

**THE VIEJO PERIOD IN WEST-CENTRAL CHIHUAHUA, PART 1:  
INTRODUCTION TO THE RESEARCH  
AND DESCRIPTION OF THE QUEVEDO SITE**

By

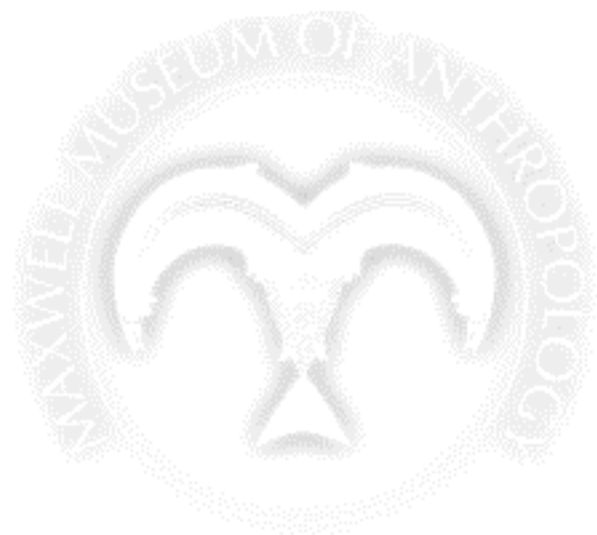
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## TABLE OF CONTENTS

|   | Page |
|---|------|
| List of Figures.....                          | v    |
| List of Tables.....                           | vi   |
| Acknowledgments.....                          | vii  |
| 1. INTRODUCTION.....                          | 1    |
| PAC's Viejo Period Research.....              | 1    |
| The Quevedo Site.....                         | 4    |
| 2. FIELD STUDIES OF THE QUEVEDO SITE.....     | 7    |
| Excavation of Structure 1, 1996 and 1998..... | 7    |
| The 2005 GPR Survey and Testing.....          | 10   |
| Testing in 2007.....                          | 11   |
| The 2008 GPR Survey and Testing.....          | 12   |
| Structure 2.....                              | 12   |
| The 2010 Field Season.....                    | 17   |
| Structure 3.....                              | 20   |
| Structure 4.....                              | 21   |
| 3. ANALYSIS.....                              | 27   |
| The 1996 and 1998 Artifacts.....              | 27   |
| Pottery.....                                  | 27   |
| Flaked Stone.....                             | 31   |
| Ground Stone.....                             | 31   |
| Other Stone Items.....                        | 32   |
| Shell.....                                    | 32   |
| Bone.....                                     | 33   |
| Botanical Remains.....                        | 33   |
| The 2005 Artifacts.....                       | 33   |
| Pottery.....                                  | 33   |
| Other Artifacts.....                          | 34   |
| The Lithic Index.....                         | 35   |
| The 2007 Artifacts.....                       | 35   |
| Pottery.....                                  | 35   |
| Flaked Stone.....                             | 38   |
| Ground Stone.....                             | 38   |
| Shell.....                                    | 39   |
| The 2008 Artifacts.....                       | 39   |
| Pottery.....                                  | 39   |
| Flaked Stone.....                             | 41   |
| Ground Stone.....                             | 41   |

## TABLE OF CONTENTS, *continued*

|  | Page |
|--|------|
| 3. ANALYSIS, <i>continued</i>                                |      |
| The 2008 Artifacts, <i>continued</i>                         |      |
| Shell.....   | 42   |
| The 2010 Artifacts.....                                      | 42   |
| Pottery.....   | 42   |
| Flaked Stone.....  | 55   |
| Ground Stone.....  | 55   |
| Other Artifacts.....   | 57   |
| Botanical Remains.....                                       | 58   |
| 4. RADIOCARBON DATES.....                                    | 59   |
| 5. DISCUSSION.....   | 61   |
| REFERENCES CITED.....  | 63   |
| APPENDIX A. TWO PROBLEMATIC SITES IN THE PICACHO VALLEY..... | 67   |
| CH-252, the Lopez Site.....                                  | 67   |
| Testing in 1999.....   | 68   |
| Testing in 2007.....   | 68   |
| Artifacts.....   | 71   |
| CH-223, the Rock Site.....                                   | 72   |
| Test 96-1.....   | 74   |
| Test 2007-2.....   | 76   |
| Test 2007-3.....   | 77   |
| Test 2007-4.....   | 78   |
| Pottery.....   | 78   |
| Stone Artifacts.....   | 79   |
| Summary and Discussion.....                                  | 81   |
| APPENDIX B. PEDESTRIAN SURVEY OF THE PICACHO VALLEY.....     | 82   |
| APPENDIX C. LÍTICA TALLADA RECUPERADA EN 2010                |      |
| <i>by Tanya Chiykowski</i> .....                             | 85   |

## FIGURES

|  | Page |
|--|------|
| 1. West-central Chihuahua, showing site locations.....         | 2    |
| 2. Location of Ch-146 and the Hacienda San Jerónimo.....       | 3    |
| 3. Location of the Quevedo Site (Ch-218).....                  | 4    |
| 4. Contour map of Ch-218, showing location of Structure 1..... | 6    |
| 5. Initial tracing of the wall of Structure 1 in 1996.....     | 7    |
| 6. Structure 1.....  | 8    |
| 7. Structure 1, construction details.....                      | 9    |
| 8. The 2005 GPR scan of Ch-218 at a depth of 35 cm.....        | 10   |
| 9. Locations of the 2007 tests at Ch-218.....                  | 11   |
| 10. Four tests in 2007.....                                    | 12   |
| 11. Three GPR scans from Ch-218.....                           | 15   |
| 12. Structure 2 after excavation.....                          | 16   |
| 13. Excavation units, 2010.....                                | 17   |
| 14. GPR maps of Ch-218, from 2005.....                         | 18   |
| 15. Structures 3 and 4.....                                    | 19   |
| 16. Structure 3.....   | 20   |
| 17. Structure 4 after excavation.....                          | 21   |
| 18. Wall base details for Structure 4.....                     | 22   |
| 19. Structure 4, main support posts.....                       | 23   |
| 20. Two hearths found in Structure 4.....                      | 23   |
| 21. Field sketch of Feature 19.....                            | 24   |
| 22. Structure 4, Features 1 and 2.....                         | 25   |
| 23. Features 10 through 13 (burned structural wood).....       | 26   |
| 24. Red-slipped sherds.....                                    | 28   |
| 25. White paste sherds.....                                    | 28   |
| 26. Sherds collected in 1998.....                              | 29   |
| 27. Six sherds from the Quevedo site.....                      | 30   |
| 28. Three projectile points.....                               | 31   |
| 29. Piece of welded ash from Structure 1.....                  | 32   |
| 30. Two red-on-brown sherds collected in 2005.....             | 34   |
| 31. Two stone artifacts collected in 2005.....                 | 34   |
| 32. Brownware jar shoulder with broad red bands.....           | 36   |
| 33. Sherds collected in 2007.....                              | 37   |
| 34. Projectile point of fine-grained black basalt.....         | 38   |
| 35. Small stone bowl (?) <i>in situ</i> .....                  | 38   |
| 36. Partly reconstructed vessel from Unit 8, Level 2.....      | 41   |
| 37. Examples of sherds from the 2010 collections.....          | 43   |
| 38. Vermetid bead.....   | 57   |
| 39. Scapula rasp.....  | 57   |

## FIGURES, *continued*

|   | <b>Page</b> |
|---|-------------|
| A.1. Arroyo Picacho area and the location of CH-252.....                | 67          |
| A.2. CH-252.....  | 68          |
| A.3. Plan of CH-252, Feature 2, after excavation.....                   | 69          |
| A.4. CH-252, Feature 8.....   | 69          |
| A.5. Profile of Feature 8, Test 1, showing Levels 1–3.....              | 70          |
| A.6. South bank of arroyo Picacho.....                                  | 70          |
| A.7. Arroyo Picacho and the locations of CH-223 and CH-224.....         | 73          |
| A.8. A “patio wall” at CH-223.....                                      | 73          |
| A.9. Map of CH-223.....   | 74          |
| A.10. CH-223, Test 96-1.....  | 75          |
| A.11. CH-223, Structure A, cleared of vegetation in 1996.....           | 76          |
| A.12. Plan of CH-223, Structure A, with location of Unit 2007-2.....    | 76          |
| A.13. CH-223, Unit 2007-1.....  | 77          |
| A.14. CH-223, Test 3, after excavation.....                             | 78          |
| A.15. An unusual checkerboard design on a black-on-brown sherd.....     | 79          |
| A.16. CH-223, engraved stone.....                                       | 80          |
| <br>B.1. Photomosaic of the Picacho survey area.....                    | <br>83      |
| B.2. PAC 08-4.....  | 84          |
| <br>C.1. Tipo de material por peso.....                                 | <br>85      |
| C.2. Tipo de artefacto por sitio.....                                   | 86          |
| C.3. Algunos artefactos de piedra de la temporada de campo de 2010..... | 88          |

## TABLES

|   | <b>Page</b> |
|---|-------------|
| 1. Quevedo Site Test Units in 2008.....                               | 13          |
| 2. The 1996 and 1998 Sherds.....                                      | 27          |
| 3. Rim Sherds from Structure 1.....                                   | 30          |
| 4. Pottery Collected from Test 1, in 2005.....                        | 33          |
| 5. Pottery Collected in 2007.....                                     | 35          |
| 6. Sherds from Structures 1 and 2.....                                | 39          |
| 7. Sherds from the 2010 Field Season.....                             | 42          |
| 8. Sherds from 2010, by Category and Vessel Part.....                 | 44          |
| 9. “Combination” and “Other” Sherds, 2010.....                        | 44          |
| 10. Percentages of Body Sherds by Level, 2010.....                    | 45          |
| 11. Percentages of Rim Sherds by Level, 2010.....                     | 45          |
| 12. Bowls versus Jars, 2010.....                                      | 46          |
| 13. Estimated Diameters of Vessel Rims by Level, 2010.....            | 47          |
| 14. Body Sherds, 2010.....  | 48          |
| 15. Ground Stone Artifacts, 2010.....                                 | 56          |
| <br>7. Radiocarbon Dates from the Quevedo Site.....                   | <br>34      |
| A.1. CH-252, Surface Pottery from 1996.....                           | 43          |
| A.2. CH-252, Excavated Sherds from 1999.....                          | 43          |
| A.3. CH-223, Sherds from 1996.....                                    | 51          |
| A.4. CH-223, Flaked Stone from 1996.....                              | 52          |
| <br>C.1. Tipo de Material por Conteo.....                             | <br>86      |
| C.2. Provenencia por Sitio de las Herramientas de Piedra Tallada..... | 87          |
| C.3. Herramientas de los Contextos Excavados.....                     | 87          |

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## **Chapter 1**

### **INTRODUCTION**

Between 1990 and 2010, the Proyecto Arqueológico Chihuahua (PAC) completed thirteen field seasons in west-central Chihuahua. The work focused on four geographic settings—the Bustillos basin (where Cuauhtémoc is located), the Santa Clara Valley, the upper Río Santa María, and the Babícora basin (with limited excursions into adjacent areas). Our research straddled the prehistoric cultural boundary between the southern zone of the Chihuahua culture (as Brand [1933] called it; also known as the Casas Grandes culture) and a previously undocumented culture to the south. This was the first major project in west-central Chihuahua since the pioneering work of the early 1900s (see Brand 1933; Carey 1931; Hewett 1908; Kidder 1939; Sayles 1936) and Arturo Guevara Sánchez's work of the 1980s centered in the mountain area to the west (Guevara S. 1984).

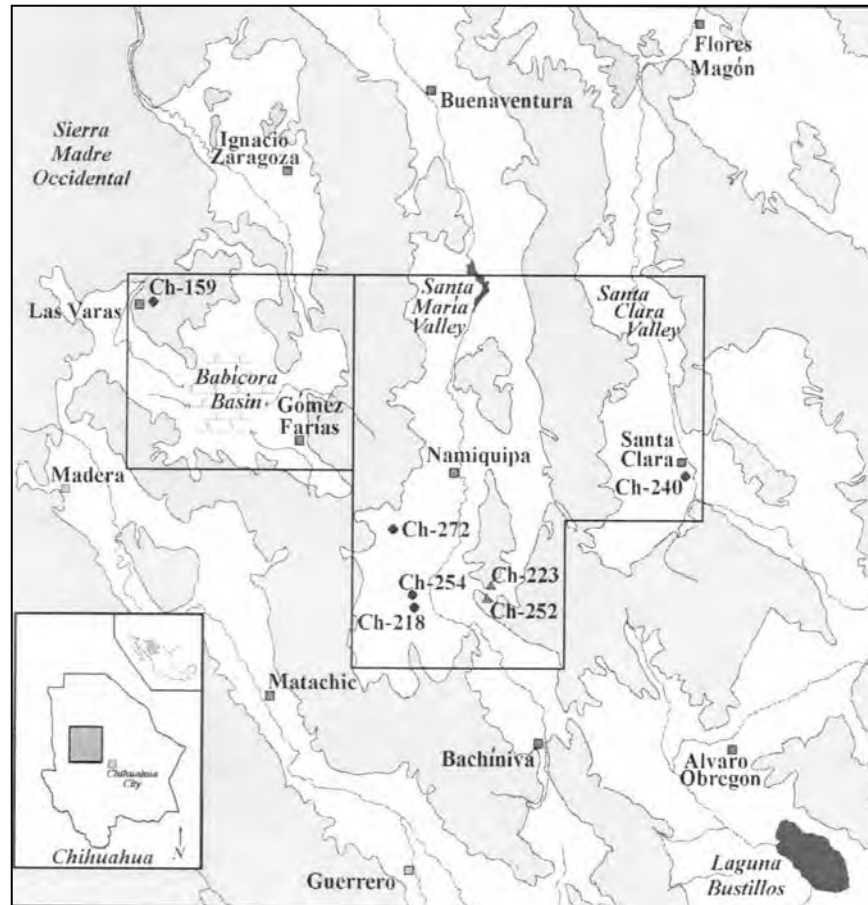
The Chihuahua culture is best known from its largest site, Paquimé or Casas Grandes, some 75 km to 150 km north of the PAC study areas. Charles Di Peso, who led the excavations at Paquimé, created the first comprehensive occupation sequence for the Chihuahua culture area (Di Peso 1974; Di Peso et al. 1974). His Medio period (now dated A.D. 1200–1250 to 1450) included remains dating to the culture's florescence. He and his colleagues also documented earlier (pre-florescent) remains of the same culture, which he assigned to the Viejo period. Di Peso's type sites for the Viejo period were the Convento site and the Los Reyes sites I and II, all near Paquimé. Medio period sites were known to extend as far south as west-central Chihuahua but before our project, no one had found Viejo period remains outside the immediate vicinity of Paquimé. While the PAC worked in sites of both periods, the purpose of this monograph is to introduce the project's Viejo period research (Figure 1) and describe the first site thus investigated (the Quevedo Site, CH-218).

