are in a comparable stratigraphic position.

# Neff's Identifications

Neff identified a black-on-red from Level 1 as Ramos Black-on-red. He also identified Madera Black-on-red from Level 2, Villa Ahumada Polychrome from Level 6, Victoria Red-on-brown textured and Anchondo Red-on-brown from Level 7, and Mata Red-on-brown textured and Leal Red-on-brown from Level 9. He also noted a possible Playas Red Incised but added a note saying "probably not."

# Notes from the Lab

Lot 2117, L2: "Other": (1) one Madera Black-on-red; (2) a rim lacking painted designs, carrying a possible white slip. "Combo": an undecorated rim with an incised lip and a possible black slip band on the interior.

Lot 2118, L3: within textured: one scored sherd with zoned smoothing, one incised corrugated, and one incised with scoring. Two of the undecorated (brown) rims have red slip bands (Pilón Red Rim).

Lot 2121, L4: "Combo": (1) an upper body textured (scored) sherd with a red line below, separating those elements from a plain body; (2) a sherd with a red-line design on polished black. "Other": one piece appeared to be a solid modeled figurine torso and neck (5.2 cm long, 3.5 cm wide at the "shoulders," and 1.3 cm thick). A Babícora Polychrome sherd had red angular elements drawn from an upper red line, interlocking with black angular elements drawn from a lower black line.

Lot 2122, L5: "Other": (1) a heavy neck of a brown bottle or a hollow support (see below); (2) a worked sherd with a polished black exterior and fine line incision (see below). One of the blacks had an exceptionally heavy crackled slip. A sherd with a black polished interior had a worked-beveled edge (see below). One of the undecorated sherds showed that a coil had broken away from the vessel wall. Rims with interior red slip bands occurred on an undecorated brown (Pilón Red Rim) and on one textured example. A rim with a red-slipped exterior had the red slip carried over onto the interior of the lip, creating a lip that is visually similar to Pilón Red Rim. A large scored rim had a squared lip. Four of the olla rims were textured below the lip.

Lot 2123, L6: "Other": (1) a possible Villa Ahumada Polychrome with white slip and polished brown background (a locally made Villa Ahumada?); (2) a brown sherd with a 'knob' added to the surface; (3) a black-on-brown rim. An undecorated rim from a straight-walled bowl has an estimated diameter of 16 cm; its uneven walls exhibit visible coils on the interior. A red-on-brown olla rim has faint, sloppy red swaths extending diagonally from the lip on the exterior. A body sherd from a thin-walled jar (3 mm thick), estimated to be 14 to 16 cm in diameter, may have been painted. Some of the Babícoras were burned and discolored, with burned out paint. One of the Babícora Polychrome sherds had a classic interlocking spiral design.

Lot 2124, Feature F-L1: "Other": (1) a coiled brown handle; (2) a brown modeled vessel base. A rim with a red slipped interior had the red slip carried over the lip and into an exterior band. A black incurving rim (tecomate?) was 9 mm thick.

Lot 2125, Feature F-L2: "Combos": (1) the unusual number of black-on-reds included five sherds with black exteriors and black-on-red interiors, three with red-on-black exteriors and blackened interiors, and four with black-on-red exteriors and polished black interiors; (2) an altered corrugated with red paint on the exterior; (3) a corrugated with a polished black interior. "Other": a brown coiled handle. An altered corrugated had both diagonal and horizontal "corrugations" similar to those on sherds from Test 2. One of the Babícora Polychrome sherds had a silvery slip or wash covering the red and black designs. The proportion of textured in this

unit suggests that as in the lower fill of Feature 1, the ceramics were most closely allied to the lower levels of the site.

Lot 2156, L7: "Other": (1) an unusual black-on-brown with very large and irregular paint patches on the exterior; the paste had temper particles up to 7.5 mm across; coil lines were evident on the exterior; low firing temperatures suspected; (2) roughly half of a brown biconically drilled sherd that may have broken during drilling (see below). "Combos": (1) a black-on-brown that appeared more local than the "other" sherd noted above; (2) four sherds with textured exteriors and polished black interiors (one incised with a chevron shaped tool, one incised, one scored, and one smoothed corrugated); (3) a corrugated jar rim with a black exterior. A red-on-brown (?), thickened and everted rim had red paint below the lip and above a polished brown to black exterior. One of the textured sherds had very regular incisions at a right angle to the corrugations. The exterior of a possible bowl rim (lip very eroded) had a thickened lip with a red band under the brown lip; the exterior body below the red band or broad horizontal line was polished brown to black. The interior of this sherd was a light, polished brown.

Lot 2154, L8: this level was entirely underneath Feature F-1 and constituted the matrix into which that feature was dug. "Other": (1) roughly half of a brown biconically drilled sherd (see below); (2) two sherds have burned out black painted designs on polished dark brown exteriors; (3) a thickened rim had two or three rows of corrugations above a polished black exterior. "Combo": (1) a scored sherd with a broad groove, also 10 other sherds of the same vessel (but lacking the groove); (2) a sherd with red slipped interior and an exterior exhibiting a flange or ridge around the vessel, probably at the shoulder. A brown sherd also had a flange or thickening around the shoulder, combined with scoring. Some very hard sherds with a cream exterior and a tan interior may have been Babícora with burned out paint, but the sherds were unusually hard for that type. (Ch-159 produced a number of polychrome and bichrome sherds that would have been called Babícora except for the dark background color.) A red-on-brown has a swath of red fuzzy-edged paint on a dark brown exterior. A neck-banded brown rim has red slip band on the interior of the lip. Some of the gray undecorated sherds may be from a vessel from which sherds and a rim were found in L 9.

Lot 2164, L9: "Other: (1) a drilled gray sherd may originally have been part of a vessel represented by seven gray undecorated sherds in this level (perhaps the sherds mentioned above, from L8, also belonged to this vessel. The drilled sherd, like the one described above for L8, had a line scratched onto one surface that could have served as a guideline for final shaping); (2) a rim with an incised, black, smoothed, crazed exterior and polished black interior; (3) two painted black-on-brown sherds were reminiscent of Jornada sherds in that there was little contrast between the designs and the background color; (4) a sherd that may have had a polished/matte pattern, if it was not burned out paint; (5) a sherd with zoned corrugation above red lines, may also have had a black line and could therefore be a polychrome. Within the textured category, one sherd had two horizontal corrugations on an otherwise plain surface, reminiscent of the kind of corrugation sometimes associated with Mata Red-on-brown. A thick corrugated or banded sherd was broken vertically at a point where three coils had been pinched onto, or otherwise added to, the vessel wall in a vertical line. In the Black category, a sharply curved sherd may be from a body with juncture with an almost flat, thickened base. The red-on-tan was described in

1991 as reminiscent of Three Rivers Red-on-terracotta because of its fine lines, but Loy Neff's re-analysis identified it as Mata Red-on-brown.

# **Other Ceramic Items**

The other ceramic items were included in the above listings unless otherwise noted.

Lot 2124, L 4: a mid-section of a coiled handle of a plain ware jar.

2122, L 5: (1) a very heavy piece with a small diameter was at first thought to be a bottle neck, but because the "rim" seemed to be eroded, this could equally well be a vessel support (the interior diameter of the piece varied from 1.5 to 2 cm, with walls varying in thickness from 1 to 1.4 cm. If this piece was a neck, it was straight and narrow for 2.5 cm, expanding outward at that point. If a support, it expanded toward its juncture with the jar wall); (2) a textured sherd with a straight worked edge, made from finely incised pottery; (3) a bowl sherd with a black interior had one edge worked/beveled from both faces.

Lot 2123, L 6: not included in the above listing were (1) a black sherd with one worked/beveled edge; (2) a sherd with a straight edge ground perpendicular to the vessel wall. The latter sherd was either from an undecorated vessel or had burned out paint (presumably black).

Lot 2154, Level 8: roughly one-third of a polished brown biconically drilled sherd (5.2 by 3.0 by 0.7 cm; 13g); outer edges roughed out but not ground A scratched line on surface suggested a guideline that would have been followed in creating a finished drilled disk (a spindle whorl?). If the scratched line served that purpose, the resulting disk would have been 2.4 cm in diameter. Two unusual sherds can be mentioned here. No. 2154-1 had an appliqué piece, or flange, that apparently encircled the exterior of the vessel. The 1 cm wide flange extended 0.5 cm outward from the vessel wall. The vessel was red-slipped on both the interior and the exterior. No. 2154-3 also had a curved flange that was at first thought to be an annular base. If so, the annular base was 26 cm in diameter.

Lot 2164, Level 9: one-quarter of an undecorated brown-gray drilled sherd without ground edges (3.6 by 2.5 cm; thickness unknown); an incised line suggested a manufacturing sequence (see above). If the scratched line was as a guide for finishing the piece, the final diameter would have been about 4 cm

Most of the modeled pieces found at the site were concentrated in Tests 1 and 7, including the probable figurine torso fragment (No. 2121-2) from Level 4 of Test 7 and the modeled piece (Lot 2122, Level 5) that could have been either a hollow vessel leg or support, or an extremely small neck of a very small jar—both possibilities are discussed above.

## Flaked Stone

As was typical, flakes without obvious use were the most numerous. Table 10.4 is derived from the Excel spreadsheet. The descriptions of catalogued items came from the Lithic catalogue. The two sources did not completely agree.

Lot	Level	Shaped	Used	Cores	Other	Total	Sherd : Lithic
							Ratio
2117	L2					0	188:0
2118	L3			1	17	18	6:1
2121	L4		1	3	35	39	5.25:1
2122	L5	1	2		25	28	7.14 : 1
2123	L6	1	1			2	122.5 : 1
2124	Fea. F L1	1		3	38	42	4.5:1
2125	Fea F L2					0	107:0
2156	L7		2		55	57	2.9:1
2154	L8				2	2	42.5 : 1
2164	L9				33	33	2.6:1
Totals		3	6	7	205	221	7.2:1

 Table 10.4. Flaked Stone from Test 7.

# Notes from the Lab

The two shaped tools were a small wedge and a biface.

No. 2122-1, L5: a white chert broken flake, possibly worked (2.0 by 1.5 by 0.7 cm, 1.3g).

No. 2122-2, L5: a wedge of gray-black chert had two perpendicular worked edges. One was worked from the dorsal side and the other from the ventral side (2.4 by 2.4 by 0.8 cm, 4.4 g).

No. 2123-1, L6: a retouched flake of fine-grained black basalt (2.4 by 1.7 by 0.7 cm, 3.0 g).

No. 2123-2, L6: a projectile point mid-section of fine-grained black basalt (1.2 by 0.9 by 0.4 cm, 0.4 g).

2124-4, Feature F, L1: a possible leaf shaped point, material not recorded (3.4 by 1.6 by 0.5 cm, 2.5 g).

## Ground Stone

Two manos came from this unit.<sup>1</sup>

No. 2117-1, L2: a mano fragment with a wedge-shaped cross-section; both upper and lower faces show evidence of grinding (8.4 by 7.1 by 4.1 cm, 278 g).

<sup>&</sup>lt;sup>1</sup>A third mano, No. 2119-1, was recorded as being from Test 7, Level 2 or 3, but the lot number pertains to Ch-151. Both Lot 2119 and the most likely lot for Test 7 were collected on the same day, June 17, 1991. As the Ch-151 entry in the Lot book is for ground stone, while the most likely lot entry for Ch-159 is not, I suspect that this third mano came from Ch-151. The mano in question is complete, rounded in plan view , and ground on one face (11.8 by 9.4 by 7 cm, 1182 g).

No. 2124-3, Feature F-1: a mano fragment had some use wear on two opposing faces, with cross striations on the most used surface. The mano was secondarily flaked into a chopper across the midsection (9.7 by 5.3 by 3.4 cm, 360 g).

#### Shell

Two small pieces of shell from Level 7, both catalogued as No. 2250-7, were identified by Ronna Jane Bradley as: (1) a freshwater bivalve fragment (0.3 g) and (2) a small land snail fragment (0.1 g).

#### **Botanical Remains**

Several species of plants were recovered both from flotation samples and as macrobotanical samples (Table 10.5). The presence of *Cucurbita pepo* in this unit was noteworthy, as squashes are so seldom preserved. Grass seeds, cheno-ams and *Physalis* were other probable foods. *Zea mays* was close to ubiquitous.

#### Table 10.5. Botanical Remains from Test 7.

Plant	L2	L4	L5	L6	L7	L8	L9	Fea. F-1	Fea
	2117	2121	2122	2123	2156	2154	2164	2124	F-2
<i>I</i> .	Б	Б	Б	2	EM	Б		Б	2125 E
Juniperus	Г	Г	Г	Ζ	ΓM	Г		Г	Г
Physalis	F				F	F			
Pinus	F	F	FΜ	1	FΜ	FΜ	F	F	F
Zea mays	F	F	FΜ	1	FΜ	FΜ		F	F
Quercus		F	FΜ	1	FΜ	F		F	F
Arcto/Arbustos			1		Μ				
Cheno-am			1	1		F		F	F
Gramineae					F				
Cucurbita pepo					Μ				
Unknown					Μ				

F: from flotation; M: collected as macrobotanical.

### Faunal Remains

The usual diversity of species characterized this unit (Table 10.6), but an unusually high number of jackrabbit, cottontail and medium artiodactyl bones were present. Except for the American Coot elements, waterfowl were not prominent in this unit.

Identification	L2	L3	L4	L5	L6	L7	L8	L9	<b>F-1</b>	<b>F-2</b>	Total
	2117	2118	2121	2122	2123	2156	2154	2170			
Medium Carnivore	1										1
Medium Artiodactyl		1	2	2	1			1	1		8
Med. Mammal							1				1
Jackrabbit			1	1	6	2			3		13
Lagomorph			1								1
Cottontail						4	3	1	1		9
Canis (dog/wolf/coyote)			1		1	1					3
Small rodent			1								1
Pocket gopher					1	1			1		3
Small mammal					1						1
Turkey					1						1
American Coot			1	1	1	1					4
Smaller than mallard			1		1	1					3
Vulture or larger			1								1
Bird larger than mallard					1					1	2
Galliformes-Grouse, etc.									1		1
Unknown		3	8	4	6	9	3		6	1	41
Total	1	4	17	9	20	19	7	2	13	2	94

Table 10.6. Faunal Remains from Test 7.

### Possible Bone Tool

A shaped-rounded long bone fragment from Feature F-2, species unknown, was noted in the faunal database.

#### Density of Artifacts and Faunal Remains

Some 2.58 m<sup>3</sup> were excavated from Levels 2 to 9 in this 1 by 2 m unit, which yielded 1,812 recorded artifacts (not counting mano No. 2119-1). Excavated volume was not calculated for Level 9. If one subtracts the 122 artifacts from Level 9 and recalculates the density for Levels 2 to 8, the artifact density is 660/m<sup>3</sup> and the faunal density is 36 elements/m<sup>3</sup>. Density figures given in Table 10.3 provide a picture of the variation in density by levels.