### **PAC's Viejo Period Research**

Crew members visited sites in the Babícora Basin in 1990, and a crew was based in the basin in 1991 and 1992. The focus their efforts, El Zurdo (Ch-159), is primarily a Medio period site, but deep cultural deposits exposed along an arroyo produced pottery and radiocarbon dates from the Viejo period (Hill 1992, Kelley 2008, 2009a, 2009b). No Viejo period structures were found, except for one Perros Bravos style adobe room base. The evidence suggests a fairly continuous occupation of the site from perhaps the 700s until the 1400s.

A second Babícora Basin site (Ch-180, in the Las Varas valley upstream from Las Varas), was also primarily a Medio period site, but we found Viejo period pottery on looters' backdirt.

In 1993 we were able to identify a Viejo period site in the Santa Clara valley. In 1998, after we evaluated our work and the state of archaeology in Chihuahua, we shifted our focus to the Viejo period.



**Figure 1.** West-central Chihuahua, showing site locations.

This monograph describes the first Viejo period site investigated under the new focus, the Quevedo Site (Ch-218), and provides other information on the area (Appendices A and B). A future monograph will describe a second Viejo period site, Calderón (Ch-254).

We also attempted, unsuccessfully, to test a likely Viejo period site that may no longer exist (Figure 2). Ch-146 (San Jerónimo) was first recorded by Donald Brand (1933; 1943). The site was next to the río Santa María and a modern acequia, just east of Ejido Abraham Gonzalez lands and on the east side of the now divided Hacienda San Jerónimo. PAC members visited the site several times and made surface collections, but the land owner at that time would not allow any digging. Based on the reported presence of Mimbres Black-on-white pottery and the observations we made (including the absence of a house mound and Medio period pottery), the site most likely dated to the Viejo period. In 2008, we conducted an extensive GPR survey of the site area, without positive results. The land owner told us that the site had been deep plowed; he believed that the site had been destroyed.



**Figure 2.** Location of Ch-146 and the Hacienda San Jerónimo. Imagery from Google Earth.

The PAC amassed 99 radiocarbon dates, mostly from annual plants to eliminate the “old wood” problem (Schiffer 1986). This suite of dates allows us to address the temporal divide between the Viejo and Medio periods (and the degree of continuity between the two periods). In a sample of 30 pre-Medio radiocarbon dates reported in 2005, 28 had 2 sigma cal (calibrated) age ranges between A.D. 775 and 1290. The extremes of this range most likely “overestimate the actual span of the period, for statistical reasons” (Stewart et al. 2005:176), so our dates are consistent with current estimates that the Medio period began between A.D. 1200 and 1250. In contrast, the other end of the range must be too conservative, in the sense that the Viejo period must have begun before A.D. 775. Presumably the lack of earlier radiocarbon dates reflects our excavation sample—or perhaps the Viejo period started later in the culture’s southern zone.

Since our 2005 paper, the PAC has obtained 19 more dates from Viejo period contexts (Kelley et al. 2012). Using 2 sigma age ranges, the earliest sampled dates to A.D. 970–1040 (probability of 0.97) and the latest to A.D. 1040–1220 (probability of 1.00). The late end of the distribution is based on two nearly identical determinations from site Ch-254. Within the limits of radiocarbon dating (see Stewart et al. 2004, 2005), we see a significant southern zone Viejo period population and a transition from the Viejo to the Medio period involving population continuity and the lack of a chronological hiatus.

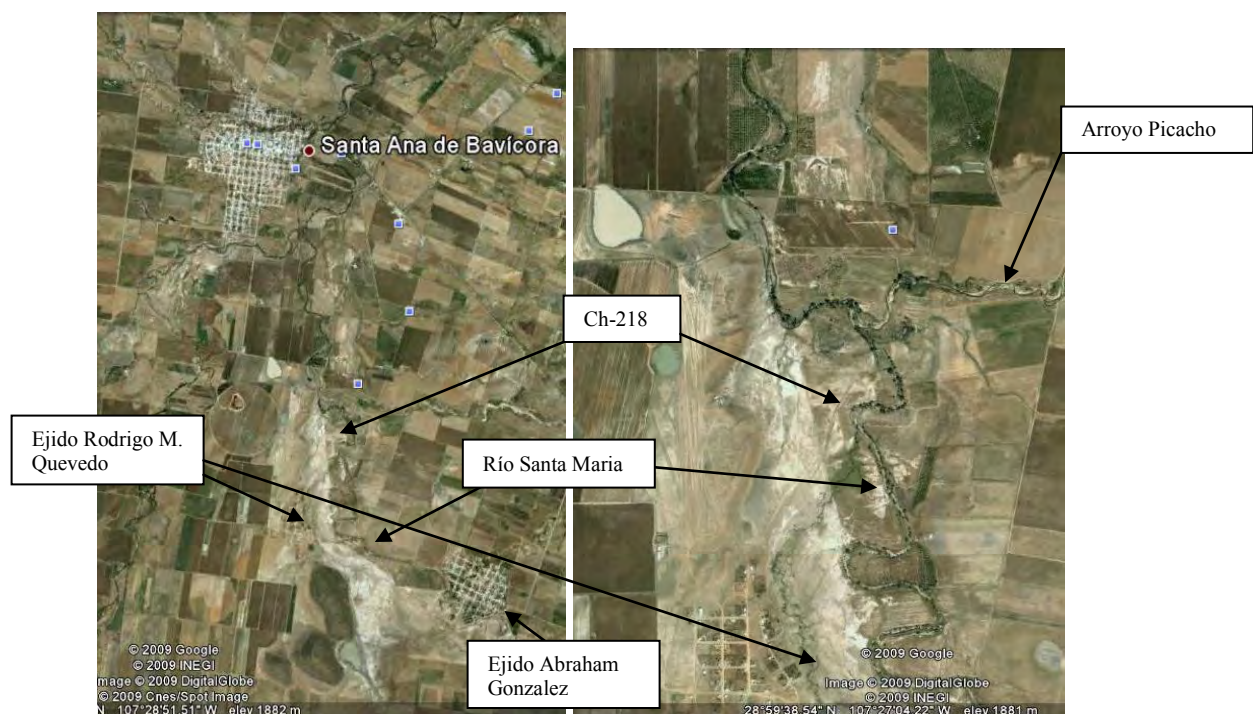
The PAC has shown that the Bustillos basin, south of the Chihuahua culture area, was home to a culture contemporary with—but independent from—the Viejo period of the southern zone (MacWilliams 2001). The La Cruz sites, as they are known, display a *ranchería* settlement pattern, have shallow round pit structures, and have evidence for the use of maize and at least two varieties of bean. Through these sites we have a glimpse of the groups in the lightly

populated areas immediately south of the Chihuahua culture area, east of the Sierra Madre Occidental. Our work on the La Cruz sites there constituted the first sustained look at the region between the Chihuahua culture and Mesoamerica border since J. Charles Kelley and explored the Loma San Gabriel culture of northern Durango and southern Chihuahua (Foster 1978).

La Cruz culture pottery is mostly brown ware (with a few textured and red-on-brown vessels), primarily *ollas* (southern zone Viejo pottery is dominated by bowls). Radiocarbon dates for the La Cruz sites cluster in the cal. A.D. 700–1100 range. Although the La Cruz sites are contemporary with the Viejo period, interaction between the two adjacent areas seems to have been minimal. The Bustillos basin appears to have been abandoned once the Medio period began to the north (MacWilliams and Kelley 2004).

### The Quevedo Site

First recorded in 1991, during PAC's initial surveys in the upper Santa María Valley, the Quevedo Site (Ch-218) is 6 km south of Oscar Soto Maynez on Ejido Rodrigo M. Quevedo. The site is on the 10 m high west terrace of the río Santa María, near the confluence of that river and the arroyo Picacho (Figure 3). There is a clear break between the almost flat terrace and the slope down to the river. The local terrace surface has very shallow soil, underlain (about 30 to 50 cm down) by hard-packed gravel that does not retain moisture. To the west are the arroyo Teseachic and arroyo Pino, which join the Santa María just below Oscar Soto Maynez and which cut off any shallow subsurface water from the sierras to the west.



**Figure 3.** Location of the Quevedo Site (Ch-218). Imagery from Google Earth.

The larger setting of the Quevedo site includes the riparian zone of the main valley and, farther away, the encircling sierras with their oak woodlands and evergreens. We are told that prior to the creation of ejidos and colonias in the 1950s—and before the appearance of tractors and (later) irrigation wells—the valley looked different. The oak woodland almost covered the valley floor.

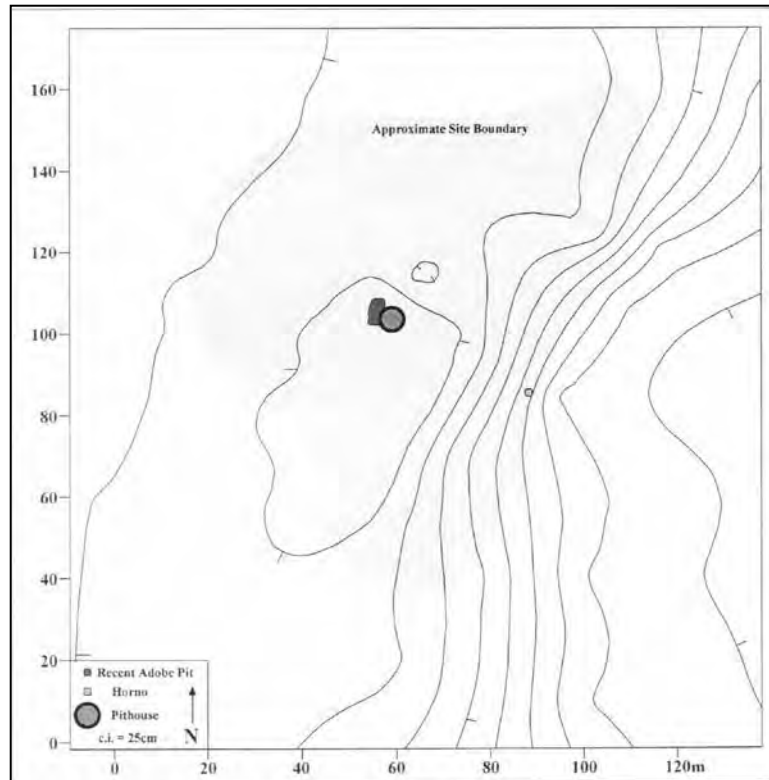
Today, wells provide the water needed for farming and domestic use. In the PAC study area, prehistoric farming communities are consistently found in places where subsurface moisture is likely, and often adjacent to springs. While the Quevedo Site was on a dry, hard-packed terrace, the necessary amenities were nearby. The site is perhaps 100 m from the Santa María (which is farther than for many Viejo period sites). The valley bottom and adjacent slopes would have provided good land for farming. Ground water levels are reported to have dropped drastically in the basin, but ranchers can still provide water for their cattle when the main river bed is dry. They dig down a couple of feet, insert a bottomless bucket or bit of large pipe in the hole, wait a bit, and *voilà!* A watering hole is created.

The site itself has a sparse grass cover interspersed with xeric plants, and the most abundant population of stinging and biting creatures encountered on any site investigated by the PAC. Over the years, we visited and excavated at the site many times. At no time were surface artifacts abundant, and they were rare in excavated contexts as well. We never managed to understand why this site produced so few artifacts, while the Calderón Site (Ch-254) produced so many.

Residents of Oscar Soto Maynez and Ejido Rodrigo M. Quevedo did not know of any modern farming at the Quevedo Site, but the PAC excavations uncovered shallow plow marks indicating that farming was once tried there. People who lived in the area prior to the dissolution of the enormous Hearst hacienda in 1954 told us that Hearst cowboys were allowed to farm small plots along the river to help feed their families at the Hearst Santa María headquarters (San Ana de Babícora, which morphed into the modern colonia town of Oscar Soto Maynez). Our evidence for plowing might date to that period; if so, it is unclear that the effort succeeded.