#### Test 7N

Located along the arroyo just west of Test 7, Test 7N (Table 10.7) was opened when Feature F-1 in Test 7 was thought to be a pit house that continued to the west. Test 7N would have been 2 m square had the arroyo face not angled across the unit; instead the west wall was 1.5 m long. The unit was further reduced by a cattle trail descending into the arroyo. The upper levels were cut farther back (to the south) by the cattle trail than the lower levels. The upper fluvial deposits (Level 1) were removed without screening or collecting.

## Table 10.7. Test 7 N.

North face along arroyo was uneven. Unit was 1.70 m E-W and measured 1.85 m along E side of unit and 1.40 m along W side of unit, for an area of 2.72 m<sup>2</sup>. Depth readings were taken from SW corner due to cattle trail disturbance and to get best correspondence to Test 7 levels.

Lot	Level	Depth	Description	Estimated
N/s	L1	7 to 56 cm	Light tan flood deposits continuous with those in Test 7. No collections made.	Not calculated
2140	L2	To 114 cm BD	Part of level missing due to cow path; L2 is brown rich midden. Level ended at estimated top of Feature F-1 in Test 7.	1.52m <sup>3</sup>
2138 2144	L3	To 143 cm BD	Feature I in the NE corner of the unit; hard packed area in NW Corner.	0.79m <sup>3</sup>
2150 2152	L4	To 147 cm BD	Excavation across the unit, and in NW corner, stopped at 147 BD. Borrow pit excavation continued. Floor of irregular borrow pit is 161 cm at deepest. Excavation stopped when borrow pit was cleared.	0.10m <sup>3</sup>
				2.41m <sup>3</sup> calculated

Level 4 was subdivided into upper and lower collection units, with Lot 2150 representing the upper fill in Feature F, while Lot 2152 represented the lower part of the fill of Feature F, paralleling the levels in Test 7. Rodent activity was quite evident in the upper levels of this unit, as in all the Test 7 group of units.

#### Features

Feature I, first noticed in Test 7, was a shallow oval hearth in the northeast corner of the unit. The hearth extended into the unexcavated area south of Test 7N. The exposed part of the hearth measured 62 cm north-south, and 48 cm east-west. The top of the hearth was at 124 cm BD and the deepest part was at 136 cm BD, for a feature depth of 12 cm. The hearth lacked a lining. The fill consisted of clayey soil with many bits of charcoal. The matrix, a continuation of Level 5 in adjacent Test 7, was darker and artifact rich. Feature I was "floating" in the dark cultural fill found in Feature F—fill that did not seem much different from the deposits above.

Based on work in Test 7, Feature F was at first thought to be a pit house, but turned out to have an irregular shape, an uneven floor, no floor features, and no evidence of usage. Once it was evident that Feature F was a borrow pit, the feature was not pursued into other units. The top of the pit was noticed at 115 cm BD, at the bottom of Level 5. Most of the pit was in Level 6. The feature extended across the unit, and its fill was clearly different from the matrix into which the feature had been dug (and which stretched across the north end of the unit near the arroyo). The deepest part of the pit was reached 55 cm below the point at which the pit was first defined (i.e., at 167 cm BD). According to the plan views of Feature F in Level Records, the exposed part of the pit measured 260 cm from the east wall of Test 7 to it its maximum width in Test 7N. Along the east wall of Test 7, the borrow pit extended 153 cm from the southeast corner, and 104 cm north of the south wall of Test 7N. However, these observations were not duplicated in the detailed profile drawn by Loy Neff, of the east walls of Units 7 and 7A, unless the pit that was not assigned a feature number (described above in connection with Test 7) represents the pinching out of the borrow pit to the east. This would not have been impossible, as the pit in the east wall of Test 7 reached to the bottom of Level 5 at its lowest point. However, it was decidedly odd that the plan views showed so little correspondence to the very detailed profile.

The fill of Feature F was dark and artifact-rich, including large sherds and pockets of ash and charcoal. As was noted for Test 7, these were qualities of primary trash that had not been water transported. A number of basalt cobbles in the 10 to 20 cm diameter range, many showing heat spalls, were also found in the feature fill.

Another depression (not given a feature number) along the arroyo face could have been a natural depression or another borrow pit. In the latter case, most of the pit had been removed by the arroyo. This depression, noted in Level 4, reached a depth of about 22 cm at 169 cm BD.

# Pottery

Table 10.8 summarizes the pottery from Test 7 N. Villa Ahumada Polychrome was present in the upper fill of Feature F. The fill from Feature I produced few sherds, and no painted wares. Hill (1992) placed Level 3 and Level 4 (Feature F L-1) in his Viejo period cluster, while Level 2 was placed in the Medio period cluster on the basis of frequencies of plain and textured wares.

Lot	Level	Undec.	Black	R-slip	R/Br	Text	Bab	Other	Combo	Total	Weight	Density
2140	L2	35	6	1		6	4	3		55	729.8g	36/m <sup>3</sup>
%		64%	11%	2%		11%	7%	5%			-	
2138	Fea. I Fill	3				3				6	130.7g	39/m3 for 2138 & 2144
%		50%				50%						
2144	L3	12	1	1		8		3		25	475.4g	
%		48%	4%	4%		32%		12%				
2150	L4 Fea F L1	111	37	4	2	56	19	8		237	2357g	2480/m3 for 2150 &
												2152
%		47%	16%	2%	0.8%	24%	8%	0.4%				
2152	L4 Fea FL2	5				3	1	1	1	11	266.1g	
%		45%				27%	9%	9%	9%			
Totals		166	44	6	2	76	24	15	1	334	4212.6g	
%		50%	13%	2%	0.6%	23%	7%	4%	0.3%			

# Table 10.8. Pottery from Test 7N.

# Notes from the Lab

Lot 2140, Level 2: "Other": (1) two polychrome sherds were present that the lab analyst thought were not Babícora (Neff did not note any polychromes from this level except Babícora, but he noted that some of the Babícora was heat altered. The two analysts were presumably talking about the same sherds); (2) a sherd with a red-slipped interior and exterior and with black paint on the exterior.

Lots 2138, Feature I fill: one of the three undecorated sherds was burnished. The three sherds were altered corrugated; two fit together.

Lot 2144, Level 3, above Feature F: "Other": (1) two polychrome sherds on dark polished brown (possibly dark Babícora); (2) a sherd of red-on-dark-brown. Neff classed a red-on-brown sherd as "perhaps Leal or 'generic"; it was described as having a red exterior slip and two eroded broad red lines on the interior. In the original tabulations, this sherd was classed as red-slipped, with an eroded interior red slip or red paint. Neff also noted two other possible Leal Red-on-brown sherds with faint red linear designs polished over the paint on the exteriors. (These examples nicely illustrate the judgment calls and perceptual differences that can affect the tabulations). Included in the textured sherds was one with a double corrugation at the mid-section (as is seen on Mata Red-on-brown); otherwise, this was an undecorated brown sherd belonging to a jar with an estimated maximum body diameter of 30 cm.

Lot 2150, Feature F-L-1: the largest number of sherds came from this lot. "Other": (1) a body sherd of Villa Ahumada polychrome with a non-chalky white slip over the exterior, and with red and black paint over the white slip (unlike local black paints with a strong tendency to burn out, this heavy black paint flaked off. The sherd appeared to be from a small incurving jar); (2) a black-and-red on dark brown that could be Babícora (the colors were very difficult to see, but there seemed to be a banded design of dark red and burned out black and brown. The whole surface was polished over the paint); (3) five sherds from the same light gray vessel (one of which had a thin black line on the exterior. The paste appeared to be local; the interior of the vessel was a dark polished gray); (4) a biconically drilled brown disk fragment with a roughed out edge (see below).

Three vessel bases from this lot had black interiors as well as fire blackened exteriors. One belonged, unusually, to a rather crude, flat-bottomed vessel, and another was from a small round-bottomed vessel. Two red-on-tan or red-on-brown sherds were noted in the original analysis as not belonging to the Babícora family. Babícora sherds in this lot included polychromes and black-on-tans. One of the Babícora rims came from an incurved bowl. A textured rim had an interior red slip band. Neff noted that the Babícora Polychrome from this unit exhibited both polish over paint on matte exteriors, and paint over polish.

2152, Feature F-L2: "Combo": a red-on-tan textured sherd had parallel oblique red lines crossing finger impressed and smoothed corrugations. One very everted Pilón Red Rim sherds, from a bowl, was noted. "Other": a brown bowl rim had a gray silvery-colored slip on the exterior that reached to the midline of the lip. A single Babícora Polychrome sherd occurred at the bottom of Feature F.

### **Other Ceramic Items**

Lot 2150, L1 of Feature F: included in the above tabulations is a worked sherd with a central, biconically drilled hole, on a more or less round sherd with ground edges. The sherd was broken across the hole, with less than half remaining (4.9 by 2.4 by 0.5 to 0.65 cm; 8 g). The hole's estimated diameter was 0.5 cm. The radius of the original piece would have been 2.4 to 2.5 cm.

Lot 2155, Level 3 (see Test 7A tabulations), combined Tests 7N and 7A (from the boundary between the two units): a modeled piece that could be a vessel support. The description and sketch were unclear, but the piece appeared to taper possibly was hollow. This item was not included in the above tabulations, and is only worth mentioning in the interest of full coverage and possibly for reevaluation.

#### Flaked Stone

No formal flaked stone tools were recovered from Test 7N. Table 10.9 summarizes the flaked stone from the unit.

Lot	Level	Shaped	Used	Cores	Other	Total	Sherd: Lithic Ratio
2140	L2					0	
2138	Fea I				1	1	6:1
2144	L3				5	5	5:1
2150	Fea F L1			2	8	10	23:1
2152	Fea F				1	1	11:1
	L2						
	Totals			2	15	17	19:1

# Table 10.9. Flaked Stone from Test 7N.

#### Hammerstone

No. 2144-1, L3: a pitted hammerstone (7.1 by 5.2 by 7.1 cm, 314.5 g).

#### Ground Stone

Lot 2144-2, L3: a hand stone or polisher, made of a fine-grained gray basalt, had a flat, wellground or polished area measuring 7 by 7 cm on one face. One side was chipped (8.4 by 8.7 by 6.1 cm; 756.2 g).

#### **Botanical Remains**

*Zea mays* was present in all levels, and was recovered in both macrobotanical and flotation samples (Table 10.10). Chemo-ams were recovered from Level 1 of Feature F. The usual wood species were distributed throughout the two features.

Identified plants	L3	Fea I	Fea F-1	Fea F-2
	2144	2138	2150	2152
Juniperus		F	F	F
Pinus		F	F	F
Quercus		F	F1	F
Zea mays	М	F	F	FM
Cheno-am			F	
Unknown		F		

Table 10.10. Botanical Specimens from Test 7N.

#### Faunal Remains

Seventeen of Hodgetts' identified categories were represented (Table 10.11). One of nine badger elements from the site comes from Test 7N.. The most bones per category came from jackrabbit, medium mammal, and medium artiodactyl. Waterbirds were present.

Identifications	L2	L3	Fea F -1	Fea F-2	T7N/T7A	Totals
	2140	2144	2150	2152	L3 2155	
Med mammal	2	1	1			4
Med artiodactyls	1		4			5
Deer		1				1
Canid	1	2	2			5
Badger	1					1
Jackrabbit		3	3			6
Cottontail					1	1
Prairie Dog	1	1		1		3
Turkey	1		1			2
Small rodent		1	2			3
Pocket Gopher		2	1			3
Bird-smaller than mallard	1	1				2
Large Anas-Mallard size and larger			1			1
American Coot	1	1	1			3
Ancerinae		1	1			2
Goose/swan						
Bird, Vulture size or larger		1				1
Ciconiiformes-Herons, etc.		1				1
Unknown	6	13	15			34
Totals	15	29	32	1		78

Table 10.11. Faunal Remains from Test 7N.

#### Bone Tools

All bone tools were noted on the faunal spreadsheet. A long bead or tube came from Level 3, Lot 2144. From Feature F, Level 2, Lot 2150, came two worked bone fragments. One of these, 5 cm long, was worked to a point, while the 8 cm long specimen was worked smooth. Neither bone could be identified to species or element.

## Density of Artifacts and Faunal Elements

It was impossible to estimate the volume of this unit with any accuracy, because of fill removed by the arroyo and the cow path. An area of ca. 2.7 m<sup>2</sup> was involved, and most of the unit was taken to a depth of 1.47 m. A total of 343 artifacts came from the unit. Omitting Level 1 (from which no collections were made), an estimate of 2.41 m<sup>3</sup> of fill was used to arrive at rough figures of 142 artifacts/m<sup>3</sup> and 32 faunal elements/m<sup>3</sup>.

These density figures were considerably lower than those seen in the adjacent Test 7. This seemed odd, as there was no evidence of massive disturbance of the deposits. The flaked stone count was quite low in Test 7N, with the highest sherd-flaked stone artifact ratio at the site (19:1). Perhaps Test 7 was near the western edge of the midden, so that while the rich deposits of Feature F extended into Test 7N, the trash deposits were mostly to the east of this unit.

#### Summary of Test 7N

This unit was excavated mainly to complete the investigation of Feature F, at first believed to be a pit house. Level 1 within Feature F (Lot 2150) was the most productive of artifacts. Some of the sherds were large, supporting the view that the borrow pit contained primary trash deposits.

## Test 7A

This unit was immediately south of Test 7 and served to extend the excavations farther south of the arroyo (Table 10.12). An east-west stonewall became visible at the top of Level 2. The deposits on each side of the wall turned out to be quite different: those north of the wall were a clear continuation of the rich deposits in Test 7, while those south of the wall were clearly something else. The decision was made to continue excavation only on the north side of the wall. Levels 3 through 8, in this reduced work area, covered 1.2 by 1 m.

Feature F extended into the northern part of the unit, bottoming out in Level 6. The matrix into which Feature F had been dug made up the lower deposits within the test. Various burned zones, sometimes referred to as "burned mats," occurred in the lower levels, where little evidence of rodent disturbance was observed (as opposed to the upper levels, which were well supplied with old and new rodent holes). The profile of the east wall of Tests 7 and 7A shows the lower strata sloping toward the arroyo, with one of the burned zones on bedrock near the arroyo end of the trench.