During initial survey in 1991 a second site, Ch-217, was recorded on the terrace edge some 400 m south of the Quevedo Site. Ch-217 lacked exposures of the subsurface deposits but it was thought to be similar to Ch-218, namely, it had a sparse surface scatter of stone artifacts and plain brown sherds. Subsequent efforts to relocate Ch-217 failed. A large garbage trench excavated across the terrace edge, in the approximate recorded location of Ch-217, showed no evidence of buried cultural deposits.

The Quevedo Site was recorded after Art MacWilliams noticed a section of wall in an adobe borrow pit, in an area of sparse surface artifacts. The only pottery on the site surface was brown ware. In 1996, MacWilliams, Loy Neff, and John Roney were excavating at Ch-156 (a Medio period site) and decided to investigate the adobe wall at the Quevedo Site; they obtained a radiocarbon sample that placed the occupation within the Viejo period. Excavation of Structure 1 (Figure 4) was completed in 1998 by the same group, with the assistance of Rudi Roney. Art MacWilliams (2001) used the site as an example of a southern Viejo period site in his comparative context for the la Cruz sites in the Bustillos basin.



**Figure 4.** Contour map of Ch-218, showing the location of Structure 1. Map prepared by A. C. MacWilliams. From MacWilliams (2001); used with the author's permission.

A Ground Penetrating Radar survey in 2005 was instrumental in our decision to continue work at this site (in 2007, 2008 and 2010). Given the lack of surface indications and sparse artifacts, we were surprised when the GPR scan of a 100 by 100 m area revealed an additional 21 probable pit structures and 11 smaller anomalies. In the next two chapters we present the architecture and field work by field seasons, followed by a discussion of the artifacts, also by field seasons.



## Chapter 2

### FIELD STUDIES AND ARCHITECTURE OF THE QUEVEDO SITE

#### Excavation of Structure 1, 1996 and 1998

In 1996, a 1 by 1 m test pit verified that the modern adobe borrow pit at Ch-218 had cut into a prehistoric house. A well-plastered floor was encountered 40 cm below the surface, along with the top of a circular adobe wall 10 cm below the surface (Figure 5). The wall, some 20 cm thick, was traced around much of the house's circumference. A break in the wall, to the northeast, indicated a possible entrance. The outer diameter of the structure was an estimated 5.5 m. In 1998, excavation of Structure 1 was completed, making it the first Viejo period structure excavated by the PAC (Figure 6).



**Figure 5.** Initial tracing of the wall of Structure 1 in 1996.  
Cerro Picacho is in the background

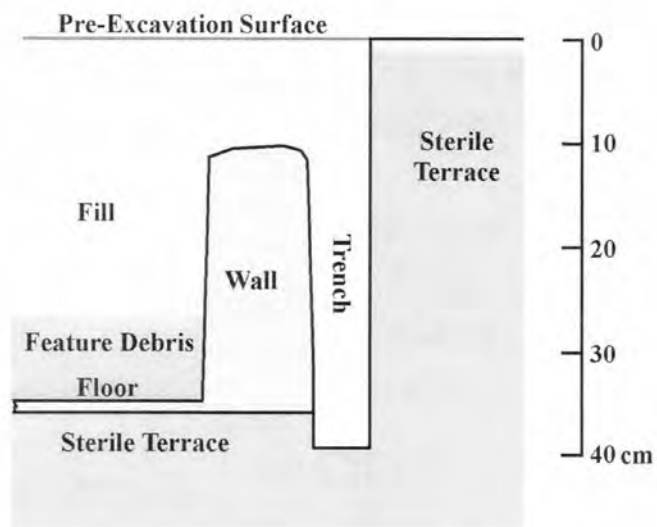
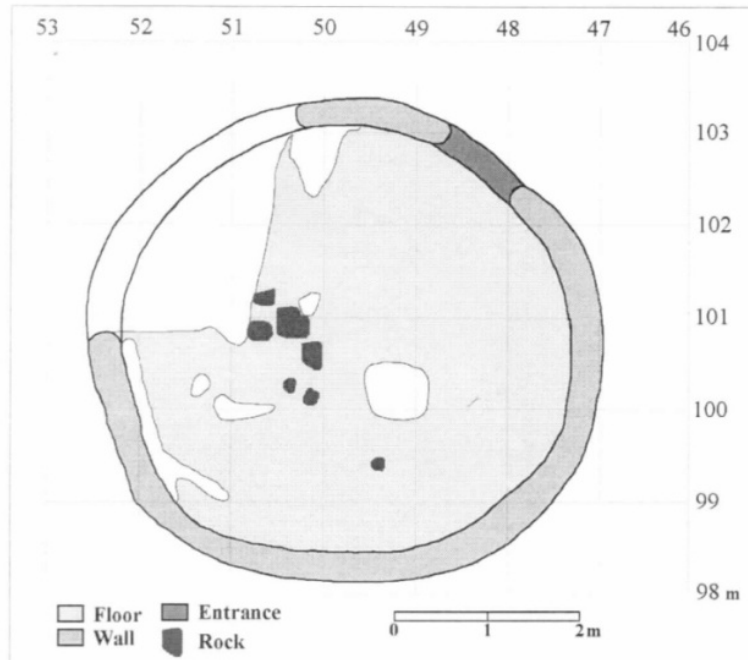


**Figure 6.** Structure 1. Top: looking NNE, near the end of the 1998 excavations. The adobe borrow pit is to the lower left. The entryway is on the far side of the structure, in the left half of the picture. Bottom: A. C. MacWilliams' photo of Structure 1, showing the disturbance by the adobe borrow pit more clearly. From MacWilliams (2001); used with the author's permission.

Figure 7 provides construction details for the structure. The only internal feature was a filled pit, 50 cm in diameter, in the center of the floor. Although a trench was excavated around the exterior of this feature, no external posts or postholes were found. Adobe melt, burned adobe, and burnt *bajareque* (baked daub) provided some hints about the construction of this structure. As is the case for the several circular houses subsequently excavated, or inferred on GPR scans, we do not think that the adobe represents a full height wall. The wall base was placed inside a pit dug into the sterile terrace deposits.

Cultural fill was found in the trench surrounding the adobe wall base, and several pieces of a pot were found at the base of that trench, so the trench was clearly part of the original pit for the structure.



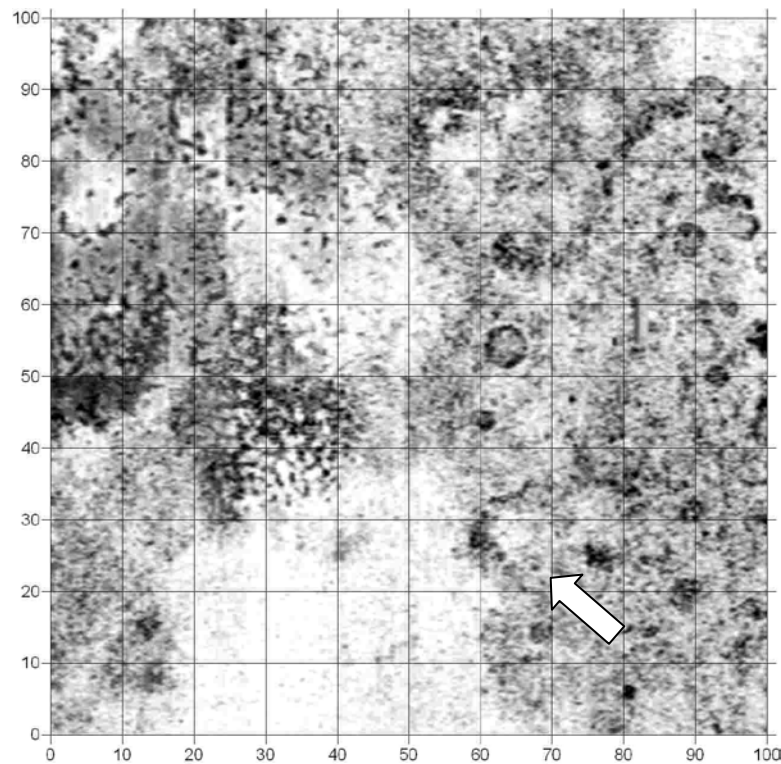


**Figure 7.** Structure 1, construction details. Top: plan. Bottom: partial profile.  
From MacWilliams (2001); used with the author's permission.

### The 2005 GPR Survey and Testing

In 2005, a GPR survey changed our understanding of the Quevedo site. In a 100 by 100 m area, the survey revealed 21 circular anomalies of 4 m or more in diameter, possibly representing structures, and 11 smaller anomalies that could represent storage pits or, more likely, external hearths. Interestingly, neither the excavated and backfilled Structure 1 nor a suspected structure southwest of Structure 1 (noted in 1998) showed up as anomalies in the GPR survey. The site extends beyond the area included in the GPR survey, so the actual number of structures at the site is probably more than the 22 indicated by Structure 1 plus the GPR survey. These results make the Quevedo Site the second-largest known site in the upper Santa María Valley. As was also the case in other sites, the GPR imagery suggests that structures occur at different depths, in turn suggesting a long-term occupation.

In order to verify the GPR results, one anomaly in the southeast quadrant of the site was tested during the 2005 field season (Figure 8). The location for Test 2005-1 was chosen from the 35cm depth imagery. The test measured 1.5 m (north-south) by 0.5 m. An apparent occupation surface was encountered 50 cm below the ground surface. Below that surface the hard, red-purple, gravelly clay of the terrace was encountered. Two small pits extending below the surface were filled with soil mixed with charcoal. In the lowest excavated level, artifacts were rare. The test was a disappointment: it was not clear whether a structure had been exposed. The excavators suspected that they had exposed an extramural surface next to a structure.

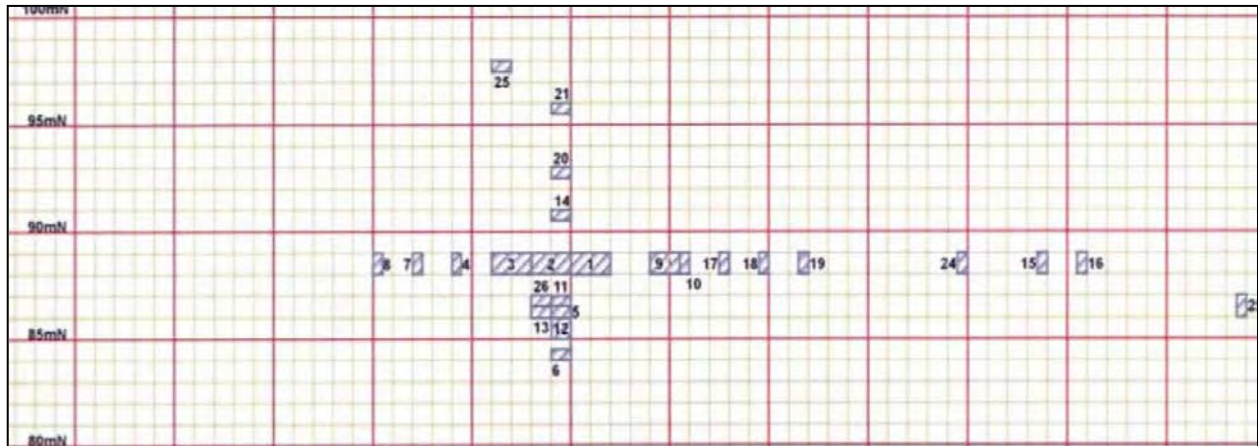


**Figure 8.** The 2005 GPR scan of Ch-218 at a depth of 35 cm. The arrow indicates the anomaly selected for testing (2005 Test 1).

## Testing in 2007

One goal of the 2007 field season was to excavate houses at Ch-218. To this end, we attempted to reestablish the site grid which would allow us to relocate anomalies documented by GPR in 2005. We had left a series of metal stakes on the site to mark grid points, but two years later, only one remained. The new grid, based on the single remaining stake and location of Structure 1, was incorrectly aligned. As a result, several tests to locate a house (as indicated by a GPR anomaly) failed to do so.

The 2007 tests (Figures 9 and 10) were mostly placed in an east-west line between N85 and N90, and between E80 and E125. The N 82 and N 88 lines of what was thought to be the 2005 grid were extended eastward to allow testing on the slope east of the terrace. Tests 1 through 3 were 1 by 2 m units in a line. No evidence of the structure was found, so additional 1 by 1 m and 1 by 0.5 m units were placed nearby. All of these tests were in the northeast quadrant of the site. One other unit, Test 22, was placed in the southern part of the site (at N54–55 and E62–63). Test 22 measured 1 by 0.5 m, and was dug to a depth of 1.0 m, albeit the lower 50 cm of the unit was in the sterile terrace deposits. Cultural remains were sparse; this unit had a lithic index (explained below) of 216 and yielded 31 sherds.



**Figure 9.** Locations of the 2007 tests at Ch-218. Test 22 was outside this area. The north-south grid lines extend from E65 to E125. This is the grid established in 2005, and is skewed compared to the 2005 and 2008 grids.

The results are summarized in Table 1. Three fairly uniform strata extended across the site. Cultural materials (including fragments of local mussel shell) were found in Levels 1 and 2, while Level 3 represented the sterile top of the gravel terrace.

Level 1 was compact and hard, with low organic content and little moisture, and represented an old plow zone. The Munsell color of the soil was 7.5 YR 3/2.