# Table 10.12. Test 7A.

Level	Depth in	Description	Estimated	Radiocarbon
	cm BD		Excavated	dates
			Volume	
L 1	12 to 68	Nearly sterile flood deposits	1.12m <sup>3</sup>	
L 2	68 to 91	E/W rock wall. Dark deposits to N of wall.	0.46m <sup>3</sup>	
2139		Rich in artifacts. Fewer artifacts to S side of		
		wall.		
L 3*	91 to 119	Excavation N side of wall only. Brown deposits	0.34m <sup>3</sup>	
		rich in artifacts continue.		
L 4	119 to 134	Continuation of above, with charcoal, ashes	0.18m <sup>3</sup>	$640\pm50~BP$
L 5	134 to 164	Part of Feature 91-F fill with FCR, charcoal,	0.35m <sup>3</sup>	
2178		burned earth, botanicals, abundant artifacts.		
L 6	164 to 180	Dense burned zone in NE ¼; Underlies Feature	0.19m <sup>3</sup>	$1060 \pm 50 \text{ BP}$
2179		91-F. Sharp break at bottom of level.		
L 7	180 to 190	Sparse cultural materials, but some ashy	0.12m <sup>3</sup>	$1050 \pm 50 \text{ BP}$
		concentrations and botanicals. No lithics		
L 8	190 to 197	Very sparse cultural materials. Bedrock at 197	0.08m <sup>3</sup>	
2204		BD		

This unit measured 1 by 2 m in L1 and L2 and 1.2 by 1 m in L3–L8.

\* Some of Test 7A, L 3 was combined with T 7N (Lot 2155) for the area N of the cross wall.

Bedrock shelves up toward the junction of Tests 7 and 7A, with a sterile level, 20 to 25 cm thick, sloping upward from the burned zone on bedrock. At a point 30 cm south of the Test 7-Test 7A unit boundary, the sterile layer shelves up. Sterile soil was 60 cm higher at the south edge of the (reduced ) Test 7A unit than at the arroyo wall. This might indicate the edge of the old arroyo channel.

A sharp break between the "lower midden" and the dark, rich "upper midden" (Stratum B) was apparent in Level 7.

#### Features

An east-west wall, two courses high, crossed Test 7a. The crew observed that the north side of the wall contained darker fill and more artifacts, though the south side fill was also dark. No associated floor or occupational surface was identified.

The large borrow pit, Feature 91-F1, was dug into deposits underlying the wall. The deposits associated with this feature continued from Test 7 into the north end of Test 7A, as did the strata underlying Feature 91-F.

#### Radiocarbon Dates

The two lower radiocarbon dates are out of stratigraphic order but are indistinguishable at the 1 sigma level. Although there was a sharp break at the bottom of Level 6, the dates from Levels 6 and 7 suggest that the two levels were deposited in a fairly short time. The Level 4 date is in correct stratigraphic order, relative to the other two dates. Taken at face value, it suggests that as much as 400 years intervened between Levels 4 and 6—most of that interval presumably being associated with the deposits of Level 5.

#### Pottery

Table 10.13 summarizes the pottery from Test 7A. Very little pottery came from the Feature F-1 extension into this unit from Test 7A. Madera Black-on-red was identified from Level 2 (Lot 2139). A later examination of the records from Level 6 (Lot 2179) resulted in identification of Mata Polychrome. The sherd in question had vertical thin black lines extending from a red line that was placed just under (or over?) a line of corrugations. This sherd was so use-blackened that the designs were not initially visible. From Level 6, another potentially important sherd had a white line 4 to 5 mm thick sandwiched between two black lines that were painted on a brown background (that was itself between red lines or red areas above and below the black, white and brown zones). Because of the white line, one suggested identification was Villa Ahumada Polychrome. Another suggestion, made after we had differentiated Santa Ana Polychrome as an early form of Babícora Polychrome, was that this sherd might be Santa Ana.

Lot	Level	Undec.	Black	R-sl	R-br	Text	Bab.	Other	Combo	Totals	Weight In gms	Density /m <sup>3</sup>
2139	L2	130 69%	24 13%	4 2%	4 2%	17 9%	7 4%	2 1%	1 0.5%	189	608.7	410/m <sup>3</sup>
2155 (a)	L3	210 49%	101 23%	6 1%	10 2%	65 15%	35 8%		3 0.6%	430	3140.5	1264/m <sup>3</sup>
2163 (b)	L4	45 46%	26 27%	1 1%	4 4%	18 19%	1 1%		2 2%	97	652.2	538/m <sup>3</sup>
2178	L5	138 59%	50 21%		2 0.9%	31 13%	6 2.5%	2 0.85%	4 1.7%	233	1155.4	666/m³
2179 (c)	L6	34 53%	13 20%			12 18%	1 2%	3 5%	1 2%	64	427	526/m <sup>3</sup>
2203 (d)	L7	6 24%	12 48%			7 228%				25	151.5	208/m <sup>3</sup>
2204	L8	22 59%	9 24%		1 3%	3 8%		1 3%	1 3%	37	91.8	462/m <sup>3</sup>
Totals		585 54%	235 22%	11	21	153 14%	50 5%	8	12	1075	6227.1	

Table 10.13. Pottery from Test 7A.

(a) Bags from Level 3 Test 7N and 7A combined in lab during sherd washing. Both collected on July 1, 1991, and it seemed preferable to combine them rather than guess at more precise proveniences.

(b) Radiocarbon date of  $640 \pm 40$ 

(c) Radiocarbon date of  $1060 \pm 40$ 

(d) Radiocarbon date of  $1050 \pm 50$ 

Because this unit provided three dates from different parts of the stratigraphic sequence, the associated sherds were of interest. As was the case elsewhere, there was no clear break between levels containing possible Viejo period sherds and those with Medio period ones. The general trend in Levels 2 through 7 (omitting Levels 1 and 8 because of their small sample sizes) was for higher frequencies of textured pottery to be present in the lower levels. The date of  $640 \pm 40$  BP was associated with lower frequencies of Babícora sherds than was the case for Levels 2 and 3 above it, and indeed slightly higher frequencies of the Babícora sherds occurred in Levels 5 and 6 (although no Babícoras occurred in the lowest two levels). The Viejo period red-on-brown sherds clustered in the lower levels, but some occurred as high as Level 3.

Hill assigned Levels 4–6 and 8 to the Viejo period, and Level 2 to the Medio period, based on frequencies of plain and textured wares. The four Viejo period levels fell together, though in inverted sequence (if the relative ordering in Hill's list represented a chronological sequence). Because Level 4 produced a date of 64  $0\pm$  50 BP, the assignment of Level 4 to the Viejo Period is suspect. The lower two dates, however, were quite consistent with Hill's assignment of those levels to the Viejo period.

Laurie Beckwith, the ceramic analyst, noted that in most of the levels the sherds were small, and many were losing their surface finishes. The greatest average weight per sherd, 7.30 grams, comes from Level 3, while Level 2 sherds averaged 3.22 grams each and Level 8 sherds only 2.48 grams. These figures are appreciably lower than was the case in adjacent Test 7.

# Notes from the Lab

Neff tentatively identified Leal Red-on-brown from Level 3, Anchondo Red-brown from Level 4, and Mata Red-on-brown textured from Levels 5 and 6.

Lot 2138, Feature I: only undecorated sherds.

Lot 2139, Level 2: "Other": two red body sherds; self slipped (?), very smooth and well polished—Madera Black-on-red without the black design (?). "Combo": black polished interior and exterior, with the exterior also textured (brushed and scored). Of the Babícora, five were polychrome, two were black-on-tan, and four had red painted lines.

Lot 2155, Level 3; combined bags from Level 3, Tests 7N and 7A: "Combos": (1) a polished blackware sherd with incisions on the exterior of the vessel (the black extends into the incisions but is not polished); (2) a Babícora Polychrome with narrowly placed horizontal incisions just above and parallel to a red framing line; (3) an altered corrugated sherd with a red design over the corrugations. One of the Babícora Polychrome body sherds appeared to have a vertical linear design. Four of the Babícora body sherds had quite angular designs and in one case, a step design. The single Babícora rim also had a very angular design, and in the initial tabulation was separated as a non-Babícora polychrome. We now know, however, that angular Babícora designs occur, and this piece has been combined with the Babícora in Table 10.13.

Lot 2163, Level 4: "Combos": two textured sherds with black polished interiors (one of these was corrugated, while the other was altered corrugated/incised). In the lab tabulations, Laurie

Beckwith noted, for the Textured category, that the 10 sherds classed as altered corrugated varied greatly, from finger impressed vertical rows to the pattern being rubbed away almost entirely.

Lot 2178, Level 5: "Other": two thin line polychromes (one with corrugations could be Mata or Santa Ana Polychrome). "Combos": four textured sherds with polished black interiors (two were corrugated, one was incised corrugated, and one was brushed and scored). Of the two red-on-browns, one had the paint on the interior and the other had the paint on the exterior. All of the Babícora sherds were polychromes, including one jar rim with an angular design. Four of the undecorated brown rims were Pilón Red, and four of the textured rims had a red slip band, making eight red-banded rims in this level.

Lot 2179, Level 6: "Other": (1) a possible Villa Ahumada Polychrome sherd (with a white line, 5 mm wide, outlined with black lines, all on a tan background with red above and below); (2) a possible Mata Red-on-brown Textured (the sherd is broken where the texturing began, so it is not clear what kind of texturing was involved) with red paint directly under the horizontal textured area, and with perpendicular thin black lines below (or above?) a horizontal red line; (3) a probable black-on-brown with burned out paint on a gray to blackened exterior. "Combo": a red-slipped interior with a black slipped exterior. Among the textured sherds there were two scored, two corrugated, two incised corrugated, one zoned corrugated, and four altered corrugated (one of which had a nicely scalloped effect).

Lot 2203, Level 7: quite small sherds. The textured sherds included two rubbed/altered corrugated, two incised/rubbed or altered corrugated, one scored, and two brushed.

Lot 2204, Level 8: "Other": a black-on-tan with a design that did not look like any Babícora sherd we saw. It was a black-on-brown 'plaid' with perpendicular horizontal and vertical lines spaced from 4 to 6 mm apart, with the lines from 2 to 4 mm wide. "Combo": a red-on-brown painted exterior with a polished black interior.

# **Other Ceramic Items**

A worked sherd from Feature F, Level 1 (Lot 2150) had a biconically drilled hole ca. 5 mm in diameter, set in a more or less round undecorated sherd with ground edges. The piece is broken at the hole and less than half of the piece remains.

No 2155-1 was a modeled appendage fragment, 4 cm long and 1.2 cm wide at its widest. It was broken longitudinally and was hollow (a vessel support ?).

No. 2178-1 was a dark polished brown sherd disk of irregular shape, not drilled.

# Flaked Stone

In Test 7, the most pieces of flaked stone came from Level 2, with significantly fewer in Level 3, and even smaller numbers below that. The most shaped tools came from Level 5, which yielded

4 projectile points. The ratios of sherds to pieces of flaked stone were quite different from one level to another (Table 10.14).

### Table 10.14. Flaked Stone from Test 7A

Lot	Level	Shaped	Used	Cores	Other	Total	Sherd:Lithic
							Ratio
2139	L2	1	1		150	152	1.2:1
2155	L3		2	2	36	40	9.2:1
2163	L4		1			1	97:1
2178	L5	5	2		7	14	16.6:1
2179	L6		1			1	51:1
2203	L7				2	2	12:1
2204	L8				5	5	7.4:1
Total		6	7	2	200	215	

None of these lots were coded in Excel.

# Notes from the Lab

No. 2139-1, Level 2: a gray chert scraper (2.2 by 1.9 by 0.9 cm, 3.8 g).

No. 2163, Level 4: the Lithic notebook recorded a rhyolite scraper from the combined flaked stone from this level of Tests 7N and 7A (4.6 by 4.5 by 1.6 cm, 32.1 g). It had cortex down the middle of the dorsal surface and retouch along the broad, slightly convex distal edge.

No. 2163-1, Level 4: a small retouched flake of fine-grained black basalt (1.8 by 1.0 by 0.4 cm, 0.5 g).

Level 5 had an unusual number of shaped tools.

1) No. 2178-2: a retouched flake (serrated?) of black to gray chert (2.8 by 1.7 by 0.8 cm, 2.8 g).

2) No. 2178-3: a black to gray chert point, missing the tip. The point was leaf shaped, without notches, and had a slightly concave base (1.8 by 1.4 by 0.4 cm, 0.7 g).

3) No. 2178-4: a point tip of the same material as 2178-3 (1.4 by 1.1 by 0.3 cm, 0.1 g).

4) No. 2178-5: a side notched point of fine-grained black basalt. One corner of the base was broken off. The point was triangular with side notches and a slightly concave base (1.7 by 1.2 by 0.8 cm, weight unknown).

5) No. 2178-6: a fairly symmetrical side notched point with a bottom notch (2.0 by 0.9 cm, unknown thickness, 0.1g).

No. 2179-1, Level 6: a gray chert wedge with cortex along one edge and one worked edge (2.7 by 2.2 by 0.8 cm, 4.0g).

#### Ground Stone

A fragment (No. 2178-5) of ground vesicular basalt came from Level 5. Polishing was present on one face (4.5 by 4.4 by 4.2 cm, 175.5 g).

#### Botanical Remains

Possible food plants from this unit: *Zea mays*, cheno-am, and *Physalis* (Table 10.15). The usual wood species were present, with pine and oak in all levels and juniper in two.

Plant	L2	L3	L4	L5	L6	L7
	2139	2149	2163	2178	2175	2203
Pinus	F	F	FΜ	FΜ	FΜ	FΜ
Quercus	F	F	FΜ	FΜ	FΜ	FΜ
Juniperus				FΜ		Μ
Zea mays	F	F	FΜ	FΜ	FΜ	FΜ
Physalis		F			F	
Cheno-am			F		FM	
Gramineae					F	
Unknown			Μ	Μ	FM	FΜ

# Table 10.15. Botanical Remains from Test 7A.

F = flotation; M = macrobotanical

#### Faunal Remains

Twelve categories were present, including fish (Table 10.16). Cottontails were not included in this list but were present in mixed Lot 2155, from Test 7N-Test 7A, Level 3.

## Density of Artifacts and Faunal Remains

To estimate the volume of deposits removed, we noted that the 1 by 2 m unit was dug to ca. 91 cm BD (or ca. 81 cm at NE Corner), and from this depth only the area north of the wall was excavated. An estimated 2.84 m<sup>3</sup> were excavated. Subtracting the volume of Level 1 (1.2 m<sup>3</sup>), which produced no artifacts, and with 1,217 artifacts recovered, the resulting approximate densities are 716 artifacts and 39 faunal elements per cubic meter.

Identifications	L2	L3	L4	L5	Totals
	2139	2149	2177	2178	
Med. Artiodactyl		3			3
Small mammal		3	1	1	5
Canid				4	4
Jackrabbit		3	1		4
Pocket Gopher	1				1
Prairie dog			1		1
Large Falconiform		2	1		3
Med. Falconiforme				1	1
Med. Anas (Teal or larger)		1			1
Med bird			1	2	3
Ancerinae (geese/swans)	1	1			2
Fish				1	1
Unknown	13	9	8	8	38
Totals	15	22	13	17	67

 Table 10.16. Faunal Remains from Test 7A.