**Figure 10.** Four tests in 2007. Left: Tests 1–3 at the start of excavations. Middle: a concentration of fire-cracked rock in Test 26. Right: in Test 6, a possible pit or posthole extended into sterile Level 3.

Level 2 was less compact than Level 1, was slightly damper, and had some organic staining (primarily from charcoal from with the site occupation). The Munsell color was 7.5 YR 4/3.

Level 3 underlay the cultural deposits; it consisted of a compact, hard reddish gravelly clay with occasional cobbles.

### **The 2008 GPR Survey and Testing**

In 2008, a second GPR survey (aligned to the original 2005 grid, not the skewed 2007 grid) confirmed the imagery of three years earlier. Testing of one anomaly led to the identification of Structure 2. In this case, imagery recorded as coming from depths of 35 and 50 cm actually showed archaeological features in the 10 to 20 cm depth range. Dominic Lacroix (2009) concluded that the vertical error was due to a combination of soil moisture and the composition of the terrace on which the settlement was built (which together affected the speed of the signals). At a different site (Ch-254, Calderón), the depths registered by GPR were much closer to the actual ones.

### **Structure 2**

The anomaly chosen for testing had smaller anomalies around its periphery, suggesting the presence of post holes. This did not prove to be the case. A detailed analysis by Lacroix (2009) indicated that the darker parts of the images were created by differential moisture in the soil, in response to pieces of adobe wall base and rocks (Figure 11). The structure was quite shallow, with the floor encountered at depths of 12 to 15 cm (Figure 12), contrary to the depths provided of the GPR imagery.

**Table 1. Quevedo Site Test Units in 2008.**

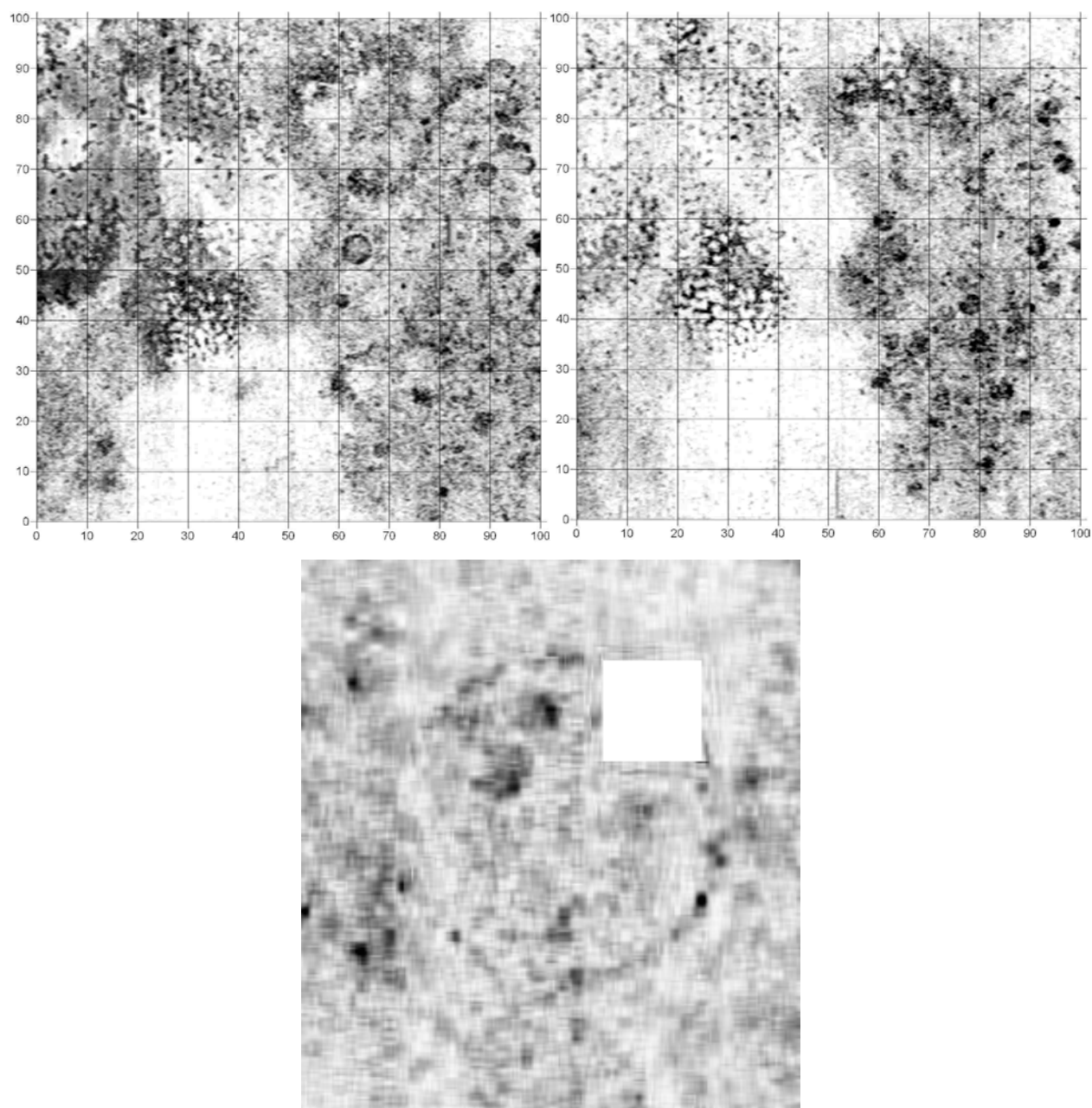
*“Lithic index” refers to the estimated number of flaked stone artifacts, normalized to 1 m<sup>3</sup>.*

| Test No. | Size of unit         | Level 1 depth (cm), Comments | Level 2 depth (cm), Comments    | Top of Level 3 (cm) | Unit Comments  | Lithic Index |
|----------|----------------------|------------------------------|---------------------------------|---------------------|--|--------------|
| 1        | 2 m E/W<br>1 m N/S   | 0–30/37, shell               | 30/37–40, shell                 | 40                  | Small concentration of ash, 20 cm in diameter and 5 cm thick   | 33.8         |
| 2        | 1 m E/W<br>2 m N/S   | 0–20E, 0–25W, shell; axe     | 20/25–35; less shell than in L1 | 35                  | Rodent hole began at 20 cm BS and ran along interface of Levels 1 and 2. One of more artifact rich units. <i>Olivella</i> bead found in Level 2. | 539          |
| 3        | 1 m E/W<br>2 m N/S   | 0–20E, 0–25W, shell          | 20/25–35, shell                 | 35                  | Rodent hole at 20–24 cm BS ran along interface of Levels 1 and 2.  | 256          |
| 4        | 0.5 m E/W<br>1 m N/S | 0–30, shell                  | 30–41, shell                    | 41                  | Lowest artifact density of any of the units  | 14.2         |
| 5        | 1 m E/W<br>0.5 m N/S | 0–7N, 0–12S                  | 7–35N, 12–36S                   | 35–36               | High artifact density. A rodent hole extended the length of the unit in the middle of Level 2.   | 566.2        |
| 6        | 1 m E/W<br>0.5 m N/S | 0–2E, 0–35W, small rocks     | 2–37E, 35–37W                   | 35–37               | Low artifact density. Strata tilted to W. A possible post hole or pit extended into Level 3.   | 0            |
| 7        | 0.5 m E/W<br>1 m N/S | 0–5SE, 0–12NE, shell         | 5–25SE, 12–30NE, shell          | 25–30               | Low artifact density. Strata tilted to W.  | 33.6         |
| 8        | 0.5 m E/W<br>1 m N/S | 0–1N, 0–17S, shell, rocks    | 15–26N, 17–43SE                 | 26–43               | Two rodent holes along the interface of Levels 1 and 2. Surface of Level 3 uneven.   | 72.8         |
| 9        | 0.5 m E/W<br>1 m N/S | 0–15/25                      | 15/25–40                        | 40                  | Low artifact density. Rodent hole along interface of Levels 1 and 2.   | 216          |
| 10       | 0.5 m E/W<br>1 m N/S | 0–30, shell, small rocks     | 30–40                           | 40                  | Low artifact density. Rodent hole along interface of Levels 1 and 2.   | 40           |
| 11       | 1 m E/W<br>0.5 m N/S | 0–20/30, shell               | 20/30–30/35                     | 30–35               | Rodent hole in Level 1. A different rodent hole ran from Level 1 into Level 3. Few artifacts. Concentration of mussel shells in Level 2.         | 294          |
| 12       | 1 m E/W<br>0.5 m N/S | 0–22                         | 22–33/39                        | 33–39               | <i>Olivella</i> shell (Lot 2562)   | 200          |
| 13       | 1 m E/W<br>0.5 m N/S | 0–22, shell                  | 22–30/32                        | 30–32               | No shell in Level 2  | 264.6        |
| 14       | 1 m E/W<br>0.5 m N/S | 0–20, shell                  | 20–32                           | 32                  | No stone artifacts. Dispersed shell fragments.   | 0            |

**Table 1. Quevedo Site Test Units in 2008.**

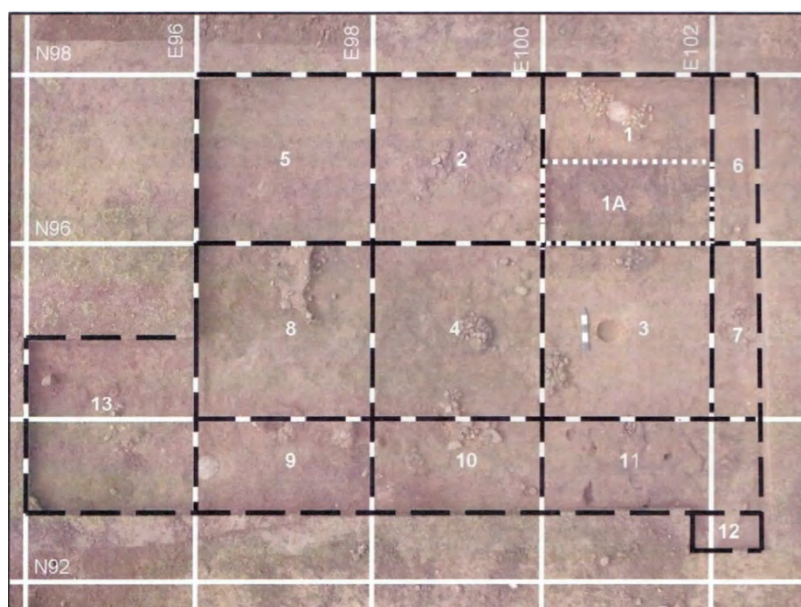
*“Lithic index” refers to the estimated number of flaked stone artifacts, normalized to 1 m<sup>3</sup>.*

| Test No. | Size of unit         | Level 1 depth (cm), Comments | Level 2 depth (cm), Comments       | Top of Level 3 (cm) | Unit Comments   | Lithic Index |
|----------|----------------------|------------------------------|------------------------------------|---------------------|---|--------------|
| 15       | 0.5 m E/W<br>1 m N/S | 0–15, shell                  | 15–26, small rocks, abundant shell | 26                  | Low artifact density  | 146.3        |
| 16       | 0.5 m E/W<br>1 m N/S | 0–20/30, FCR, charcoal       | 20–30                              | 20–30               | Low artifact density. Level 2 was divided into 2a and 2b, the latter with cobbles of “ <i>calcio</i> .” Level 2 was discontinuous. The Level 3 surface was quite irregular. | 107.1        |
| 17       | 0.5 m E/W<br>1 m N/S | 0–18S, 0–20N                 | 18–25S, 20–30N                     | 25–30               | Low artifact density  | ?            |
| 18       | 0.5 m E/W<br>1 m N/S | 0–20                         | 20–25/30                           | 25–30               | Low artifact density  | 72.6         |
| 19       | 0.5 m E/W<br>1 m N/S | 0–12N, 0–15S                 | 12–35N, 15–35S                     | 35                  | Charcoal flecks in Level 1.   | 119.7        |
| 20       | 1 m E/W<br>0.5 m N/S | 0–5                          | 5–20SW,<br>5–25SE                  | 20–25               | Low artifact density  | 42           |
| 21       | 1 m E/W<br>0.5 m N/S | 0–15SE,<br>0–20SW            | 15–25SE,<br>20–35SW                | 25–35               | Two rodent holes in SW corner of unit, in Level 2.  | 15           |
| 22       | 0.5 m E/W<br>1 m N/S | 0–35/40                      | 35/40–45/50                        | 45–50               | Excavated to 1m BS; sterile gravelly red terrace deposits began 45–50 cm BS.  | 216          |
| 23       | 0.5 m E/W<br>1 m N/S | ?                            | ?                                  | ?                   | Easternmost of the tests, on the slope east of the terrace. Few artifacts (28 sherds).  | ?            |
| 24       | 0.5 m E/W<br>1 m N/S | 0–15N, 0–25S                 | See unit comments                  | 25                  | Level 2 pinched out in S half, leaving Level 1 sitting on Level 3. Low artifact density.  | 210.6        |
| 25       | 1 m E/W<br>0.5 m N/S | 0–10/15                      | 10/15–12/17                        | 12–17               | Northernmost test unit. Low artifact density.   | 237.5        |
| 26       | 1 m E/W<br>0.5 m N/S | 0–20, shell                  | 20–35/40                           | 35–40               | One rodent hole in Level 1; two others at the interface of Levels 2 and 3. A mussel shell found 28 cm BS in Level 2. Unit included a cluster of FCR.                        | 226.8        |



**Figure 11.** Three GPR scans from Ch-218. Top left: recorded depth of 35 cm. Top right: recorded depth of 50 cm. Structure 2, selected for testing, is the circular anomaly in the upper northeast corner, at 90N 90E. Bottom: GPR scan of Structure 2 prior to excavation, showing a test pit in the upper right quadrant. The adobe wall base and the fire pit (just below the 1 by 1 m test) are identifiable in the image.