#### Summary of Test 7A

The three radiocarbon dates from this unit allowed us to estimate dates within the sequence and to look at the associated ceramics, which were probably no more disturbed through rodent and other natural action than was the case for other units. The east-west wall crossing the unit appeared to be a patio or compound wall, as the areas on both sides of the wall seemed to be external spaces and no additional cross walls were noted within the Test 7 group of units.

#### Test 7B

Test 7 B (Figure 10.4 and Table 10.17) was excavated only to the level of the south side of Test 7A. The upper, fluvial deposits extended to ca. 75 cm BD. The "upper midden," as excavators called it, was sandwiched between the upper fluvial deposits and the occupational surface encountered from 76 to 84 cm BD.

At the base of Level 2, one definite pit (Feature 91-K) and one possible rock-lined pit (not given a feature number) extended into the underlying level. In order to completely excavate Feature 91-K, an extension (25 cm east-west by 80 cm north-south) was added to the east side of Test 7B.

#### Features

Feature 91-K (Figures 10.4 and 10.5) was a rock-lined pit measuring 100 by 80 cm, with a depth of 34 cm (from 77–84 cm BD, to 109 BD at the deepest point). Neatly rock-lined, it was quite similar to Feature 91-B in Test 4 in the enclosed plaza area.



Figure 10.4. Test 7B. Looking south over Feature K and the rock wall in Test 7A. PAC 91B/W-91-8-24.

# Table 10.17. Test 7B (1 by 2 m).

Lot	Level	Depth	Description	Estimated
				Excavated
				Volume
None	L1 &	To 65 cm	Almost sterile fluvial deposits. No collection made.	1.30m <sup>3</sup>
	L1 Ext			
2147	L2	To 82 cm	Upper midden. At base of level, one rock lined pit (Feature	0.34m <sup>3</sup>
			91-K) and another possible rock lined pit (not given a	
			feature number). No deeper testing.	
2228	L1 Ext	To 81 cm	80x25 cm extension to east of Test 7B for completing	0.16m <sup>3</sup>
			excavation of Feature 91-K. No deeper testing.	
				1.8m <sup>3</sup>

Depths were read from the NE corner, from the Test 7 datum.



**Figure 10.5.** Test 7B, Feature K. Top: looking west. PAC 91B/W-11-21. Bottom: plan and profile.

Feature 91-K was an oval basin-shaped pit. It contained fire-cracked rock in a mix of ashy soil and large quantities of charcoal.

The possible rock-lined pit in the northern third of Test 7B was not assigned a feature number. A group of rocks in a roughly basin-shaped pattern was originally thought to represent a rock-lined pit. After excavation, its function seemed less certain. It may have been a disturbed feature.

## Pottery

Neff noted that the sherds from Level 2 of Test 7B "are typically small and many have rounded or worn edges suggesting secondary deposit (or tertiary), e.g., trash deposits that were then transported and tumbled....." Neff notes that his definition of a "small" sherd is usually one with a maximum dimension of 1 to 1.5 cm.

The relative frequency of textured pottery, 18 percent (Table 10.18), fell between the high frequencies from the lower levels of Tests 1 and 7 and the low frequencies from Tests 2, 3 and 4. Babícora style pottery occurs in both Test 7B and its extension. Madera Black-on-red was recorded from Level 2. Neff identified both "generic" red-on-brown and, from Lot 2228, a possible Anchondo Red-on-brown. Hill placed Level 2 of Test 7B near the top of his chart for Medio period assemblages; this would place it quite late in the Medio period.

Lot	Level	Undec.	Black	R-sl	R/br	Text.	Bab.	Other	Combo	Total	Weight	Density
												/m <sup>3</sup>
2147	L2	49	5	1		15	1	2	1	74	349.2g	218/m³
		67%	7%			21%	2%					
2228	L1	23	7		1	8	1			40	162.6g	250/m³
	Ext	57.5%	17.5%			20%	5%				_	
	Fea											
	Κ											
Totals		72	12	1	1	23	2	2	1	114	511.8g	63/m³
%		60%	11%	0.8%	0.8%	18%	7%	2%	0.8%		_	

Table 10.18. Pottery from Test 7B.

# Notes from the Lab

Lot 2147, Level 2: "Other": two Madera Black-on-red were identified in both the original tabulations and by Neff. "Combo": one altered corrugated with red paint over corrugations.

Neff described a textured red-on-brown as a 'generic' red-on-tan-textured with typical paste, fine sand temper, and dull red paint over altered corrugated that was finger impressed/smooth. This was not identified in the initial tabulations, or it would have been put in the "Combo" category here.

Neff also offered more detail on the 12 textured sherds that he re-examined: four were small body sherds, two had typical paste, and two had tan paste. All had fine to medium sand temper. Texturing techniques included closely spaced parallel incisions, altered corrugated, zoned corrugated, punched, and brushed. One small body sherd with medium to coarse temper had a gray interior and exterior and tan core. All had sand temper.

Lot 2228 (Level 1 Extension, Feature K): The black sherds were "blackened/darkened" and perhaps should classified as undecorated brown. The two painted sherds included a Babícora

Polychrome and a red-on-tan sherd on which the red paint was quite thin in places (and could have been an eroded red slip).

For Lot 2228, Neff listed three painted sherds: one Babícora polychrome, one possible Anchondo Red-on-brown, and one "generic" red-on-tan with faint red paint on the interior below the lip (Pilón Red Rim?).

## Flaked Stone

The flaked stone from this unit is summarized in Table 10.19. The only formal tool from this unit was a gray chert projectile point, No. 2147-1, from Level 2. It was a side- notched point with a slightly convex base and measured 1.9 by 0.9 by 0.2 cm (the recorded weight of 0.1 g seems unlikely). The point was subjected to anti-sera immunological tests in 1991 and tested positively for "dog" (which could be any Canid) (Newman 1991). The two used flakes from the unit were not drawn or catalogued.

# Table 10.19. Flaked Stone from Test 7B.

Lot	Level	Shaped	Used	Cores	Other	Total	Sherd:Lithic Ratio
2147	L2	1	1	4	47	53	1.44:1
2228	L2 Ext		1		2	3	15.3:1
	Total	1	2	4	49	56	

## Ground Stone

The only ground stone artifact, from the fill of Feature 91-K (No. 2159-1), was a ground slab of vesicular basalt. It measured 13.1 by 9.4 by 2.1 cm (189.1 g).

## Botanical Remains

From Lot 2157, *Pinus, Quercus,* and *Zea mays* were recovered. From 2159 (Level 2 of Feature K), *Quercus* and *Zea mays* were noted.

## Faunal Remains

The only faunal elements reported for the unit came from Level 2 (Lot 2147) and included one jackrabbit bone, two cottontail bones and five bones from unknown species.

### Density of Artifacts and Faunal Remains

Based on an estimated volume of 0.5 m<sup>3</sup> for Level 2 and the Test 7B extension, the estimated density of recovered materials, per cubic meter, is 348 artifacts and 16 faunal elements.

## Summary of Test 7B

Test 7B exposed 2.16 m<sup>2</sup> of the external occupation surface on the south side of the east-west wall in Test 7A. At least one well-made rock-lined hearth, in remarkably good condition, was located 1.3 m south of that wall. A possible second rock-lined hearth was too disturbed to be convincing. The wall and the occupation surface dated to the Medio period.

## Test 7 C and Test 12

Test 7C was the southernmost of this group of tests. Unlike Test 7B, it was carried to sterile deposits (Table 10.20). Cultural deposits were thinner this far south of the arroyo, and artifacts were rare below 111 cm BD.

Test 12 (Table 10.21) was opened up to the east of Test 7C in order to complete the outlining of Features 91-M and 91-O.

Lot	Level	Depth	Description	Estimated Volume
None	L 1	To 64	Fluvial deposits.	0.96 m <sup>3</sup>
2146	L 2	To 82 cm	Active rodent disturbance. Level taken to same surface as	0.27 m <sup>3</sup>
			Test 7B and the occupational surface associated with the	
			wall in Test 7A. Deposits were dark brown. Top of	
			Feature M visible at bottom of unit.	
2145	L 3	To 101	Continuation of upper midden with dark brown deposits.	0.28 m <sup>3</sup>
		cm	Concentration of fire-cracked rock in NW corner of unit.	
			Several large rocks across the south side of unit, and near	
			center of unit were removed. Feature M was in this level.	
2211	L 4	To 111	Color change within level to lighter color deposits. Feature	0.15 m <sup>3</sup>
		cm	O was within this level (and Level 2 of Test 12).	
2212	L 5	To 130	Visible change to lighter deposits. Neff felt this was	0.28 m <sup>3</sup>
		cm	"lower midden."	
2213	L 6	To 154	Artifacts become sparse, and the silty-clay layer (Stratum	0.36 m <sup>3</sup>
		cm	D) reached. Augering encountered bedrock at 210 cm BD.	
				2.3 m <sup>3</sup>

## Table 10.20. Test 7C (1 by 1.5 m)

Depths were measured from the NE corner; unit datum was the Test 7 datum.

# Table 10.21. Test 12 (1.25 by 0.5 m)

Lot	Level	Depth	Description	Estimated
				Excavated
				Volume
2225	L1	57 to 77	Upper midden	0.125m <sup>3</sup>
		cm		
2242	L2	To 89 cm	Features M and O, extending from Test 7C, outlined and	0.069m <sup>3</sup>
			excavated within the Test 12 parameters.	
				0.194m <sup>3</sup>

#### Test 12 was a westward extension of Test 7C.

#### Features

Feature 91-M was a rock-lined pit dug from the bottom of Level 2 (at 85 to 93 cm BD) into Level 3. Overlapping Feature 91-O, and stratigraphically above it, Feature 91-M's orifice measured 38 to 40 cm in diameter. The bottom of the basin (at 105 cm BD) was 23 cm below its rim. The pit was filled with heat-altered and cracked rock mixed with ash, burned earth and charcoal, a few animal bone fragments, and a single stone artifact. Feature 91-M was roughly 1 m from Feature 91-K, another stone-lined, basin-shaped pit in Test 7B. Features L and M both rested on a sharply defined, hard packed surface of burned earth and ash that capped the underlying deposits.

Feature 91-O was a slab-outlined pit with a flat bottom; it measured 110 by 85 cm by 10 to 15 cm deep. The pit was dug from a surface 96 cm BD and was vertically contained within Level 4 of Test 7C, extending horizontally into Test 12 on the west. The feature was not completely excavated (it extended north and west of the excavated area) but the approximate size and shape were apparent from the placement of the exposed vertical slabs. The pit was filled with heat altered and fire-cracked rocks mixed with dark soil, ash, abundant charcoal, floral and faunal remains, and a single stone artifact. The feature was associated with the "lower midden" in Neff's view, and was stratigraphically below Feature 91-M.

#### Pottery

Sherd counts are provided in Table 10.22. Frequencies of textured ware were relatively high in the lower levels: 22 percent in Level 3, 24.5 percent in Level 4, and 30.9 percent in Level 5 of Test 7C. Babícora sherds were most numerous in Levels 2 and 3 of Test 7C and in Level 1 of Test 12, and absent in Levels 5 and 6. A possible Villa Ahumada polychrome sherd came from Lot 2146, Level 2, Test 7C, and possible Mata Red-on-brown sherds came from Lot 2211, Level 4 of Test 7C and Lot 2242, Level 2 of Test 12.

Only Level 2 of Test 7C was included in Hill's study. He placed it in the Medio period on the basis of a high frequency of plain ware (in excess of 70 percent) and a low frequency of textured ware (13 percent).

Lot	Level	Undec.	Black	R-sl	R/br	Text.	Bab.	Other	Combo	Totals	Weight	Density /m <sup>3</sup>
2146	L2	84	6	3	1	15	7	1		116	509.5g	429/m <sup>3</sup>
		72%	5%	2.5%	0.8%	13%	6%	0.8%				
2145	L3	123	18	3	3	44	5		1	199	1181 g	710/m <sup>3</sup>
		62%	9%	1.5%	1.5%	22%	2.5%		1.5%			
2211	L4	57	59	2	8	49	2		1	183	1158.9g	1220/m <sup>3</sup>
		31%	32%	1%	4%	28%	1%		0.5%			
2212	L5	48		1	1	27		3		81	801.6g	289/m <sup>3</sup>
		59%		1%	1%	34%		4%				
2213	L6	1								1	2.5g	3/m <sup>3</sup>
2225	T12 L1	21	6		1	6		1		35	205.4g	31/m <sup>3</sup>
		60%	17%		3%	17%		3%				
2242	T12 L2	77	25		2	24	2	3	1	134	1019.7g	2000/m <sup>3</sup>
		57%	119%		1.5%	18%	1.5%	2%	0.7%			for 2242 &
												2264
2264	Fea 0	2				1				4	16.5g	
	T7C&	66%				33%						
	T12											
Total		418	114	9	16	160	20	11	5	753	4895.1g	302/m <sup>3</sup>
%		56%	15%	1%	2%	21%	3%	1%	0,6%			
										1		

 Table 10.22. Pottery from Test 7C and Test 12.

Hill saw the production of black pottery as important in the Viejo period, with a drastic reduction in the Medio period. It is interesting that blackwares were quite numerous in Level 4 (which has a reasonable sample size), while their frequency decreased dramatically in Levels 2 and 3.

# Notes from the Lab

Lot 2146 Level 2: "Other": a sherd with black and red lines on a possible white slip could have been the very pale end of local tan backgrounds, or a Villa Ahumada polychrome. "Combo": (1) a zoned corrugated with red paint; (2) a rim with a red slipped interior and incisions on the exterior.

Neff felt that all of the painted sherds were probably Babícora, including the, black-on-tan, redon-brown, and tan sherds. He noted that the sherds were small. Five of the painted sherds were described as having typical paste, three as heat altered. All were painted over matte polish.

Lot 2145, Level 3: "Other": (1) a rim had horizontal lines in burned out paint on the interior; (2) a possible black-on-brown (or Babícora?). "Combo": zoned corrugated with red paint or slip on the smoothed parts of the sherd. Textured: eight corrugated, six altered corrugated, two zoned corrugated, eight incised, one punctate, nine with scoring on the exterior, two with scoring on the interior, one vaguely zoned textured with a smoothed area, and one incised corrugated. Babícora: two polychrome, two red-on-tan, and one black-on-tan with burned out paint.

From Level 3, Neff listed 15 painted sherds, including a red "generic" red-on-black and a red-ontan textured (noted above). He remarked that one of the Babícora polychromes was painted over the polishing and another was polished over the paint. Neff noted that the two red-on-tans had broad-band red paint over matte to low luster exteriors ("generic" red-on-tans).
Lot 2211, Level 4: "Combo": a corrugated with red paint. In Undecorated: a red slip band (Pilón Red Rim) on an otherwise undecorated rim. Babícora sherds: one was black-on-tan, while the other was described by Laurie Beckwith as having a "paint line less than 2 mm wide—red a little thinner; spaces are 1–3 cm wide. Early?" If reexamined, this sherd might become Mata or Santa Ana Polychrome.

For Level 4, Neff noted 15 painted sherds, including fine-lined polychrome sherds that he assigned to Babícora, with a query on one: "Dublan Poly?" This sherd was very smooth. Individual polishing lines were not visible. The painted lines were very thin, closely spaced and freely executed. Within the red-on-brown category, Neff suggested a possible identification of Anchondo or Leal Red-on-brown for four sherds with medium to fine sand temper. Another sherd also thought to be Anchondo Red-on-brown had a rough matte exterior while the interior was smooth with low luster polish in dark brown. This sherd was from a bowl with broad (1.2 cm wide) red paint on its interior. Neff also noted two red-on-brown textured sherds with red paint over corrugations ("generic" red-on-brown).

Lot 2212, Level 5: "Other": (1) an unusual painted sherd had dark brown paint on a tan background; it also had a somewhat transparent stain or paint in irregular patches on the exterior. (2) Two possibly painted sherds were reminiscent of Jornada polychrome. Both seemed to have remnants of black paint, and one seemed to have a patch of red. "Call them 'painted plain'(?)" was the analyst's comment. In the undecorated category, five thick body sherds came from the same vessel. They varied from 1.05 to 1.35 cm in thickness. The exterior of this vessel was scraped and polished and smudged brown, while the interior was smoothed and gray-brown. Textured: four incised, 10 corrugated, two altered corrugated, one zoned corrugated, three zoned incised, and one brushed and scored. Also, a textured rim had a red slip band on the lip interior.

Lot 2212, Level 5: Neff identified a possible Anchondo Red-on-brown and a "generic" red-ontan. He also noted three red-on-gray rims, suggesting that the gray color was due to heat alteration. One of these was from the rim of a small, short-necked jar with a finger impressed rim exterior and with faint red paint inside the rim. The three red-on-gray rims differed in profile and came from different vessels, though all were from jars and had vestiges of red paint on them. Neff wondered if one was from a Babícora Polychrome vessel, based on its paste.

Lot 2213, Level 6: Neff agreed that no painted or textured sherds were found in this level.

2225, Test 12, Level 1: the only painted sherd was a black-on-tan that could have been Babícora Black-on-tan. Neff noted that it probably was, with the black designs painted over the polishing.

Lot 2242, Test 12, Level 2: "Other": (1) one brown-on-white or brown-on-gray sherd was removed for identification, but the identification has not been located. (2) A crude red-on-brown was rather like Jornada (with a patch of red paint on the matte gray exterior). (3) A black-on-red appeared to be local. "Combo": punctate on the exterior of a red-slipped vessel. Among the undecorated browns were six basal fragments (1.1 to 1.4 cm thick); two of these sherds (that fit and were glued) show bottom abrasion. A sherd with red or red-brown on a cream-colored exterior slip either had a large design or was zoned red-on-cream. The paint was an unusually strong red and quite heavy.

For Lot 2242, Neff noted a Babícora Polychrome with black and red paint over a matte polished exterior. A 2 percent hydrogen peroxide solution was applied to the sherd by Warren Hill. The red produced no reaction at all, but the black paint foamed—indicating organic pigments. Neff suggested that Anchondo Red-on-brown (?) and Victoria Red-on-brown Textured were present, noting that these types have broad painted bands and usually show sloppiness along the band edge, with small areas of paint smeared or daubed along the paint edge. From his drawing of one of these two sherds, it was the same as the red-on-brown described above in having a strong red paint or slip.

Lot 2264, fill of Feature O extending across both Tests 7C and 12: A brushed and scored rim had a cut or groove across the lip; the cut was made after the clay hardened, but before the piece was fired. A second rim was fairly thin, brown. The single body sherd was scraped and polished brown.

Included in the above listing were three worked sherds from Level 3 (Lot 2145): (1) a textured rim sherd with a biconically drilled hole placed 2.8 cm below the lip; the hole had an aperture of 0.4 cm, and could be a lacing hole. The sherd appeared to be from an vessel with an everted rim, possibly a plate. (2) A worked, undecorated, brown body sherd with a biconical hole (0.5 cm diameter). The edges of the sherd were not worked. This could also have been a lacing hole. (3) A fragment of a subrectangular worked sherd, made of a red-brown sherd (not drilled).

From 2242 (Test 12, Level 2), not included in the above listings, came a worked sherd and a plain brown handle. Item No. 2231-2 was a red-on-brown sherd (with 2 mm lines spaced 1 cm or more apart) with a beveled edge and a band of wear or deliberate abrasion below the bevel. The exterior had both striations and a smoothed area. The handle midsection was more like a strap handle than a coiled handle, and seemed fragile.

# Flaked Stone

Flaked stone was not recovered from most of the levels. Lot 2212, Level 5 of Test 7C produced one tool and 33 flakes, for a total of 34 pieces. The tool was an asymmetrical, crude gray chert projectile point basal fragment with side notches and a slightly concave base (1.7 by 1.5 by 0.4 cm, 0.5 g). In addition, one flake (Lot 2269) came from the fill from Feature 91-O.

# Ground Stone

Item No. 2146-1, from Level 2, was described as a metate fragment. The lab drawing suggests the shaped end or side-wall of a grinding surface (9.7 by 6.8 by 5.0 cm; 438.5 g).

# Botanical Remains

Pine and oak were present in all levels (Table 10.23). Juniper was only found in Levels 3 and 5. *Zea* mays came from 4 of the 6 lots, and cheno-am from 3.

# Table 10.23. Botanical Remains from Test 7C and test 12.

Identification	2243	L 2 (F-0)	L3	L4	L5	L6
	Pit fill	2269	2145	2211	2212	2213
Juniperus			F		F	
Pinus	F	FΜ	F	F	F	F
Quercus	F	FM	F	F	F	F
Zea Mays	F	FM		F		FM
Cheno-am	F	F		F		
Unknown						Μ

(F=Sample from Flotation; M=Sample from Macrobotanical)

#### Faunal Remains

The faunal remains showed the usual pattern of category/species diversity, with small numbers of elements per category/species (Table 10.24). Levels 3 and 4 produced the most faunal remains, with the largest single number from a single category (other than unknowns) being small rodents. Except for the two elements from Anserinae in Level 4, both cases of more than one element per category in the same level came from rodents.

#### Bone Tool

The shaft portion of a bone awl (6 cm long) came from Lot 2212, Test 7C, Level 5.

#### Density of Artifacts and Faunal Remains

The total excavated volume is 1.53m<sup>3</sup>, not counting Level 1 which produced no artifacts. With 659 artifacts, the average density of artifacts per m<sup>3</sup> is 430, and the average faunal density is 27 elements/m<sup>3</sup>.

#### Summary of Test 7C Area

The Test 7C area was of interest for the presence of two kinds of exterior firepits in different strata. This unit, like the entire Test 7 group, seems to have been exterior space.

	L2	L3	L4	L5	Totals
Identifications	2146	2145	2211	2212	
Deer	1			1	2
Med. artiodactyls		1		1	2
Small mammal		1			1
Med. mammal		1	1		2
Small rodent		4			4
Canid			1		1
Jackrabbit		1	1		2
Cottontail		1			1
Pocket gopher		2	1		3
Ground squirrel			1		1
Wood rat		1			1
American Coot		1	1		2
Turkey				1	1
Anserinae (geese/swans)	1		2		3
Med. Falconiform	1				1
Large bird (mallard & up)			1		1
Small Anas			1		1
Unknown	2	3	3	4	12
Totals	5	16	13	7	41

Table 10.24. Faunal Remains from Test 7C and Test 12.

# Summary of the Test 7 Group

Although no claim could be made for continuous deposition (and thus a continuous cultural record) in the Test 7 group of units, the available dates suggest that most of the occupational history of the site was reflected here. If one accepts the date obtained in 1990 from the deep burned zone in the arroyo of (uncalibrated) 1340  $\pm$ 80 BP as relevant to the Test 7 complex (and it came from precisely this location on the same side of the arroyo), the sequence of events at this spot can be postulated to bracket the period from ca. A.D. 600 to post A.D. 1300 (uncalibrated). The oldest date had a large error factor, however.

The oldest dated material came from the lower burned zone (it might be more correct to say that it came from one of the lower burned zones). Excavations into the lower parts of Levels 8 and 9 in Test 7 indicated that still older materials—below the first burned zone noted in 1990—might be present. The two dates from Test 7A of  $1060 \pm 50$  BP (Level 6) and  $1050 \pm 50$  BP (Level 7) came from beneath Feature 91-F, as did the  $940 \pm 50$  BP date from Test 7. No dates were run from Feature 91-F (the large borrow pit) or its midden-like matrix. One date was run from levels above Feature 91-F and its matrix:  $640 \pm 50$  BP (Test 7A). An identical result was obtained from Test 7N, Level 3, also from above Feature 91-F and its matrix. All of the pits exposed in the Test 7 group were in the upper levels of the fill and reflect outdoor activities associated with the Medio period component of the site. These exterior hearths are similar to those in the north part of the patio compound attached to the central room block (Tests 3 and 4).

No human remains came from any of the Test 7 units, or from Test 1, suggesting that the dead were not usually interred along the western part of the Zurdito swale.

The Test 7 group of sites had variable densities of artifacts and faunal elements per cubic meter, in part because of the amount of surface slope in Test 7N (due to the cow trails and erosion) and the shallowness of Test 7B. In fact, they were among the lowest densities for the site (other low density tests were 2, 6, 29, 31 32, and 34 [the last three in the long north-south trench]. In general, the Test 7 group of units had lower densities than did Test 1, and much lower than Tests 13, 14, 15 and 38.

Because excavations were conducted on both sides of the east-west rock wall in Test 7A, and because no floors or other interior features were observed, the exposed section of wall probably formed part of an exterior or compound wall.



# Chapter 11

# TEST 8

Test 8 was placed on the west side of the south mound. Arbitrary excavation levels of ca. 20 cm were employed. No features were encountered in this test, but a possible occupational surface was encountered in lower of Level 3 and upper Level 4. At that depth, sherds, lithic artifacts, an animal bone, ash, and charcoal were reported. For the unit as a whole, artifacts were not as numerous as elsewhere on the site. Excavations ended at 140–144 cm BD, as the deposits were sterile at that depth. Augering from the lowest excavated level produced no charcoal or artifacts, and encountered bedrock at 203 and 207 cm BD.

Lots	Level	Depth B (unit) D	Nature of deposits	Estimated Excavated Volume
2205	L1	7 – 22	Light reddish brown sandy silt with occasional small pebble inclusions. Stratum A. Fluvial. Sparse artifacts. Most or all post dated the occupation of the site.	0.3m <sup>3</sup>
2181	L2	22-42	Fluvial deposits continue. Sparse artifacts. Large rocks near SW corner of unit showed no pattern and were removed. Soft matrix underneath due to rodent disturbance. Some charcoal.	0.4m <sup>3</sup>
2172	L3	42-61	Matrix change at ca. 50-55 cm BD. At bottom of level, conjoinable sherds of a brown olla, charcoal, ceramics, lithics and bone. Some orange clay patches. Some burned wood in northern part of unit. A possible occupation surface continued into top of L4.	0.30m <sup>3</sup>
2174	L4	61-82	Brown soil with more charcoal. Stratum B. Concentration of bones near charcoal/ash area in south of unit. Most cultural remains near top of unit in association with possible occupation surface.	0.42m <sup>3</sup>
2206	L5	82-100	Continuation of Level 4. Stratum B. More charcoal. Bird bone.	0.36m <sup>3</sup>
2207	L6	100-119	Hard, compacted level, light brown. Possibly Stratum C. Sparse artifacts. Rodent disturbance reaches to L 6.	0.38m <sup>3</sup>
2207	L7	119-144	Light brown deposits with larger gravels. Almost sterile. From excavation floor, augered to bedrock at 203 and 207 cm BD	0.125m <sup>3</sup>
				2.285m <sup>3</sup>

# Table 11.1. Test 8 (1 by 2 m).

Depth given for NE corner of unit. Unit datum was 7 cm Below 1991 Site Datum.

Strata A through D were arguably all present, though this terminology was not used in the excavation records. All of these strata were thinner than their counterparts in the Zurdito arroyo or in the central mound. Levels 2 and 3 represented the most intensive cultural deposition.

#### **Possible Occupation Surface**

A possible aggrading occupation surface extended from the lower part of Level 3 into the upper part of Level 4. This stratum, 15 to 20 cm thick (from 50–55 to ca 65–70 cm BD) contained conjoinable sherds of a brown olla, pieces of charred wood, and other remains that suggested a surface exposed and utilized for an extended period.

#### **Probable Turkey Burial**

Although no intentional turkey burial was identified in this unit during excavation, Hodgetts noted that "A final burial of a juvenile turkey was found in a large trash-filled pit dug into an earlier, more compact midden deposit. Although not identified as a burial in the field, it has been classed as such based on the completeness and pairing of elements, and a comparable stage of development for all the bones" (Hodgetts 1996:163). The excavator's statement about Level 4 in the Level Records is at odds with the description of the bones as coming from a trash filled pit: "L4 yielded noticeably less ceramics and lithics than L3, and this material seems mostly to have come from the zone considered to represent a former surface (lower L3 and upper part of L4). … Several non-human bones collected, especially from a concentration near south end of unit in lower half of L4." In the faunal database, the "comment" for the turkey bones in Test 8, Level 4 is "Lot 2174—Complete? Juvenile Turkey."

#### Pottery

The frequencies of textured wares were quite low in the upper levels (8.9 percent in Level 2, 13.4 percent in Level 4) but increased to 20.6 percent in Level 6 (which yielded a small sample, however). Babícora Polychrome occurred as deep as Level 6. Madera Black-on-red and possibly Villa Ahumada Polychrome occurred in Level 2, Ramos Polychrome occurred in Level 3, and Villa Ahumada Polychrome in Level 5. Level 7 had too few sherds to allow meaningful inferences. Neff tentatively identified Chupadero Black-on-white from Level 3, but nothing in the laboratory notes corresponds to this designation.

Hill (1992), who used only Levels 1 and 2 from this unit in his cluster analysis, placed both in the Medio period. Level 1 was near the middle of his list, and Level 2 nearer the top, in a reversal of their stratigraphic relationship. Frequencies of plain sherds remained quite high through the levels with large enough samples to be considered. Except for Level 5 (with a fairly small sample size), textured frequencies were low. Most if not all of Test 8 can be assigned to the Medio period.

#### Notes from the Lab

Lot 2181, Level 2: "Others": (1) one red-on-polished black; (2) one sherd with a white slipped exterior (possible Villa Ahumada); (3) two Madera Black-on-red.