**Figure 12.** Structure 2 after excavation. Top: note the southeast portion of the adobe wall base in the lower right corner of the excavation, and the fire pit to the right of the north arrow. Bottom: the same area, with the site grid superimposed.

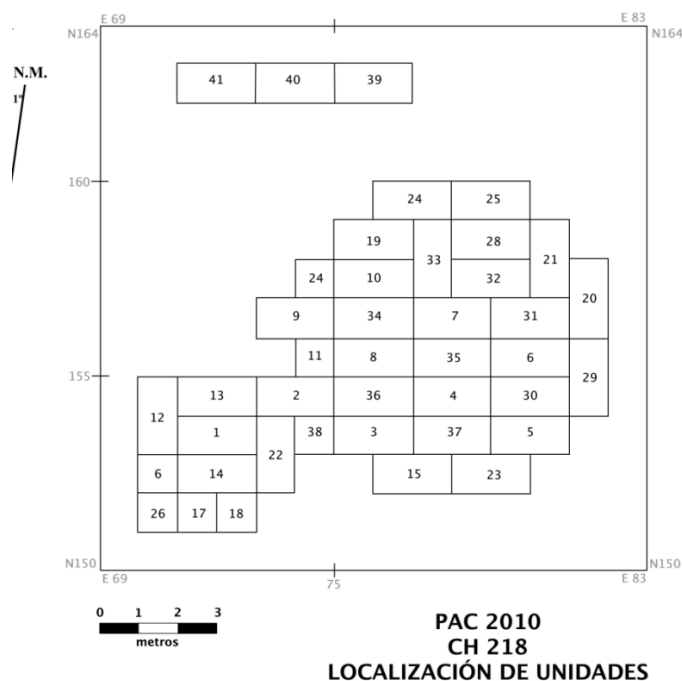


The estimated diameter of the rounded structure is 6 m, making it larger than Structure 1. The curving adobe wall base seen in Figure 12 is assumed to have extended around the entire circumference of the structure, as is indicated intermittently on the GPR imagery. No internal posts were identified. The floor was not well preserved, or had not been fully plastered. Floor plaster was best preserved around the fire pit. The latter was a shallow, plastered, basin-shaped oval pit, 25 by 30 cm across and 5 cm deep at the center. The top of the fire pit was flush with the floor (i.e., was not collared).

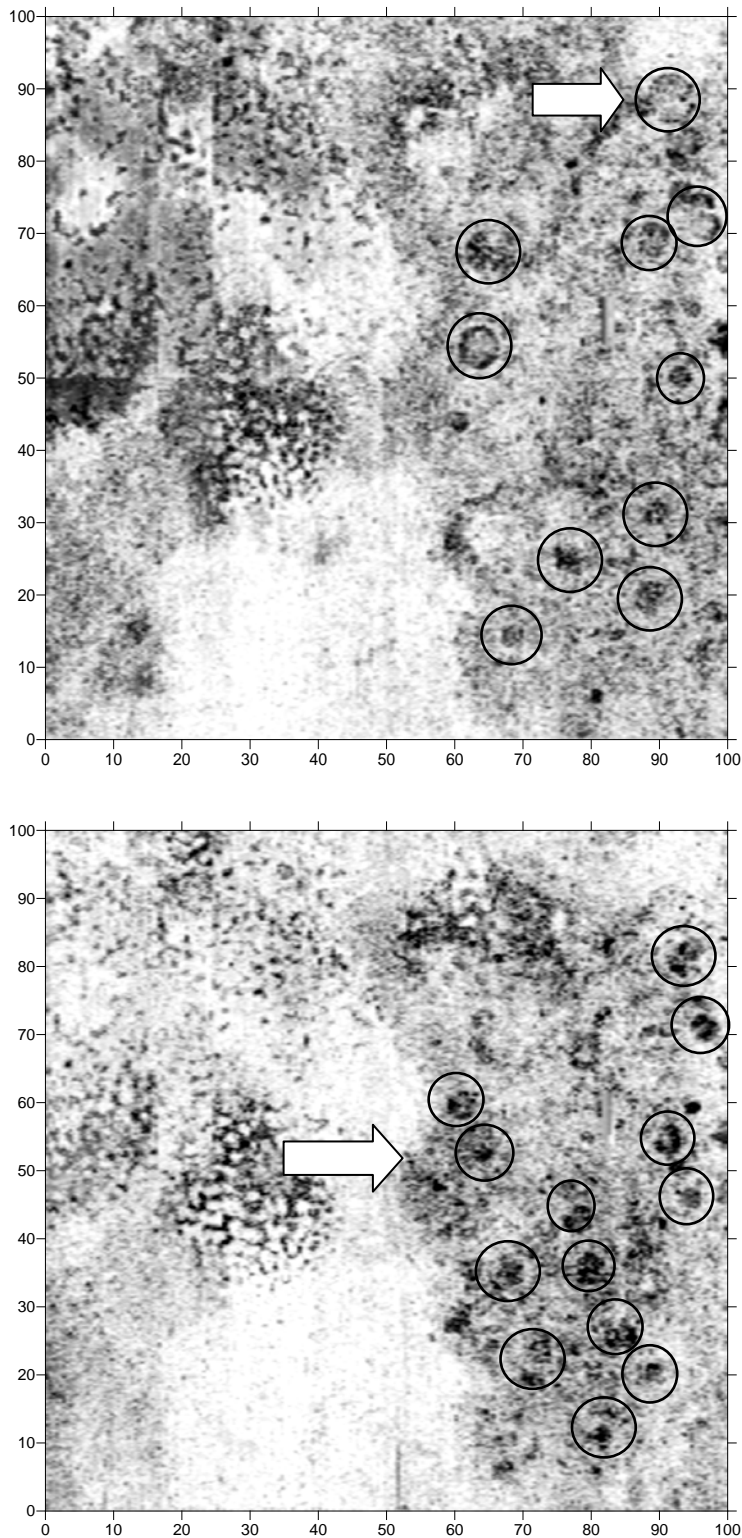
Several sherds of a crushed pot were found on or just above the floor in Unit 8. Scatters of rocks and adobe fragments at and above floor level were the only other recorded contents of the structure.

### The 2010 Field Season

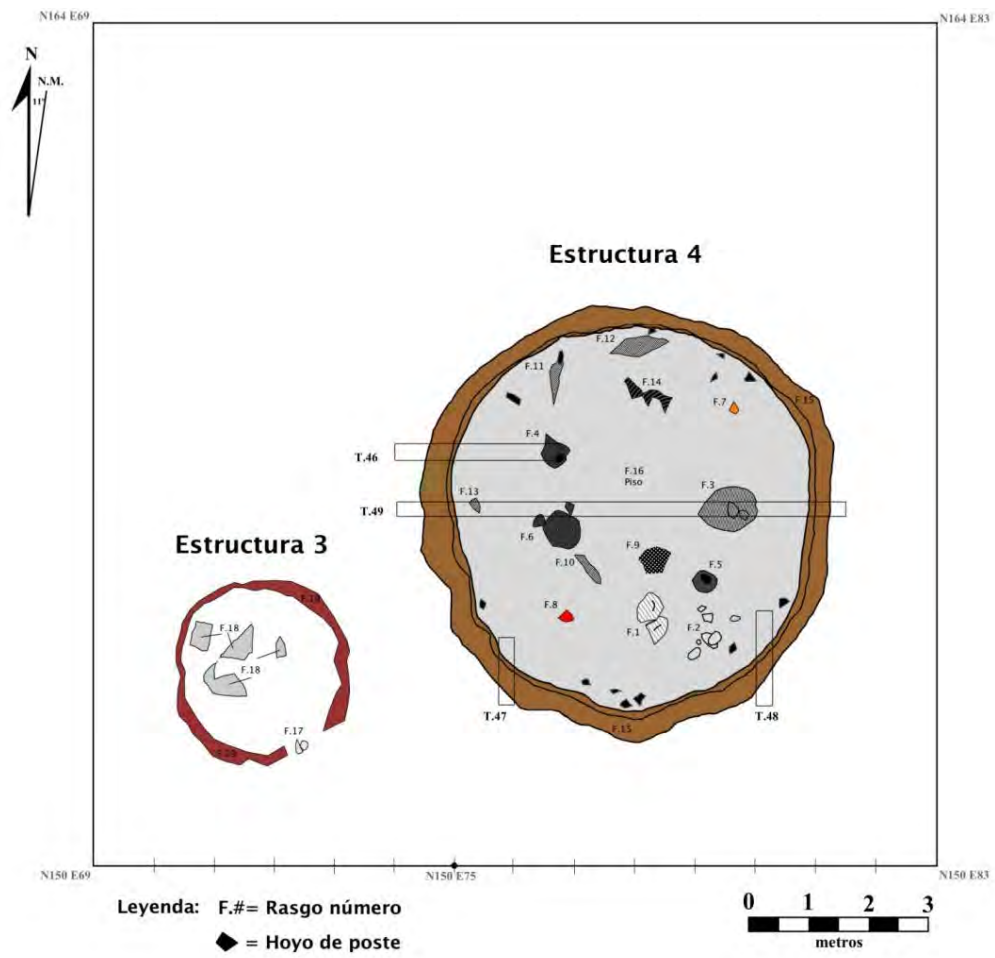
Figure 13 shows the 2010 excavation units at the Quevedo Site. Anomalies on the 2005 and 2008 GPR scans, in the southeast quadrant of the site, were targeted for excavation in 2010 (Figure 14). We anticipated finding two domestic structures of roughly equal size. One anomaly proved to be a structure but testing of the second anomaly, north and west of the first, failed to locate a second structure. Initial testing did reveal a small circular structure southwest of the first one (Figure 15), causing us to re-examine the GPR scans and note a small anomaly in that location. The only previous excavation of a small anomaly had been at the Calderon site; it turned out to be an multi-layered external hearth. This ground-truthing of the GPR scans indicates that not all circular anomalies are houses and that more small anomalies need to be investigated.



**Figure 13.** Excavation units, 2010.



**Figure 14.** GPR maps of Ch-218, from 2005. Top: at a depth of 0.35 m. Bottom: at a depth of 0.45 m. Anomalies interpreted as houses are circled. Structure 2 is indicated by the top arrow, while Structures 3 and 4 are indicated by the bottom arrow.



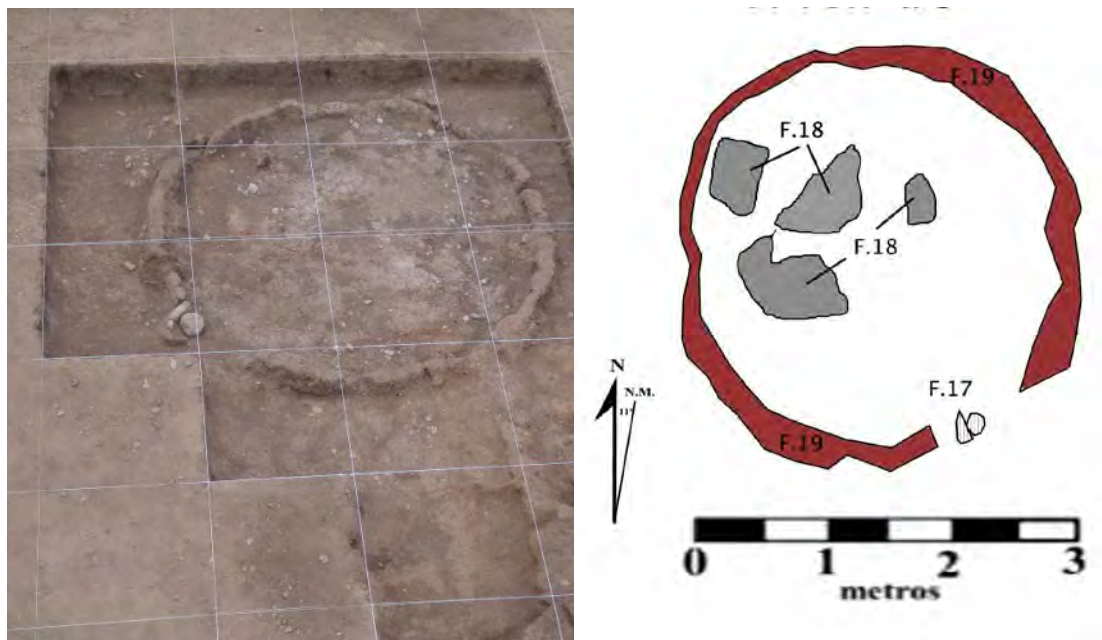
**Figure 15.** Structures 3 and 4. Top: photograph of the excavated structures. Bottom: Plan of the structures.

The circular outline of Structure 4 on the 2005 GPR imagery was thought to indicate an adobe wall base surrounding a plastered or hard, compact floor, as had been the case in all the previously excavated examples. The smaller anomaly was noted but not identified as a potential structure. Upon excavation, the circular wall bases of both Structures 3 and 4 proved not to be adobe; instead they were local soil mixed with water, *lodo* (mud), not strong enough to be either straight or tall. This was unexpected because two previously excavated houses at this site had adobe wall bases (like those at Ch-254, for example) and we could detect no differences in the GPR imagery for the two kinds of bases.

Whether the wall bases were adobe or *lodo*, construction began with the excavation of a pit larger than the intended structure. The circular wall base was created, and the portion of the pit outside that wall base was backfilled. A subfloor was laid on the base of the pit, inside the circular wall, creating a slightly concave surface that lipped up against the lower portion of the wall base. This subfloor was then covered with a earth plaster or plaster-like mix to create the actual floor (Figure 16). The upper walls of the structure were, presumably, wattle and daub.

### Structure 3

Measuring 2.5 m east-west by 2.75 m north-south, this almost circular structure contained patches of floor plaster (Figure 16). No internal features or artifacts were found on the floor, and no post holes were found either inside or outside the structure. The nature of the superstructure could not be determined.



**Figure 16.** Structure 3. Left: photograph after excavation. Right: plan, showing the patches of plaster floor (Feature 18).



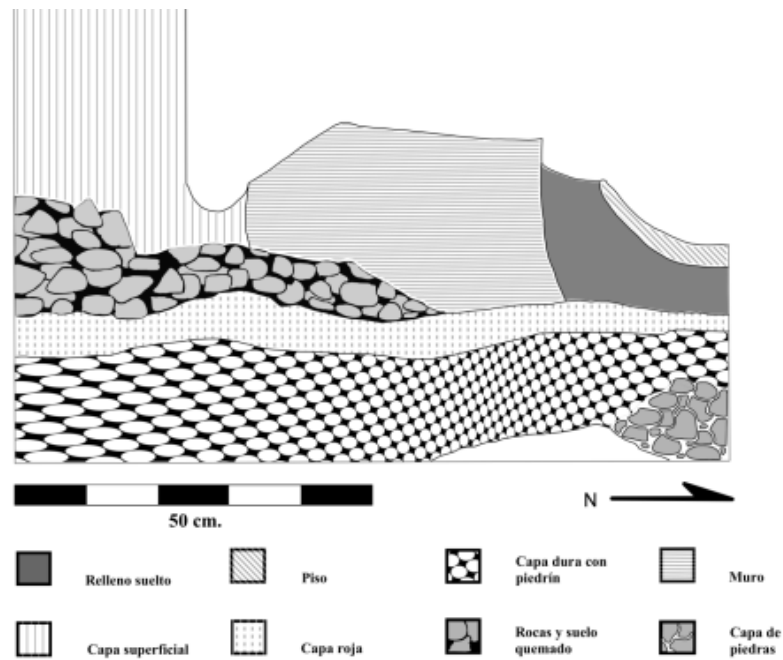
Structure 3 appears to have been a storehouse next to a domicile (Structure 4). This structure, along with a rectangular room full of crushed pots containing food (discovered in the Santa Clara Valley in 2010), sent our thinking about Viejo period food storage in a new direction.

#### **Structure 4**

Measuring 6.25 m east-west and 6.50 m north-south, this almost circular structure had a floor found 39 to 42 cm below the surface (Figure 17). The floor was slightly dish-shaped, being deepest toward the center of the structure and sloping up to the plastered side walls. The structure was destroyed by fire; given the artifacts found on the floor, the structure was in use when it burned. Twenty features (architectural and artifact clusters) were identified and provide clues regarding construction techniques and work spaces within the structure. Figure 18 shows details of the wall base for Structure 4.



**Figure 17.** Structure 4 after excavation. North is to the top of the photograph.



**Figure 18.** Wall base details for Structure 4. Top: photograph of the wall. Bottom: profile from the southeast section of the structure.

Two support posts (Features 4 and 5; Figure 19) were set in the northwest (F. 4) and southeast (F. 5) sectors of the house—a general orientation that echoes that of Structure 5 at Ch-254 (and houses in the study area in general). The two main posts were pine, presumably obtained from the sierra to the west. Eleven small holes, presumably for wall posts, were found at irregular intervals around the interior of the wall. The two main posts and small wall posts provide a good sense of the superstructure, including vertical walls lower down and a roof with a ridgeline.





**Figure 19.** Structure 4, main support posts. Left: Feature 4 (NW). Right: Feature 5 (SE).

Structure 4 included two hearths (Figure 20). Feature 3 was found near the east wall, roughly along the east-west midline for the structure. This hearth was defined as a burned area on the floor, with two large cobbles set along its east edge. An abundance of charcoal was found within an 81 by 79 cm area. At the center of the feature was burned ash surrounded by fire-hardened, reddened deposits.

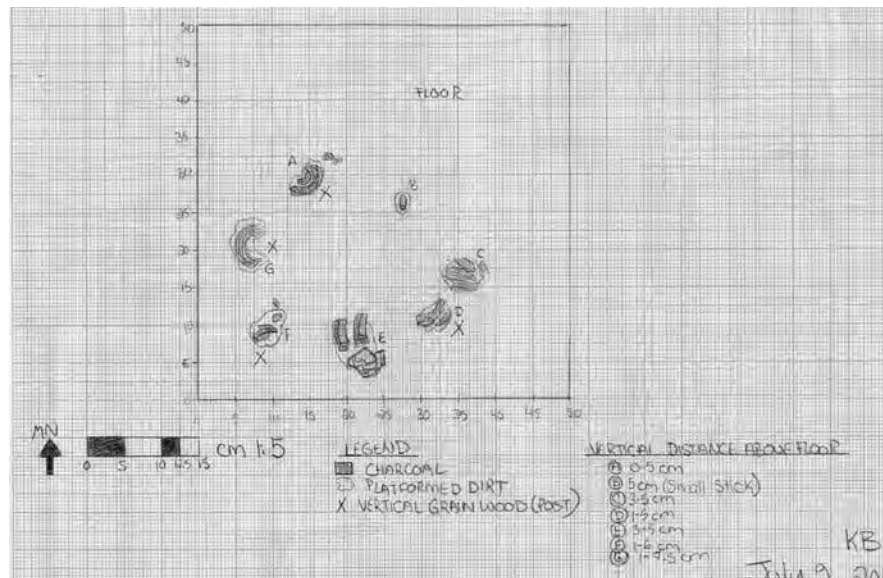


**Figure 20.** Two hearths found in Structure 4. Left: Feature 3 (E). Right: Feature 6 (W).

The second hearth (Feature 6) was 2 m in from the west wall. Given our experience at Ch-218 and Ch-254, this was an unusual location for a hearth—all others have been found in the northeast quadrants of the houses. Feature 6 was a collared circular fire pit. The collar measured 78 by 75 cm (exterior dimensions) and was 10 cm thick. The fire pit itself was 55 cm in diameter—unusually large for the southern zone. This hearth had been plastered, but much of the

plaster had been broken up. A fire-cracked rock plastered into the floor next to the hearth's northern margin, could have served as hearth furniture. An oval mano lay just outside the southeast edge of the hearth.

Feature 9 consisted of six small posts in a rough hexagon pattern, enclosing an area 36 cm in diameter (Figure 21). Located just west and north of the southeast main support post (Feature 5), the posts may have been supports for a shelf or table.

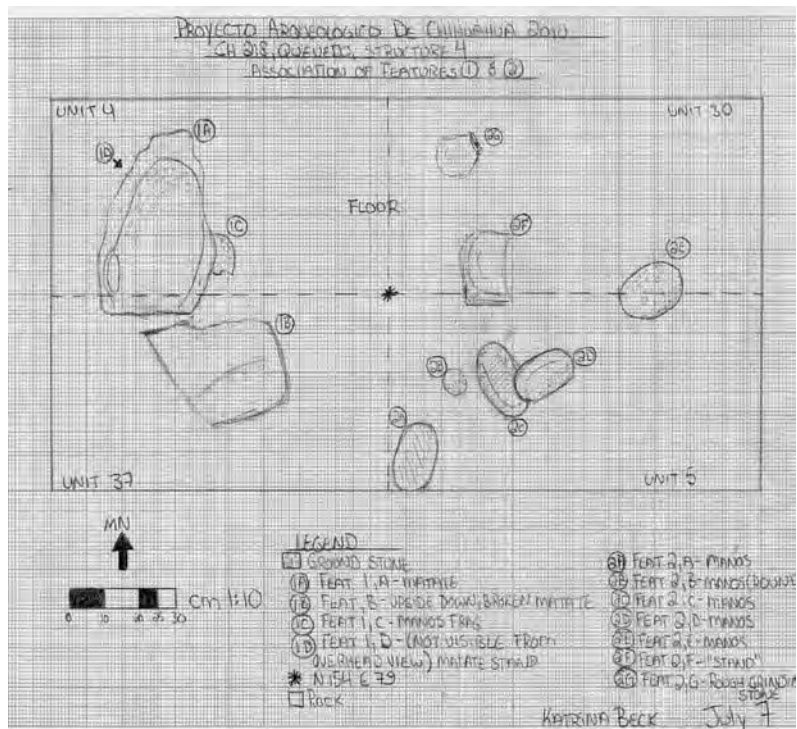


**Figure 21.** Field sketch of Feature 19.

Feature 14 was the partial base of a fixed storage feature in the northern part of the house (at N157.70 E79.50) covering 65 by 52 cm area, at a depth of 39 cm below surface (Figure 20). *Bajareque* and a large amount of long fibers were used to create a circular base plastered into the floor. Although we had not recognized such storage features in previous years, two were identified in 2010. The second one found that year was in the storage house excavated at Ch-240 in the Santa Clara valley. David Phillips (personal communication, 2013) once saw an out-of-context example with a volume of perhaps 50 liters.

In addition to these architectural features, a number of artifact clusters on the floor appeared to be *in situ*—part of the evidence that the structure had burned while in use. The artifact clusters were given feature numbers. One such area, recorded as Features 1 and 2 (also as A-1 and B-2), was in the southeast sector of the house near the southeast main support post (Figure 20). Feature 1 was a metate set at a convenient angle for grinding, with a stone shim at the rear of the metate to raise and stabilize it. This metate was mostly in Unit 4, with one end extending into Unit 37. A flat mano was found next to the metate. Nearby, Feature 2 (in Units 5 and 30) consisted of a cluster of four well-ground manos, a roughly ground mano, and an upright stone. A broken metate in Unit 37 was positioned on its side south of the complete metate, and could have served as house furniture related to the meal-grinding area.





**Figure 22.** Structure 4, Features 1 and 2. Top: field sketch. Bottom: photograph. These features were also designated A-1 and B-2. Unit 4 contained the whole metate, Unit 30 contained the southeast main support post and a mano fragment, and Unit 5 contained four manos. The upright stone straddled the line between Units 30 and 5, and the metate on its side was in Unit 37.

Features 7 and 8 were clusters of sherds. Feature 7 was in the northern part of the house and included seven sherds (four plain, three fine-line red-on-brown) from a single red-on brown vessel. The sherds were 1 m from the north wall. Feature 8 was in the southern part of the house and consisted of eight sherds from a Mata Corrugated jar (six plain sherds, one corrugated sherd, and one corrugated sherd with a red line design. All of the sherds designated as Feature 8 were found together at N 154 E77 in Unit 4 (Lot 4610).

Burned wood from fallen posts and roof beams were documented as Features 10 through 13 (Figure 23). The amount of burned structural debris, combined with the floor assemblage, is our evidence that the structure burned while in use. The distribution of the burned wood, as well as of the burned and darkened bajareque, indicates that when the structure burned, it collapsed to the west, with some of the superstructure debris falling outside the pit limits.



**Figure 23.** Features 10 through 13 (burned structural wood).

### Chapter 3

### ANALYSIS

#### The 1996 And 1998 Artifacts

##### Pottery

The first collections from Ch-218 were made in 1991 and consisted entirely of undecorated brownware sherds. The 1996 and 1998 pottery from the site represents the first excavated Viejo period pottery obtained by the PAC, thus our practical introduction to Viejo period pottery. The Viejo period sample was augmented by surface collections from Ch-218 and Ch-254, also obtained in 1996 and 1998.

We treated the sherds from 1996 and 1998 as a single collection (Table 2), as they are mostly from the same structure (only 43 of the 1996 sherds and 143 from the 1998 sherds are from surface collections).

**Table 2. The 1996 and 1998 Sherds.**

| Years   | Undec. | Black | Red | R/Br | Text. | Other | Total | Weight (grams) |
|---------|--------|-------|-----|------|-------|-------|-------|----------------|
| 1996    | 430    | 12    | 11  | 39   | 59    | 30    | 581   | 2944           |
| 1998    | 721    | 4     | 28  | 37   | 106   | 42    | 938   | 5294           |
| Total   | 1151   | 16    | 39  | 76   | 165   | 72    | 1519  | 8238           |
| Percent | 75.8   | 1.1   | 2.6 | 5.0  | 10.9  | 4.7   |       |                |

Within the largest group, undecorated sherds, one had a 1.25 cm thick base. Another had what appeared to be a squared version of an annular base. A rim sherd and 15 body sherds of a small blackened brown jar were found at the base of the exterior trench around Structure 1 (Lot 8115).

Polished black sherds, or at least sherds with one polished black surface (the opposite surface could be brown) are outnumbered by the red-slipped sherds, in contrast to percentages at Ch-254. The four black sherds from the 1998 collection are from the same small polished black bowl, and were found together just above the floor (in Level 3 of 101N 49W, at the north end of the floor). The more numerous polished black sherds from 1998 were concentrated in middle and lower fill, or on the floor, in units in the middle and northern parts of the room. One bowl sherd with a polished black exterior and a polished dark brown interior is estimated to have had a diameter of 24 cm, making it an unusually large bowl.