Lot	Level	Undec	Black	R-sl	R/Br	Text	Bab	Other	Combos	Total	Weight	Density /m <sup>3</sup>
2205	L1	24	3	2	1	6	2			38	155.6g	127/m <sup>3</sup>
		63%	8%	5%	3%	15%	5%					
2181	L2	107	11	2	5	13	4	4		146	721.1g	365/m <sup>3</sup>
		73%	8%	1%	3%	9%	3%	3%				
2172	L3	91	33	2	2	21			6	155	2381.g	516/m <sup>3</sup>
		59%	22%	1%	1%	14%			4%			
2174	L4	28	10	1	2	4	1	1	2	49	564.1g	117/m <sup>3</sup>
		57%	20%	2%	4%	8%	2%	2%	4%			
2206	L5	12	10			6		1		29	228.7g	81/m <sup>3</sup>
		41%	34%			21%		2%				
2207	L6	3	2			1	1		1	8	56.4	22/m³
		37%	25%			12%	12%		12%			
2209	L7	3				1				4	31.3g	32/m³
		75%				25%						
Totals		268	69	7	10	52	8	6	9	429	4138.2g	188/m³
%s		62%	16%	2%	2%	12%	2%	1%	2%			

Table 11.2. Pottery from Test 8.

Lot 2172, Level 3: "Other": (1) one Ramos Polychrome; (2) two Madera Black-on-red; (3) one polychrome with angular designs on a gray background (that Laurie Beckwith thought wasn't Babícora but that Loy Neff concluded was an atypical Babícora Polychrome); (4) two black-on-brown rims. "Combo": six textured sherds with black polished interiors.

For this lot, Neff noted 18 painted sherds. Most were Babícora, but he identified one possible Chupadero Black-on-white with fine sand temper and with black paint on a matte exterior. Nothing in Beckwith's lab notes on the lot corresponds to this suggestion. Neff thought that one painted sherd was a local variant of Ramos Polychrome. This sherd was smooth, of uniform thickness, well made, probably high fired, and slipped on both surfaces. The red was not outlined in black but there were alternating black and red designs separated by tan ground. Neff later added a note about this sherd, indicating it was originally identified as Babícora and concluding it probably was Babícora Polychrome. Finally, he identified two body sherds as Ramos Black-on-red. Both had a dark red slip on the interior and exterior surfaces, over a gray core. One of the sherds had black organic inclusions, the other did not. The vessel exterior or exteriors were polished over the black paint. A very slight reaction to hydrogen peroxide suggested the use of organic pigment.

Lot 2174, Level 4: "Combos": two sherds were both textured with polished black. "Other": a non-local Ramos Polychrome was noted by Loy but missed in the lab. Two red-on-brown sherds were tabulated in the lab, while Loy counted three that he identified as Anchondo (partly polished over broad red line design) and Mata or Leal Red-on-brown—depending on whether other parts of the vessel were textured.

For this lot, Neff listed four painted sherds. One of these was the non-local Ramos polychrome noted above with a creamy tan paste, uniform texture, fine sand temper and that was very smooth

and very uniform in thickness. Polish marks were invisible. Polished over black paint to low luster on the exterior. The possible Anchondo and Mata and or Leal sherds discussed by Neff were noted above.

Lot 2206, Level 5: "Other": one possible Villa Ahumada sherd with a polished black interior and with black designs on a white slipped exterior.

#### Flaked Stone

Both flaked stone and pottery were most numerous in Levels 2 and 3. No shaped tools came from this unit. Utilized flakes accounted for 5 percent of the flaked stone (Table 11.3). Only one core was present. Sherd:lithic ratios were fairly consistent between the various levels, with only Level 4 having an unusually high ratio.

Lot	Level	Shaped	Utilized	Cores	Other	Total	Sherd:Lithic Ratio
2005	L1		2		9	11	3.4 : 1
2181	L2		1		39	40	3.6 : 1
2172	L3		2	1	42	45	3.4 : 1
2174	L4		1		4	5	9.8 : 1
2206	L5				8	8	3.6 : 1
2207	L6				2	2	4:1
2209	L7				2	2	2:1
Totals			6	1	106	113	3:1

 Table 11.3. Flaked Stone from Test 8.

The only catalogued piece from this unit came from Level 3 (No. 2172-1). It was a black to gray chert wedge (2.7 by 2.2 by 0.6 cm, 1.9 g).

# **Ground Stone**

No. 2207-1 (Level 6) was a small (1.8 by 1.8 cm) fragment of stone with one ground surface. The thickness of the piece was not given, and the recorded weight (0.3 g) must be wrong.

# **Botanical Remains**

The only flotation samples analyzed from this unit came from Level 4 (Lot 2174). *Pinus, Zea mays* and an unknown species were present—all from the burned area. No macrobotanical remains were reported.

#### **Faunal Remains**

Few faunal elements were recovered for the volume excavated (65 elements from 2.64 m<sup>3</sup> yields an estimate of 23 elements/m<sup>3</sup>). Turkey, medium birds and a single medium artiodactyl were represented (Table 11.4). The probability of a turkey burial was noted above.

Identifications	L3	L4	Totals
	2172	2174	
Medium Artiodactyl	1		1
Turkey		18	18
Bird larger than mallard		5	5
Unknowns	6	35	41
Totals	7	58	65

 Table 11.4. Faunal Remains from Test 8.

#### **Density of Artifacts and Faunal Elements**

The impression of Joe Stewart, the excavator, was that this unit produced few artifacts relative to other parts of the site. An estimated 2.285 m<sup>3</sup> were excavated. With 553 reported artifacts, an average of 242 artifacts/m<sup>3</sup> was calculated and, as noted above, of 28 faunal elements/m<sup>3</sup>.

# **Summary of Test 8**

This test showed that the southern part of the site was aggrading throughout the history of the site, with cultural materials being incorporated into the deposits but at a much lower rate than in other test units. The way or ways in which this 2 by 1 m area was used during occupation of the site is unclear. One probable occupation surface was noted, and a wider exposure of the upper levels might have revealed a more structured use area. As this unit was on the south mound, we expected evidence of architecture; no such evidence was found. Surface walls did occur at several other places in the southern part of the site. The probable turkey burial in this test, along with those from Tests 14 and 43 along the Zurdito arroyo, was of interest because this was the one indication of a spatially bounded activity within the site. Burial of whole turkeys (which, if found articulated and in correct anatomical position, had to have been buried with the flesh on) indicates ritual behavior.



# Chapter 12

# TEST 13

Arroyo Trece, which was eating headward around the north edge of the southern "mound," cut through a house floor. The south half of the room was removed by the arroyo. A 2.5 by 3 m unit revealed half of the hearth (exposed at the arroyo cut), the remaining plastered floor, and the room's north wall (Table 12.1 and Figures 12.1–12.3). East and west walls were not located, even though the edges of the plastered floor were exposed and the northeast corner was detected. Ground surface varied from 8 to 21 cm BD. Level 1 reached depths of 37 to 41 cm BD and stopped at a change in soil texture and color. In the southwest portion of the level, this change took the form of a rectangular yellow-buff, compact clay zone at 43 cm BD, measuring 110 cm across the arroyo edge and 180 cm north-south. In the southeast portion of the unit, a yellow zone containing ash and charcoal was encountered 36 cm BD. An ash concentration was noted at this level, over the fire pit visible in the arroyo wall. The level also contained gravel, along with adobe thought to be collapsed wall or roof material.

Lot	Level	Depth	Description	Estimated
				Excavated
				Volume
2238	L1	21 cm	Since floor and hearth were visible in the arroyo profile, L1	1.5m <sup>3</sup>
		to 41	was excavated to a soil change level that occurred between	
		cm	37 and 41 cm BD. Moderate rodent disturbance. Rich in	
			artifacts. Charcoal chunks. Hard deposits. Adobe mottled	
			with dark soil appears to be wall/roof fall.	
2271	L2	To 61	Cleaning off of compacted fill to floor and walls. N wall	1.5m <sup>3</sup>
		cm.	contains posts set in an adobe/jacal base. 2 <sup>nd</sup> rock wall	
			immediately N of adobe/post wall designated Feature N.	
			Sherd concentration in NE corner of unit included a possibly	
			reconstructible bowl.	
				3.0m <sup>3</sup>

Table 12.1 Test 13 (2.5 by 3 m).Unit datum near NW corner; depths given for SE corner

Level 1 was exceptionally rich in artifacts. Level 2 (Lot 2250), which continued to the welldefined floor, also contained many artifacts, although fewer than in Level 1. Hearth fill was removed separately (Lot 2271), and the fragments of five vessels in the northeast corner of the floor were collected as Lot 2292. Because of the trade wares in both Levels 1 and 2, at first Test 13 was assigned to the Medio period. Hill (1992, Charts 5.9 and 5.11) placed it in the Viejo period based on the frequencies of plain and textured pottery. Hill's assignment let to a reevaluation of the room. The presence of Ramos and Villa Ahumada Polychrome and one of the few sherds of Chupadero Black-on-white collected by the PAC do not fit easily with a Viejo period designation.



**Figure 12.1.** Test 13 room, showing north wall with post holes in adobe wall base. Arroyo cut is on the south side of the room (top of photograph). PAC 91B/W-11-30.



**Figure 12.2.** Test 13 room, looking north to adobe wall base and adjacent rock wall. Note the hearth in the arroyo face and vessel fragments in the northeast corner. PAC 91B/w-9-11-27.



Figure 12.3. Test 13, hearth cut by arroyo. PAC 91B/w-11-31.

Although the (post-occupation) room fill could date to the Medio period, the question arises as to the relationship between the Medio period imports and the Viejo-like frequencies of plain and textured pottery. Equally significant is the occurrence of Perros Bravos style wall construction. The north wall of the room had an adobe wall base with inset post holes like Perros Bravos architecture at the Convento Site (Di Peso et al. 1974). Unfortunately, we did not obtain a date from this unit.

# The Room

The floor of the house varied from 52 to 65 cm BD, sloping toward the south (toward the room center). The well-plastered floor curved at the north end of the room, into an adobe wall base containing 12 postholes. This post-and-daub wall was slightly less than half a meter inside (south of) a rock wall. The pattern of dual walls echoed the situation in the Test 2 Extension-Test 9, as did our lack of an explanation for the pattern. If Test 13 represented a Viejo period house, the two walls were presumably independent. The post-and-daub wall found in Unit 13 base was unique in the PAC investigations, but typical of the Perros Bravos phase architecture at the Convento Site (Di Peso et al. 1974).

Before being cut by the arroyo, the plastered hearth was about 32 cm in diameter and 20 cm deep, with a rim that rose above the floor level. The surviving portion was filled with a dark soil mixed with fire-cracked rock and yielded a single flake.

The sherds most likely associated with the occupation of this room, as opposed to later fill, were found under a rock in the northeast corner of the room (see below). Fragments of five different vessels were collected from that context as Lot 2292.

#### Pottery

The 13 kilos of pottery in Test 13 (Table 12.2) suggested that the room location was subsequently used for trash disposal. The unit was unusual for its high frequency of black slipped sherds. Hill postulated that that higher percentages of black slipped wares were indicative of the Viejo period at this site, and that the technique began early in the southern part of the Chihuahua Culture area. The frequency of textured sherds was highest in Level 2 (see Figures 12.4–12.6), while Babícora was least common in that level. The fact that Level 2 (the fill above the floor), with an adequate sample size, had more textured wares than did the upper fill, suggests that the perceived decrease in textured wares through time held here as well. Red-slipped sherds were quite uncommon; red-on-brown sherds were present. Neff's tentative identification of Mata Red-on-brown supports an earlier temporal placement. Imported wares were present in both levels, with Ramos Polychrome in the upper level and Chupadero Black-on-white and Villa Ahumada Polychrome in the lower level. This sherd of Chupadero Black-on-white was one of the few sherds originating outside the Chihuahua Culture area. The single cord-marked sherd (one of three from the site) could represent an import but was just as likely a variant within the local texturing tradition; the paste of this sherd appeared to be local.

Lot	Level	Undec.	Black	R-sl	R-Br	Text	Bab	Other	Combo	Total	Weight	Density /m <sup>3</sup>
2238	L1	697 53%	218 17%	8 0.6%	20 1.5%	214 16%	74 5.6%	30 2%	50 3.8%	1311	8617 g	874/m³
2250	L2	288 44%	131 20%	2 0.3%	10 1.5%	170 26%	6 0.9%	8 1%	44 7%	659	3118 g	456 /m <sup>3</sup> for 2250, 2271 & 2292
2271	Hearth fill	3 60%	1 20%			1 20%				5		
2292	On floor	10 50%				5 25%		5 25%		20	1297 g	
Total %		988 52%	350 19%	10 0.5%	30 2%	390 21%	80 4%	43 2%	1891		13032 g	658/m <sup>3</sup>

Table 12.2. Pottery from Test 13.

The vessel fragments that lay directly on the floor (under the stone) did not include any that would, of necessity, date to the Medio period, although four of the five vessel fragments would not be out of place in a Medio period context. Rather, all fell comfortably within the Viejo period. Specimen 2292-3, described below, does not fit easily into any named Viejo period type but is more categories but is much more likely Viejo than Medio.

Hill placed Test 13 in the Viejo period based on the low percentage of plain ware and the high percentages of textured and black slipped ware. Reconciling these frequencies with the imported Medio period sherds presents a challenge.



Figure 12.4. Textured rims from Lot 2250, Test 13, Level 2. PAC 91B/W-14-16.



Figure 12.5. Textured sherds and one Babícora painted sherd from Lot 2250, Test 13, Level 2. PAC 91B/W-91-14-18.



Figure 12.6. Textured sherds from Lot 2250, Test 13, Level 2. PAC 91B/W-91-14-20.

# Notes from the Lab

Lot 2238, Level 1: "Others": (1) one Ramos Polychrome; (2) an unnamed polychrome on black to gray (a darkened Babícora?); (3) another unnamed polychrome (that could also be an unusual Babícora); (4) three red-on-brown textured (one of which was tentatively identified by Neff as Mata Red-on-brown textured); (5) one black-on-brown; (6) 16 sherds with white slipped exteriors; (7) seven red on dark brown to black.

"Combos": (1) a red slipped interior with red-on-brown exterior; (2) a red-slipped/textured; (3) two sherds with red-slipped exteriors and red-on-brown interiors; (4) a red-slipped exterior with a polished black interior; (5) 12 red painted textured sherds; (6) one textured with brown or black paint; (7) 30 textured with black slipped interiors; (8) a textured with white slipped interior; (9) a black textured rim. A base-wall juncture from a flat-based vessel (a flaring bowl?), a handle, and a sherd disk were included with the undecorated sherds (see below). A black handle was counted with the blackware sherds (see below).

Two beveled red-on-brown sherds probably served as sherd scrapers (see below). The Babícora polychromes included 20 with darkened backgrounds and three with polished black interiors. One of the Babícora polychromes was a *malacate* or drilled sherd (see below). Seventeen Babícora Black-on-tan were noted. Three rim sherds appeared to be from unusually shaped vessels. One of these could have come from an angular form, another had a wavy rim, and the third rim was either warped or had an unusual shape. One rim belonged to a *tecomate*.

Lot 2250, Level 2 (two bags): "Combos": (1) one red-on-black; (2) five textured with red paint over the texturing; (3) 36 textured with polished black interiors; (4) one Babícora Polychrome with texturing; (5) one white-slipped corrugated with an additional red wash over the white slip.

"Others": (1) two Villa Ahumada Polychrome; (2) one black-on-red; (3) one Chupadero Blackon-white; (4) a sherd with a white slipped exterior. A cord-marked sherd (one of three from the site) was included with the textured in this level. Two of the undecorated brown rims had red slip bands (Pilón Red rim).

Neff recorded information separately for each of the two bags from Lot 2250. For Bag 1 he listed four painted sherds, including one Babícora Polychrome, a "generic" red-on-black (with exterior polish over red paint, which was applied over the black ground), and two "generic" red-on-browns. The two last were large, thick body sherds with brown paste. One was heat-altered and had a darkened exterior on which were parallel red painted lines. The other had only faintly visible red paint in what appeared to be a horizontal band (comprising parallel descending bands). Included with the textured sherds was a possible Mata Red-on-brown Textured. This sherd had a red painted band adjacent to a zoned corrugated area.

Neff notes for Bag 2 of Lot 2250 (Level 2) listed 33 painted sherds, most of which were Babícora. (1) One of the Babícora sherds was on a thin, finely made vessel with tan paste and medium coarse sand temper. The sherd was polished over very thin, closely spaced parallel painted lines, which alternated between black and red. (2) Two body sherds of Villa Ahumada had creamy tan slips over dark gray cores with relatively dense, medium sand temper. The exteriors had white paint grounds on which were painted parallel bands of red and black paint. The white and red were mineral pigments, while the black was organic (based on the hydrogen peroxide test). (3) Four red-on-tan body sherds were listed. Three had darkened, heat altered paste. One of these three was slipped. All had washed out, ill-defined red paint areas; one had paint on both sides of the sherd while the others had paint on the exteriors only. (4) Another painted sherd was thin (4.9 mm), with a thin wash of a dark red slip on the exterior (it was double slipped) and thin, well-executed mineral pigment black parallel lines. Neff suggested this was a "home-made" Madera Black-on-red. (5) A single body sherd was thought to be Mata Redon-brown Textured; it was zoned, with narrow, parallel incised horizontal lines and faint red paint lines descending at an oblique angle from the textured zone. (6) Another red-on-tan textured had narrow corrugations on the exterior and faint red paint on the interior. (7) Four body sherds were classed as "generic" red-on-tan. (8) Four jar rims had red bands on the interiors of the lips. Neff wondered if these could be Babícoras. (9) A jar rim had red paint from the outer lip to the exterior limit of sherd, and Neff wondered if this could be Babícora.

Lot 2271 (the hearth contents): the few sherds included a brown-gray direct rim (probably from a bowl), a plain brown sherd with blackened exterior, a corrugated sherd, a painted sherd with red on a dark red scraped and polished exterior, and a crudely made coil handle of blackened brown pottery.

Lot 2292: portions of five vessels found under a rock, on the floor of Test 13, were described as follows:

Item 2292-1: five sherds of a 1.3 cm thick, dish-shaped bowl fragment could be reconstructed to represent the rim to base profile of a flaring bowl. The bowl had been about 25 cm in diameter and stood 9.3 cm high. It was heavily slipped and polished on the interior and exterior, with a brown surface and dark gray core, a beveled rim, and exterior smudging.

Item 2292-2: five sherds fit together to form a midsection of a 36+ cm diameter vessel, probably a jar. The matte brown exterior surface was scored. A black deposit covered the interior. The temper included mica.

Item 2292-3: five sherds of a polychrome textured vessel did not fit easily into named types, but fell comfortably in the traditions of the Viejo period. This vessel had a sloping shoulder at least 20 cm long, covered for 19 cm with closely placed, roughly horizontal, parallel incisions. Across the upper part of the shoulder, broad red and black lines crossed the incisions. At the lower edge of the incised zone, a horizontal red line separated the incised area from the smoothed-polished brown zone below.

Item 2292-4: two sherds of a plain brown olla wall had a scraped and polished exterior. The wall was 1 cm thick, with a black core. The vessel diameter was 36+ cm. A clay patch on the interior of the vessel wall probably covered a large, protruding piece of temper. Temper visible on the broken edges was 3 to 5 mm across.

Item 2292-5: two sherds of a gently rounded jar bottom varied in thickness from 0.7 to 1.0 cm. The brown vessel interior was eroded. The exterior was well worn.

# Other Ceramic Items

Five items from Level 1 (Lot 2238), two from Level 2 (Lot 2250), and one from the hearth (Lot 2271) were included in the above tabulations.

Item 2238-1 was an incised sherd with a beveled edge; the sherd may have had black paint over the incisions.

Item 2238-3, a red-on-brown sherd with one ground edge, was probably part of an undrilled sherd disk.

Item 2238-4 was a polished brown disk, not drilled, with ground edges; it was almost perfectly round.

Item 2238-5 was a midsection of a blackware coiled handle.

The next four items were not included in the above tabulations.

Item 2238-8: an undrilled Babícora Polychrome disk on which the interior face had been ground flat. The exterior face had one black line and one red line (each 0.5 cm thick) symmetrically placed.

Item 2238-6 was a possible ladle handle. The piece was solid, very crude, and undecorated.

Item 2250-4 was a small red-on-tan sherd with a large hole drilled from one face. The edges were not worked.

Item 2250-5 was roughly one-quarter of a biconically drilled sherd with a hole diameter of 0.5 cm. The edges were not worked. The piece was broken across the hole.

Finally, Lot 2271 yielded half of a thick, crude coiled handle, which retained an attachment surface on one end. The latter measured 2.7 by 2.6 cm. The handle fragment extended 3.7 cm from the vessel surface.

# **Flaked Stone**

A single side-notched projectile point and a wedge represent the shaped tools; both came from the upper level. The 10 cores (Table 12.3) were 3.2 percent of the total number of flaked stone artifacts.

Lot	Level	Shaped	Used	Cores	Flakes/shatter	Total	Sherd:Lithic Ratio
2238	L1	2		3	127	132	9.9:1
2250	L2		4	7	168	179	3.6:1
2271	Hearth				1	1	5:1
Totals		2	4	10	296	312	

# Table 12.3. Flaked Stone from Test 13.

#### *Notes from the Lab*

Lot 2238.1, Level 1: a projectile point was made on a curved flake of black "chert," so that the longitudinal profile was decidedly convex (1.5 by 0.9 by 0.3 cm, 0.1 g). The point had side notches and a slightly convex base.

2250-2, Level 2: a black chert wedge (2.9 by 2.1 cm by 0.9 cm, 4.9 g). Unlike other items described as wedges, this one had a "tail." A patch of cortex remained on the dorsal surface. The worked edge was along the "front" of the wedge shape.

# **Botanical Remains**

Flotation samples from Levels 1 and 2 were combined in the notes for Lot 2238 (Table 12.4). *Zea mays* was present in both Lot 2238 and 2271, as were the three most common types of wood (*Juniperus, Pinus,* and *Quercus*). The hearth produced all of the species found in Level 1, and also cheno-ams.

Identifications	Levels 1-2 Lot 2238	Hearth: Lot 2271
Cheno-am		F
Zea mays	F	F
Juniperus	F	F
Pinus	FM	F
Quercus	F	F

 Table 12. 4. Botanical Remains from Test 13.

#### **Faunal Remains**

Eighteen faunal categories were listed for Test 13; 52 elements were listed as unknown (Table 12.5). Jackrabbit bones were the most numerous. The assemblage was otherwise diverse, with few specimens from any single category.

	L1	L2	
Identifications	(Lot 2238)	(Lot 2250)	Totals
Med. Artiodactyls	3	3	6
Deer	1		1
Canid	2		2
Jackrabbit	14	5	19
Small mammal	4	4	8
Cottontail	3		3
Badger	1		1
Squirrel	3	1	4
Prairie dog		1	1
Pocket gopher		1	1
Small rodent		1	1
Ancirinae (Swans and geese)	1	1	2
Quail	1		1
Anatini (Surface feeding ducks)	1		1
American Coot	2	3	5
Medium Bird-smaller than mallard	2	1	3
Large bird-larger than mallard	1		1
Medium Anas		1	1
Unknown	24	28	52
Totals	63	50	113

 Table 12.5. Faunal Remains from Test 13.

# Bone Tools

The faunal spreadsheet for Lot 2238 noted a medium Artiodactyl rib with a series of incised grooves. From the same level, two awl points were noted on the spreadsheet, one of which was 4 cm long and the other 6 cm long. Neither species nor element could be identified for these two specimens.

#### **Density of Artifacts and Faunal Remains**

The volume of excavated materials was approximately 3m<sup>3</sup>, and with 2287 artifacts, an estimated of 762 artifacts/m<sup>3</sup>, and 37 faunal elements were recovered.

# Summary of Test 13

If Hill was correct, and this test exposed a Viejo period structure, the presence of Medio period trade wares is worrisome. Although Viejo period *jacal* construction is well documented in the Paquimé area, the adobe wall base with multiple postholes (12 in a 2 m length of wall) is unique in the CAP's experience. The fact that it closely paralleled a stone wall is noteworthy, but also occurred in the Test 2 Extension/Test 9. We did not open a large enough area to unravel the relationship between the two walls, but believed that they were from separate building episodes.

The artifact density, the third highest at the site, strongly suggests that this room was used for trash disposal after abandonment. In spite of rodent activity, this was one of the least disturbed parts of the site, having escaped the looters' notice. The pieces of five vessels found on the floor appear to be directly related to the use of the room, and further appear to be Viejo period.



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# Appendix A

#### SAYLES'S BABICORA SITES

The following information is from E. B. Sayles's notes on his 1933 reconnaissance of Chihuahua, for Gila Pueblo (Sayles 1936, n.d.), and on the Sayles-Gladwin correspondence now archived at the Arizona State Museum, University of Arizona.

A sketch map encompassing sites Chih I:9:1 to I:9:9 [GP] accompanied the site forms, as did sketch maps of two of the sites (Chih I:9:1 and I:9:5). Sayles used English measurements, which are retained here. Metates were recorded using small, usually rectangular symbols in the drawings, but it is unclear whether the symbols indicate the actual shapes of the metates.

Sayles collected a few sherds from each site. These are now at the Arizona State Museum, where I examined them in 1992. The sherd samples were presumably chosen for diversity rather than being statistically representative. Most if not all of the pottery fits well with Medio period assemblages, with tantalizing differences that could reflect the relative ages of the different sites.

# Chih I:9:1

This is the most western of Sayles's 10 Babícora sites, near the Hearst ranch headquarters outside Las Varas. Sayles placed the site on the west side of a bend in the river, amid "pine clad hills along margin of Plains." A large, hourglass-shaped mound occupied the north part of the site, two oval mounds were present to the south, and three other, small mounds were shown on the sketch map. The mounds were 4 to 6 feet high. Exposed architecture was adobe, which contained occasional sherds and rocks. Dimensions of rooms with plastered interior wall surfaces and floors were in the range of 10 to 16 feet. Circular mortar holes were present in boulders, and a number of external hearths (some 4 to 5 feet in diameter and 6 to 12 inches deep) contained fire-cracked rock. A midden, 12 to 18 inches deep and surrounding the mounds, reached almost to the river.

Sayles collected a rectangular metate and a carefully shaped mano as well as sherds. He excavated east of the more southerly oval mound, in the midden area, in 6 inch levels to a depth of 30 inches. The stratigraphy was: 0–6 inches: soil, grass roots; 6–12 inches, loose soil with occasional bone; 12–18 inches, similar to the previous level but with burned stone; 18–24 inches, similar to the previous levels but with frequent burned stone and adobe. The pottery distributions are summarized in Table A.1.

The pottery in the Arizona State Museum made up a typical suite of Medio period ceramics (Table A.1). Undecorated brown and textured sherds were ubiquitous. The textured red-on-tan is suggestive of the Viejo period, but red-on-tan sherds do occur in local Medio period assemblages. The only recognized "import" was Villa Ahumada Polychrome.

	0–6 in.	6–12 in.	12–18 in.	18–24 in.	24–30 in.
Undecorated	Х	Х	Х	X	Х
Black				Х	
Red slipped		Х	Х		
Red-on-brown					
Textured	Х	Х	Х	Х	Х
Babícora		Х	Х	Х	Х
Black-on-red	Х				
Black-on-tan		X		X	
Other		V. Ahumada?		V. Ahumada?	Brown lines on
					brown
"Combo"		Red-on-tan and			Red slipped
		incised			and finger
					impressed

Table A.1. Pottery from Chih I:9:1.

#### **Chih I:9:2**

Chih I:9:2 was on the east side of the Las Varas River, 300 feet from the river. An adobe house mound measured 30 by 40 feet, with sherds scattered over a 100 by 200 foot area. Rectangular metates and shaped manos were present. Pottery at the Arizona State Museum includes Babícora Polychrome, a black-on-red sherd, a black-on-tan sherd, undecorated brown sherds, and various textured wares including neck banded. No imports were recognized.

#### Chih I:9:3

Chih I:9:3 was on the west bank of, and next to, the Las Varas River. Surface artifacts covered 100 by 150 feet. Adobe house mounds, 5 to 7 feet high, contained large rooms with well-plastered interiors. Room sizes were in the 10 to 16 foot range. A note on the level form was unclear to me: "Rectangular windows—6' x 8'." A shaped mano was reported, as were cut roof beams. The Arizona State Museum collections contained a square sherd disk of plain brown ware, a sherd of Babícora Polychrome, a sherd from a painted incurving bowl (the burned-out paint is on a very polished exterior surface), a sherd with a polished red exterior slip, incised ware, and a polished brown sherd.

#### Chih I:9:4

Sayles's two southernmost sites on the Las Varas River (which flows southeast at this location, before it enters the Babícora basin) were recorded by our project as a single site, Ch-179. A Sayles photograph of the site allows us to confirm this identification. Located northwest of the river, Chih I:9:4 had two mounds; one measured 30 by 40 feet, while the other measured 150 by

300 feet. Both mounds were 6 to 8 thick. Sayles reported seeing pottery and a metate. The Arizona State Museum does not have a collection from this site.