Red-slipped sherds were unusually common for a Viejo period site, and included sherds with slipped interiors, slipped exteriors, or both. When a vessel was slipped on one side, the red slip could be carried over the rim onto the other surface. This could cause minor classification problems, as in the case of two sherds that were refitted to reveal a broad interior band of red slip



carried from the bowl exterior over the rim (Figure 24). Before the two sherds were fitted together, the smaller of the two was classified as the rim from a bowl with red slip on both surfaces.



**Figure 24.** Red-slipped sherds. Left: rim on left has a broad red band on the interior, carried over from the exterior. Rim on the right has a polished red interior (Lot 8100).  
Right: exterior of the conjoined sherds.

The Other/Combo<sup>1</sup> category from 1996 includes eight white paste sherds (Figure 25), three white corrugated, and two whitish sherds with red lips and a white corrugated with a red lip, as well as eight sherds described as a very light cream color.



**Figure 25.** White paste sherds. Left: two sherds from 1998. Right: white paste and white surface sherd with faded thin red lines on the interior.

White and very light colored sherds in undecorated, textured, and red-on-white are not common but are particularly striking in the collections from Ch-218 and Ch-254. The 1998 Other assemblage includes 14 of the white paste sherds and three red-on-white sherds (Figures 25 and 26), as well as other very light-colored sherds.

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<sup>1</sup> Those not familiar with the project's analytical categories for pottery would do well to review its report on El Zurdo (Kelley 2008, 2009a, 2009b).



**Figure 26.** Sherds collected in 1998. Left: red-on-brown sherd with a fine line design. Right: red-on-white sherd.

The variants within the white or whitish sherds indicate that the whitish paste was used for otherwise undecorated, red-on-white, partially corrugated and red-on-corrugated vessels. It is not clear whether light-colored pastes are part of a continuum with the whitish sherds at one end and the tans and various browns the other, or if they should be grouped with the whitish sherds.

The 1996 Other/Combo category also included a sherd described as having “a band of the slip removed” (which we now interpret as being an example of burned out paint), a sherd of Mata Red-on-brown textured, and three sherds with red paint over corrugations. From the 1998 collections, there were three black-on-brown sherds (one, unusually, with a large, blocky black triangular design), two red-on-gray sherds, two classic examples of Mata Polychrome, two sherds with thin-line Mata designs on very light backgrounds, one sherd with burned out paint, a sherd with a black-on-red-on-dark brown design, a textured rim sherd with red paint over the corrugations, textured rim sherds with red lips, and a bowl sherd with an incised exterior and a red-slipped interior.

One large bowl rim sherd in Lot 8100 (101N 48W, L2) is best placed in Leal Red-on-brown. The sherd had two red framing lines below the rim, and pendant groups of vertical red lines separated by pendant angled lines on the interior of the bowl. Other red-on-brown sherds had splotchy and patchy red paint, or medium to broad lines. Most of the Red-on-brown sherds lack attributes that place them in a defined type, and can be regarded as “generic.”

Figure 27 provides additional photographs of Viejo period sherds from the Quevedo site. Table 3 lists the rim sherds from the site. Bowl (n = 27) and jar (n = 23) rim sherds were almost equally common for those instances in which vessel shape could be determined. Seven rims came from incurving jars (tecomates or seed jars). Several of these sherds came from a small polished brown tecomate with a maximum vessel diameter of 14 cm. Those sherds were found together on the floor of Structure 1, in Unit 99N 51W (Lot 8155).



**Figure 27.** Six sherds from the Quevedo site. Top left: rim and body sherds from corrugated jars. Top right: red on brown jar sherd with a broad band, and a red-on-gray sherd. Lower left: rim of a Leal Red-on-brown bowl (Lot 8100). Lower right: broad-line Anchondo Red-on-brown.

**Table 3. Rim Sherds from Structure 1.**

|                   | 1996 | 1998 | Totals | Percent |
|-------------------|------|------|--------|---------|
| Undecorated       | 19   | 26   | 35     | 55.6    |
| Pilon Red Rim     | 3    | 5    | 8      | 12.7    |
| White             | 1    | 1    | 2      | 3.2     |
| White, red rim    |      | 1    | 1      | 1.6     |
| Polished black    | 1    |      | 1      | 1.6     |
| Textured          | 2    | 4    | 6      | 9.5     |
| Textured with red | 1    | 3    | 4      | 6.3     |
| Red-slipped       | 2    | 3    | 5      | 7.9     |
| Gray              |      | 1    | 1      | 1.6     |
| Total             | 29   | 44   | 63     |         |

## Flaked Stone

The 1996 collections included 102 flakes, four cores, and one projectile point. Twelve flakes were of chert; the rest were of various types of igneous stone. The projectile point (Lot 7014, General Surface) was made of obsidian and measured 1.7 by 0.7 by 0.4 cm. It had long, shallow corner notches and a flat base.

The 1998 collection included 336 flakes (323 igneous stone, six quartzite, four obsidian, two chert, and one fine-grained black basalt), five cores (igneous stone), and one large (more than 9 cm across) core chopper (rhyolite; Lot 8114; N103 W48, upper fill [Levels 1 and 2], northeast sector of the house, near the entrance). Two of the projectile points were obsidian (8078-1 [N99 W51 L1], 8091-1 [N98 W50, L2]), while the third was made of fine-grained black basalt (8083-1 [N98 W50 L1]) (Figure 28).



**Figure 28.** Three projectile points. Left: 8078-1. Middle: 8083-1. Right: 8091-1.

## Ground Stone

Ground stone was sparse at this site, with few specimens visible on the surface and few encountered in excavations.

The 1996 work yielded a basalt bowl (7047-1; N103 W49, Level 2). It measured 6.8 by 6.2 by 1.6 cm, with a shallow depression.

From Lot 7043 (N98 W52, Level 1) came a fragment of ground stone measuring 5.8 by 5.3 by 4.4 cm, probably part of a grinding slab or metate.

The single metate fragment (Lot 8167) came from near the floor of Structure 1 (N98 W50, L3). It was made of vesicular basalt. The fragment appeared to have been an edge and mid-section of a fairly shallow grinding stone (28.4 by 21.1 by 8.7 cm).

The single mano fragment (Lot 8147), also from near the floor of Structure 1 (N103.40 W49.45 L3), measured 14.3 by 10.2 by 5.7 cm. It had a single convex ground face which would have been appropriate for use with a basin metate. One end was broken off.

Two three-quarter grooved axes were found. One came from the trench on the outside of the structure, at the level associated with the construction and occupation of the structure (Lot 8151). It had a fractured and spalled bit, was made on a fairly symmetrical pebble, and had a fairly well-defined groove placed at about the midpoint of the piece. A small ground area, about 2 cm in diameter, was present on the upper face of the axe, near the butt end. The other axe, a fragment, came from Lot 8135 (N101 W47 Level 3, near the floor of Structure 1). It was made on an asymmetrical pebble of vesicular basalt. The shallow groove was about one-third of the way from the butt end (15.4 by 8.5 by 6.9 cm).

### **Other Stone Items**

A large piece of welded ash, excavated in 1998, came from Lot 8118 (N98 W50, Level 3) near the floor of Structure 1 (Figure 29). It measured 13.2 by 3.0 by 1.2 cm. A small piece of mica (Lot 7035, N101 W50, Level 2) measured 1.1 by 0.9 by 0.4 cm.



**Figure 29.** Piece of welded ash from Structure 1.

### **Shell**

Freshwater mussel shell fragments were noted for 12 of the 1996 lots. These were distributed from the uppermost level to the floor of the house. None of the shell was worked, so we assume that the fragments are related to dietary use of mussel from a local source. Twelve of the 1998 units also contained mussel shell fragments. Shell may have been present in other units but did not make it into the lab.



## Bone

In 1996, very little bone was recovered (only three lots contained bone) and most of what could identified was rodent. The rarity of bone is illustrated by the six fragments from Lot 24 weighing 2 g, and by the one fragment from Lot 7039 weighing 0.2 g.

This scarcity was also evident during the 1998 excavations. The six lots with bone contained very small fragments, many from rodents.

## Botanical Remains

Wood was prominent among the macrobotanical specimens and flotation samples collected in 1998. Fourteen flotation samples from that year's collections were processed by Karen Adams, project botanist. These yielded six examples of *Zea mays* (Lots 8125, 8119, 8130, 8132, 8138, and 8140), one of Gramineae (Lot 8138), four of *Juniperus* (Lots 8130, 8121, 8123, and 8127), and two of *Phragmites* (Lots 8127 and 8132). Four of the samples produced no botanical remains. The macrobotanical materials were dominated by wood, with two conifer (Lots 8131 and 8102), five *Juniperus* (Lots 8100, 8104, 8131, 8137, and 8110), one *Phragmites australis* (Lot 8140), two *Pinus* (Lots 8100 and 8137), and two *Zea mays* (Lots 8104 and 8098).

## The 2005 Artifacts

### Pottery

Table 4 summarizes the 2005 pottery. A waster was found in the surface collection (Lot 1509), indicating that pottery was made on or near the site. As was noted for both Ch-218 and Ch-254, some undecorated, red-on-brown (Figure 30), and textured sherds have very light colored pastes and surface colors. Such is true of a thin-lined, Mata-like, red-on-'brown' sherd that might be better described as a red-on-gray.

**Table 4. Pottery Collected from Test 1, in 2005.**

| Prov.   | Level | Lot No. | Undec. | Black | Red Slip | R/Br | Text. | Poly. | B/Br | Total |
|---------|-------|---------|--------|-------|----------|------|-------|-------|------|-------|
| Surface |       | 1509    | 24     | 3     |          |      | 7     |       | 1    | 35    |
| Test 1  | 1     | 1527    | 25     | 1     | 1        |      | 6     |       |      | 33    |
| Test 1  | 2     | 1528    | 20     | 3     | 2        | 2    | 7     |       | 1    | 35    |
| Test 1  | 3     | 1529    | 5      |       |          | 2    | 1     |       |      | 8     |
| Total   |       |         | 74     | 7     | 3        | 4    | 21    | 0     | 2    | 111   |



**Figure 30.** Two red-on brown sherds collected in 2005. Test 1, Level 3 (Lot 1529).

### **Other Artifacts**

In 2005, a small metate fragment was recovered from the site surface. A hammerstone was found in Test 1, Level 1 (Figure 31). Eight unworked flakes were collected from the site surface, as was a biface (Lot 1509) (Figure 31), and a small, asymmetrical, corner-notched point fragment (0.7 by 0.6 by 0.1 cm).



**Figure 31.** Two stone artifacts collected in 2005. Left: hammerstone. Test 1, Level 1 (Lot 1527). Right: biface from the site surface (Lot 1509). The coin used for scale in the picture on the right is a Canadian penny.

## The Lithic Index

In an effort to evaluate the densities of cultural remains in the different tests, we normalized the number of flaked stone artifacts to a volume of 1 m<sup>3</sup>. Based on this “lithic index” and other information, the density of cultural remains was quite variable. The greatest density was in the main group of tests; there, the non-contiguous Tests 2 and 5 had by far the highest lithic index. The field notes indicate that excavators thought they were in primary trash deposits, particularly in Test 2. Other nearby tests showed moderate densities, except for Test 1 with a very low lithic index. The three tests to the west (4, 7 and 8) also had low lithic indices. Test 6 and 14, south and north of the main group of tests respectively, and Test 6, yielded neither stone artifacts nor sherds. The northernmost test (25), and Tests 24 and 23 some distance to the east, had moderate lithic indices.

## The 2007 Artifacts

### Pottery

Previous collections from this site did not include either Santa Ana Polychrome or Mimbres Black-on-white. Both types were recovered from excavated contexts in 2007: the polychrome pottery from Test 2, Level 1 (Lot 2513) and the Mimbres from Test 2 E (one sherd; Lot 2528), Test 2 (two sherds; Lot 2547), and Test 12 (one sherd; Lot 2562) (Table 5).

**Table 5. Pottery Collected in 2007.**

| Category               | Number of Sherds | Percent. of Sherds | Percent. of Sherds, 2005* | Number of Rims | Percent of Rims |
|------------------------|------------------|--------------------|---------------------------|----------------|-----------------|
| Undecorated            | 2286             | 73.7               | 84.9                      | 66             | 40.3            |
| Black                  | 99               | 3.2                | 1.8                       | 11             | 6.8             |
| Red-slipped            | 32               | 1.0                | 4.2                       | 9              | 5.5             |
| Red-on-brown           | 134              | 4.1                | 5.1                       | 27             | 16.8            |
| Textured               | 491              | 15.8               | 7.7                       | 25             | 15.5            |
| Combo/Other            | 29               | 0.9                | 1.3                       | 22             | 13.7            |
| Santa Ana Polychrome   | 1                |                    |                           | 1              | 0.6             |
| Mimbres Black-on-white | 4                | 0.1                |                           |                |                 |
| Totals                 | 3101             |                    |                           |                |                 |

\*Included to allow comparison.

Within the Textured category, the most common variety was corrugated (n = 244), with incised corrugated next (n = 132). Scoring was less common. Eleven textured sherds with red designs were counted under the Combo/Other category, so the total number of corrugated sherds was 502 (16.2 percent). Roughly speaking, one red-slipped sherd was found for every three black sherds. A sherd with a red interior and textured exterior was counted as Other.