#### Chih I:9:5

The main mound at Chih. I:9:5 was 900 to 1000 feet from (and across the river from) the Chih I:9:4 mounds. The Chih I:9:5 mound measured 460 by 380 feet. As drawn on the sketch map, the mound vaguely resembles a pentagon. The thickness of the mound varied from 3 to 4 feet (at several areas at the edge; one is labelled a "court") to 5 to 6 feet at the center and to 6 to 8 feet in five areas near the edge. A second, much smaller mound, 40 by 50 feet, is shown at the river's edge, 125 feet north of the main mound. Adobe walls were more than 12 inches thick; walls were plastered. A T-shaped doorway was noted. Circular bedrock mortars were present within the site.

Artifacts at the site included a rectangular metate, a shaped mano, a grooved mano, a hand stone, a pestle, and a three-quarter grooved axe. A small midden was present northeast of the mound (towards the river), and Sayles placed a 6 by 6 foot test excavation in that midden (Table A.2). Test levels were described as follows: 0–6 inches, sod; 6–30 inches, loose ashy soil; 30–36 inches, adobe lumps in loose ashy soil; 36–42 inches, hard-packed ashy soil on a dense natural layer of clay.

Depth	Undec.	Black	R-sl	R-br	Text	Bab	Ramos	Other	Combo
0–6 in.	Х	Х			Х	Х	Х	Bk/r	XX*
12–18 in.	Х	Х			Х	Х		R/bk	
18–24 in.	Х			Х				Bk/tan	
24–30 in.	Х	Х		Х	Х	Х		Bk/tan	
30–36 in.	Х		Х			Х		Bk/br	
36–42 in	Х				Х			**	

Table A.2. Pottery from Sayles's Test at Chih. I:9:5.

\*0-6 in., "Combos": a textured rim on a black-on-red jar, and a sherd with a punctate design on a red slipped exterior (similar to Playa Red Incised).

\*\*36-42 in., "Other": a polychrome with brown (!), red, and black.

The sherds in the Arizona State Museum include some not identified as being from the test, presumably from a surface collection. These sherds include an abundance of Babícora polychrome, a Ramos sherd with fine white paste, a Ramos effigy vessel fragment, black-on-red jar sherds (Madera?), a sherd with horizontal "barrel" ridges, and black polished sherds. Textured sherds were less common than in other collections from the Las Varas group. The fine paste Ramos is of particular interest as there is so little of it in the southern, upland zone of the Chihuahua Culture.

#### Chih I:9:6

Sayles described Chih I:9:6 as being next to a "spring stream" in a narrow valley surrounded by rocky, pine-covered hills. This was the only one of Sayles's Las Varas sites outside the main valley. He noted mounds measuring 200 by 500 feet, with an occupation area of 400 by 1000 feet. "Practically all walls show use of boulders, with numerous enclosing walls of stone foundation." A photo taken on May 19, 1933 allowed us to positively identify Chih I:9:6 as PAC Ch-159, which we called el Zurdo.

The Arizona State Museum collection from Chih I:9:6 contained much more textured pottery than those from the other Las Varas sites. The sherds included a drilled Babícora jar sherd; black-on-tan, black-on-polished-red (Madera Black-on-red?); a sherd with red lines on a cream-colored slipped exterior; heavy, thick rims with various kinds of texturing; textured body sherds; polished black; plain brown; and combinations (such as a striated sherd with a red wash).

#### Chih I:9:7

Judging from the sketch map, Chih I:9;7 must have been very near the junction of the Las Varas valley with the main Babícora basin, probably just within the main basin. The easternmost of the nine Las Varas sites, it was 2 miles west of the Las Varas River in a grassy plain. The mound height was recorded as 8 to 10 feet, the thickest deposits noted by Sayles for any his Las Varas–Babícora sites. The mound measured 75 by 300 and lacked stones.

A rectangular metate was noted. Pottery in the Arizona State Museum includes Babícora Polychrome, a black-on-tan, and plain brown sherds.

#### **Chih I:9:8**

This mound group was 300–500 feet west of the Las Varas River. It was the first site to the northeast of I:9:1 and therefore was the second site below the village of Las Varas. Three house mounds, each about 20 by 60 feet, were strung out for a mile along the river, with smaller mounds between. Mound deposits were 4 to 5 feet thick. One mound had been excavated by Carey (1931), who reported T-shaped doors, many filled with stone; adobe walls; and plastered walls of rubble. Sayles noted sub-floor burials, rectangular metates, hand stones, and shaped and unshaped manos.

The Arizona State Museum collections include mostly plain brown sherds but also a Ramos Polychrome rim; Babícora Polychrome; a sherd with red paint on a white to cream exterior (and with gray paste); a white-slipped sherd, possibly Villa Ahumada; a rim from a neck-banded jar; textured wares; and a partly textured, partly smoothed sherd.

#### Chih I:9:9

Half a mile upstream from Chih I:9:5, a single mound on the south side of the Las Varas River (the same side as Chih I:9:5) measured 30 by 40 feet. The mound deposits 6 to 8 feet deep. A rectangular metate and manos were present.

The Arizona State Museum sherd collection included Babicora polychrome, red-on-tan, red-onblack, and textured and polished brown. Two of the more interesting sherds in the Sayles collections came from here. One was from an everted bowl rim with a black-on-yellow interior. Paul Fish suggested that this sherd could be an import from Sinaloa. The other had a black-onwhite exterior and a white-slipped interior.

# Chih I:9:10

Located 9 miles east of Las Varas, next to a dry stream, Chih I:9:10 could be Brand's "Ridge Site." Chih I:9:10 was in a low pass at the margin of grassy plains, in hills supporting pine and oak, and had a good view of the surrounding terrain. A group of house mounds some 4 to 5 feet high covered an area of 100 by 300 feet. Walls were adobe and stone.

The Arizona State Museum collection includes Babícora polychrome sherds along with blackon-red, black-on-tan, polished black, and textured pieces. A brown bowl sherd has a darker brown slip band on the lip. A textured rim has a red slip band on the interior. A black-on-tan sherd has a possible corn plant design.

# Chih I:9:11

Sayles's notes make it clear that Chih I:9:11 is the San Juan site, 27 miles from Las Varas and three-quarters of a mile from a spring-fed stream, at the edge of a grassy plain. A group of adobe house mounds covered 300 by 500 feet. Sayles collected a polished grooved axe, a metate, a shaped mano, and an axe with two three-quarter grooves for Gila Pueblo. Sayles observed many thin slabs of stone showing use, as well as circular mortar holes in boulders.

Three test excavations, measuring 8 by 8 feet, 7 by 7 feet, and 6 by 6 feet, were dug in 6 inch levels. Tests 1 and 2 were next to each other. The location of Test 3 was not given. All three tests appear to have been placed outside the mound area. Three burials were encountered in the first two units.

In Excavation 1, Burial 1 was in ashy soil. The burial extended from 18 and 30 inches below the surface and was placed on hard, undisturbed soil. Elsewhere in the test, pockets of midden extended to 3 and 4 feet deep. The burial was tightly flexed, on its left side, hands to the face, and head to the northeast. Twelve inches from the head, the excavators encountered large sherds, "bowl up," beneath a flat utilized stone. Other sherds were placed beneath a second stone 18 inches from the knee. All of the bones were shellacked by Sayles. This burial was illustrated in Sayles's report (1936, Plate 6).

Burial 2, in Excavation 2, was 10 feet north of the first burial. The individual, was loosely flexed, on its right side, with the head to the west. Some bones were missing. The skull and feet were 12 inches higher than the pelvis. A utilized flat stone was placed at the head.

Burial 3, also in Excavation 2, had a leg bone lying across the foot of Burial 2. Underlying Burial 3 was a burned stone cist, 3 feet in diameter, that extended 18 to 36 inches below the surface. Still lower down (44 inches below the surface), another cist of burned rock measured 18 inches across and extended to 52 inches below the surface. At that point, the excavators encountered hard-packed, undisturbed deposits.

In Excavation 3, Sayles encountered another rock cist measuring 18 inches across, above sterile hard-packed sand (which extended to 36 inches below the surface). "Frequent animal bone" came from the burned deposits associated with the cist.

Table A.3 summarizes the pottery collected from Test 1.

Depth	Undec.	Bk	R-s1	R/br	Text	Bab	Ramos
0–6 in.	Х			Х	Х	Х	
6–12 in.	Х			Х	Х	Х	Х
12–18 in.	Х				Х	Х	
18–30 in.	Х				X	Х	

 Table A.3. Pottery from Chih I:9:11, Test 1.

The Arizona State Museum collections from the site—one of those apparently from the surface—included very little plain ware, an abundance of polychromes, and a fair amount of textured wares. There was one imported Ramos Polychrome with fine white paste, other Ramos Polychrome sherds that may be a local variant, black-on-tan, a red-on-tan with corrugation, cord-marked, textured, and a small, and a shallow annular base that could be historical.

The only preserved collection of excavated material came from Test 1. In addition to pottery, the 12–18 inch level yielded a large point with an expanding stem. The point appears to be Late Archaic.

The only known piece of copper reported from the southern zone came from this site, but is not listed on the site form. Instead, Sayles refers to it in a letter to Gladwin dated July 21, 1933. In the letter, Sayles explained that he was sending (by railroad express service) various records and photographs from Chihuahua, Texas and New Mexico. "One coin from U-5-2 and a copper ornament from I-9-11, which were not packed with the other materials from these sites, are enclosed in this letter." As of 1992, the copper ornament was not part of the Gila Pueblo collections at the Arizona State Museum. Chih I-9-11, the San Juan Site, is the same one that produced the unusual Babícora vessels described in a separate volume of this report, as well as a set of matched flaked stone projectile points.

# **Appendix B**

# **EL ZURDITO PROFILES**

# David A. Phillips, Jr.

Arroyo el Zurdito provided a roughly east-west cut through El Zurdo. By lining up a series of units, it was possible to provide a second extensive cut through the site, at roughly right angles to the first. In 1992 the author drew the resulting large profiles and in 2008 he rendered them, so it should be clear who is to blame for errors. The Zurdito profiles are reproduced here, while the north-south profile will be reproduced in Part 2 of the report (along with descriptions of the associated units).

The south face was by far the longer profile. Like arroyo itself, the profile did not follow a straight line (Table B.1). Instead, the face was hand-cleaned and recorded along a zigzagging level string, which was pulled taut between spikes set into the arroyo wall. The string was leveled using a builder's string level and checked with a transit and stadia rod. The eastings were not grid eastings but distances measured along the level string. Bearings were taken with a Brunton pocket transit and were for "true" north, as estimated from the declination shown on local topographic maps. The stratum designations are discussed in Chapter 3; notes taken directly from the field drawings are summarized in Table B.2.

Disturbance included burrows, only some of which were drawn. These were present along the entire south side profile. In the ranges 395–405, 475–485E, and 505–515 E they were noted as common. In several places, cows had cut into the arroyo as part of their paths through the site.

The north face profile was much shorter, extending from 495 E to 513 E. It was prepared in a similar fashion, and the same stratum notations were used.

Easting	Bearing E/N (comments)
395.0-401.0	78 (west end of profile)
401.0-406.0	96
406.0-413.6	106
413.6-427.0	91
427.0-445.0	79
445.0-452.7	86
452.7-460.6	70
452.7-460.6	70
460.6-465.0	66
465.0-473.0	83
473.0-480.0	96
480.0-489.2	90
480.0-489.2	90
489.2–491.0	170
491.0-495.2	97 (across cow cut)
491.0-500.7	157
500.7-516.0	141
516.0-520.3	141
520.3-533.0	103
533.0-539.8	101 (east end of profile)

 Table B.1. Bearing of the South Face Level String.
Stratum	Description
А	Light tan alluvial deposits (overburden)
A2	Thick band of fine gray silt
A3	Same as A2 (fine gray silt) but slightly darker. A2 grades into A3 (no sharp break from one
	to the other).
В	Midden
	Notes for 395–405 E: at this end of the profile, the cultural staining simply peters
	out; its maximum extent is indicated. The local deposits have very few artifacts and
	charcoal chunks.
	<i>Notes for 405–415 E:</i> west of 415 E, B6 and B7 are probably anthropic soils but
	only B8 is actually midden.
	Notes for 422–425 E: base of B (midden) consists of a thin lens of charcoal lying on
	a surface (top of F).
	Notes for 475–485 E: silt band at top of B was absent from 479 E eastward.
B1	Dark brown, organically stained silt with occasional small angular bits of gravel
B2	Light brown fine silt (finer than B1) with occasional small angular bits of gravel. In 445–
	455 E range, distinction between B1 and B2 was tenuous due to mixing. In 475–485 E
	range, distinction between B1 and B2 was often blurred by disturbance.
B3	Mixed deposit. Alternating coarse angular flood materials and short, thin lenses of gray sit
	with tiny charcoal flecks. Between 468.9 E and 473.0 E, B3 contains multiple lenses of fine
5.1	gray silt, 3 to 4 cm thick at thickest, with tiny flecks of charcoal.
B4	Basal midden deposit. East of 440 E, strongly banded: light and dark brown silt, charcoal,
	ash, coarse sand, in many thin lenses. West of 440 E, the banding becomes much less
	distinctive.
	Notes for 445–455 E: includes many thin lenses that are charcoal or ash rich and
D.5	that usually dip to the east. Overall color is dark brown. Trasn-rich.
B2	Lower midden deposits with strong banding: brown and gray silt, charcoal, wood ash, dark
DC	Soll Description with second second second proving Dark stained but not tracker
B0 D7	Brown still with coarse sand grains. Dark-stained but not trasny.
B/	Brown uniformity line silt. Dark-stained but not trasny.
Bð	Midden: brown silt with coarse sand grains, artifacts, and charcoal lenses
C1	<b>Coarse sand and gravel.</b> Absent from most of profile.
	Lens of light gray mixed silt and coarse sand at the base of C
D	Compact line silt at base of midden. Below C in places.
E	Bedrock. Occurs at lower end of Arroyo el Zurdito.
Г	Sterile (1) stratum consisting of alternating bands of coarse sand and silt, both light gray.
	<i>Notes for 403–413 E</i> : from 415 E westward, F becomes an orange sand-silt mix,
C	and clearly culturally sterile.
G	Gray shit and coarse sand. Culturally sterile.

## Table B.2. Stratum Descriptions for Arroyo el Zurdito, From the Field Drawings.





Figure B.1. South face of Arroyo el Zurdito, from mouth of arroyo (540 m E) to 508 m E.



Figure B.2. South face of Arroyo el Zurdito, from 508 m E to ca. 470 m E.

7.00 mbd

mbd



Figure B.3. South face of Arroyo el Zurdito, from ca. 470 m E to ca. 430 m E.





Figure B.4. South face of Arroyo el Zurdito, from 430 m E to 396 m E.



Figure B.5. Portion of the north face of Arroyo el Zurdito, from 405 m E to 513 m E.