The Red-on-brown category includes sherds with red-on-brown or red-on-cream/white body painting, and red rims on plain and textured vessels. Two conjoining sherds from a jar shoulder have broad red bands (Lot 2519) (Figure 32). Red slip or red paint is found on 180 otherwise plain sherds (11.6 percent). Some of the more interesting sherds combine decorative techniques that are more often employed singly. These sherds include one with a black-on-red exterior and a polished cream interior, the one with a red interior with a textured exterior mentioned earlier, one with red paint or a partial slip over texturing, and a sherd from black textured vessel.



**Figure 32.** Brownware jar shoulder with broad red bands.

The variability in brownware paste and surface color is striking. The nominal browns vary from deep brown through terracotta to light brown, cream and even white or whitish. The light end of the scale is seen in red-on-cream or red-on-white vessels, but also in textured vessels. The light to whitish sherds may involve separate manufacturing locales, and perhaps merit separate classificatory status. They are not numerous, and occur most frequently at Ch-218 and Ch-254.

Black paint is represented by three black-on brown sherds.

Rim percentages are better indicators of vessel numbers per broad category than total sherds. While undecorated sherds make up 77 percent of the total sherd count, they represent only 40 percent of the rims. We found plain vessels with red rims. The lower parts of most vessels were undecorated.

Figure 33 illustrates sherds collected in 2007.



**Figure 33.** Sherds collected in 2007. Top left: partly corrugated sherd with appliqué “fake” corrugations curving below the corrugated section. Top right: medium-line red-on-brown. Middle left: sherd with a horizontal flange (lower left of the three) and two partly corrugated sherds. Middle right: two white paste textured sherds. Bottom: corrugated, incised corrugated, partly corrugated, and incised textured sherds.

## Flaked Stone

The 2007 assemblage included 988 flakes, 105 cores, 61 utilized flakes, 24 retouched flakes, and 2 shaped tools. Rhyolite was the most common material, with various grades of basalt next in importance. Seven pieces were of the fine-grained black basalt favored for shaped tools (Figure 34). A few chert, chalcedony, quartzite, and obsidian artifacts were found, along with two items possibly of granite.



**Figure 34.** Projectile point of fine-grained black basalt. From the site surface (Lot 2501-2).

## Ground Stone

A three-quarter-grooved basalt axe came from Test 2E, Level 2 (Lot 2528). A stone bowl (?) measuring 4.5 cm in diameter and 3.1 cm tall, with a depression 2 cm deep, was also recovered. Figure 35 shows this artifact *in situ*.



**Figure 35.** Small stone bowl (?) *in situ*. Test 11, N7 E20, 28 cm BD (Lot 2561).



## Shell

As was the case in other years, a fair amount of fragmentary unworked mussel shell was collected in 2007. At least 17 of the test units yielded the shell fragments, one of which was a nearly complete valve. As was mentioned, we see them as evidence of the use of mussels for food.

## The 2008 Artifacts

### Pottery

Table 6 summarizes the pottery collected from Structure 2 in 2008, and allows comparisons with the sherds from Structure 1. Neither Structure 1 nor Structure 2 produced Mimbres sherds, although four Mimbres sherds were collected from the 2007 tests. Likewise, Santa Ana Polychrome (Burd Larkin et al. 2005) is quite rare at Ch-218, with only two examples recorded: one from the surface and one from Structure 2.

**Table 6. Sherds from Structures 1 and 2.**

|                                    | Undec. | Black | Red-on-slate | R/Br | Text. | Other | Total |
|------------------------------------|--------|-------|--------------|------|-------|-------|-------|
| <i>Structure 1</i>                 |        |       |              |      |       |       |       |
| 1996 count                         | 430    | 12    | 11           | 39   | 60    | 29    | 581   |
| 1998 count                         | 721    | 4     | 28           | 37   | 106   | 42    | 938   |
| Total                              | 1151   | 16    | 39           | 76   | 165   | 72    | 1519  |
| Percent                            | 75.8   | 1.1   | 2.6          | 5.0  | 10.9  | 4.7   |       |
| <i>Structure 2, 2008</i>           |        |       |              |      |       |       |       |
| Count                              | 1052   | 251   | 12           | 40   | 200   | 24    | 1579  |
| Percent                            | 66.6   | 15.9  | 0.8          | 2.5  | 12.7  | 1.5   |       |
| <i>Structures 1 and 2 Combined</i> |        |       |              |      |       |       |       |
| Count                              | 2203   | 267   | 51           | 116  | 365   | 96    | 3098  |
| Percent                            | 71.5   | 9.0   | 2.5          | 5.0  | 10.2  | 1.7   |       |

Undecorated body and rim sherds make up three-quarters of the sherds from Structure 1, and two-thirds of from Structure 2. Those sherds range in color from gray to various shades of tan, brown, and reddish brown. On an individual undecorated body sherd, the surface color can vary from brown to tan and, rarely, to black. Undecorated body sherds could be from plain vessels, from vessels with a red slip band on the rim (Pilón Red Rim or Textured with red rims), from painted vessels, or from zoned textured pots.

Black ware is a difficult category to define; black sherds due to post-firing treatment, or they can result from the deliberate production of a black vessel. Moreover, the line between dark brown sherds and black ones is arbitrary. Finally, we have noticed that lab analysts vary on which sherds to include in this category. That said, the Structure 1 sherd assemblage is unusual for a

southern zone Viejo site in having decidedly more red than black ware. Twelve of the Structure 1 sherds were classed as black ware; some were highly polished. A larger percentage of black sherds is seen in the Structure 2 assemblage, with a correspondingly lower proportion of red-slipped sherds.

Sherds were assigned to the Red (red-slipped) category if added red paint or slip covered at least one surface of a sherd. This definition was not entirely satisfactory; some sherds have broad red bands, and a sherd from within that broad band would be counted as red-slipped. Less than 3 percent of the Structure 1 sherds are red-slipped, and this category even less common among the Structure 2 sherds.

Red-on-brown sherds are the hallmark of the Viejo period. Five percent of the sherds from Structure 1 can be so classified; the percentage is lower for Structure 2. Pilón Red Rim was included in the Red-on-brown category, while corrugated sherds with red rims were included in the Combo/Other category. Defined red-on-brown types in the assemblage include Mata Red-on-brown lacking corrugations (those with corrugations were placed in the Combo category) and Anchondo Red-on-brown. Other sherds, with fine line designs but without corrugations, could be from Mata or Leal Red-on-brown vessels.

Textured sherds without other forms of decoration account for roughly one-tenth of the sherds from both structures. This category does not include textured rims with a red slip band on the lip interior (paralleling Pilón Red Rim) or sherds with red paint over corrugations (both examples were placed in the Combo/Other category). Among sherds with a single form of texturing, two textures dominated: corrugated (with fine to broad wales, and unsmoothed to partly obliterated) and (almost as common) incised. A third major group involves incisions over corrugation.

One uncommon form of texturing involved dragging a small, multi-tined tool over the vessel's exterior surface, leaving 5 or 6 fine parallel lines some 4 to 7 mm wide (we called the result the "tire track" design). Brushed and Striated, in PAC parlance, involved scoring. One sherd had a punctate rim. Two sherds combined, scoring, incisions, and red patches over the texturing. When incised sherds were large enough to reveal a pattern, the latter often mirrored the branching and chevron patterns on Red-on-brown sherds.

The Other/Combo category includes sherds with combined decorative approaches, such as red paint over texturing, textured bowls with polished black interiors, and the textured Mata.

Several sherds of an unusual jar found in Unit 8, Level 2 (Lot 2920) were tabulated as Combos because of the combination of corrugation and two color designs. This jar was a neck coiled or neck corrugated vessel with designs that included black triangles pendant from the lower part of the corrugations, other black designs, and remnants of bright red-orange paint on the vessel body and extending onto the corrugations (Figure 36). With both red and black paint on a dark brown surface, the jar must be counted as a polychrome—but it is not to be confused with Santa Ana Polychrome.



**Figure 36.** Partly reconstructed vessel from Unit 8, Level 2. Lot 2920.

Other Combos include rare sherds such as those with whitish (off-white to light tan) surface colors and light-colored paste (plain, textured and red-on-white), sherds with burned-out paint, a few black-on-red sherds, and a few black-on-brown sherds.

One fragmentary ceramic disk (3 by 2.5 cm) was made of undecorated brown ware and had a rough, eroded interior. We could not tell whether it was a *malacate* (spindle whorl). The estimated diameter was 6 cm.

The assemblages differences for Structures 1 and 2 could be due to factors other than age. If, however, the two houses were occupied sequentially (as seems likely), we suggest that Structure 2 postdates Structure 1 because of the higher frequencies of black and textured sherds and the lower frequency of red-on-browns sherds.

### **Flaked Stone**

The flaked stone from 2008 is not fully analyzed. It follows the usual pattern for Formative period sites in the area: the raw materials are probably all derived from local sources and the assemblage is expediently made (many flakes with little evidence of working). Minor amounts of chert, quartzite, and obsidian were recovered, representing materials probably obtained through exchange rather than local procurement.

### **Ground Stone**

All of the recovered ground stone comes from Structure 1, none from Structure 2. Unlike Ch-254, which has long been plowed and therefore has numerous mano and metate fragments on the surface, surface finds of ground stone were quite rare at Ch-218.

## Shell

No shell was reported from Structure 2, even though shell was found in the 2007 tests and the 1996–1998 Structure 1 excavations.

## The 2010 Artifacts

### Pottery

The sherds from the 2010 season at the Quevedo Site correspond in types and frequencies to those found in other seasons at this site. More generally, they fit well with other southern zone Viejo period assemblages. Some 3,760 sherds were tabulated for 2010 (Table 7). Sherds tended to be more numerous in the upper levels of the site than in the lower levels. Some 12 percent of the sherds by count and 15 percent of the sherds by weight were recovered from levels thought to be associated with the occupations of Structures 3 and 4.

**Table 7. Sherds from the 2010 Field Season.**

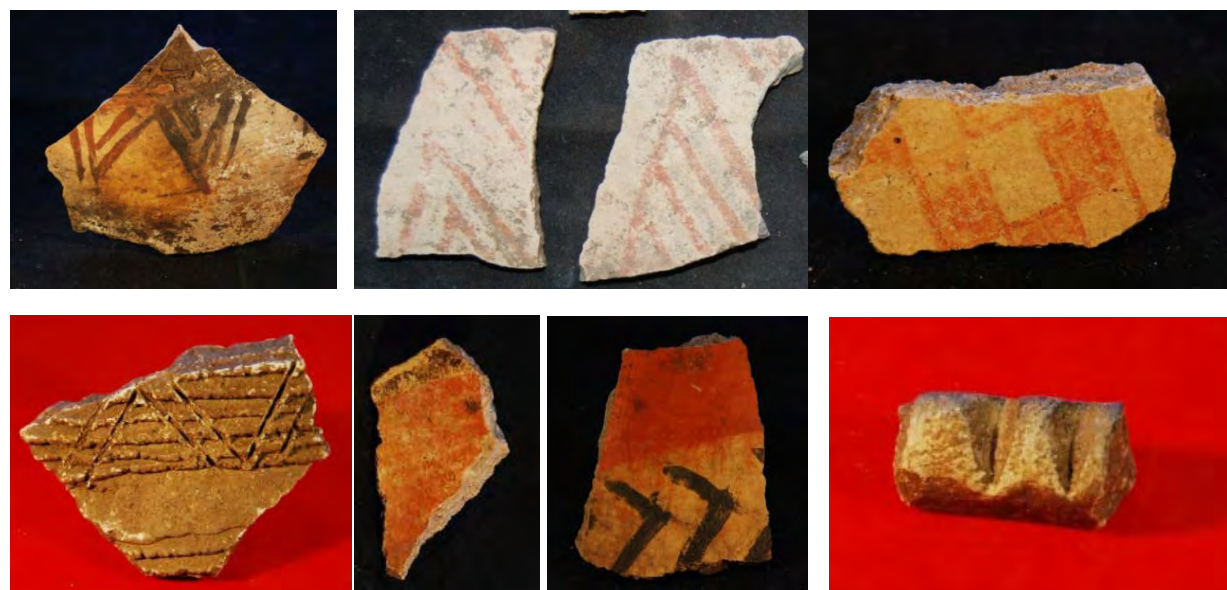
| Level                       | Number of Sherds | Percent | Weight of Sherds (gms) | Percent |
|-----------------------------|------------------|---------|------------------------|---------|
| Level 1                     | 1100             | 29.3    | 7055                   | 27.4    |
| Level 2                     | 1181             | 31.4    | 7149                   | 27.7    |
| Level 3                     | 1008             | 26.8    | 6586                   | 25.6    |
| Level 4                     | 385              | 10.2    | 2992                   | 11.6    |
| Level 5                     | 44               | 1.1     | 307                    | 1.2     |
| Structure 4, floor features | 33               | 0.9     | 609                    | 2.4     |
| Totals                      | 3760             |         | 25768                  |         |

The Structure 3 and 4 excavation area units yielded 34 body sherds (53 sherds total) per m<sup>2</sup>, the lowest density of the three excavation areas. Of the sherds from the Structure 3 excavations, 129 came from the lowest level, but there was no sherd convincingly *in situ* on the floor of Structure 3. Instead, the structure appeared to have been cleaned out. Most of the sherds in this area were in the fill over and around domestic Structure 4, which burned while occupied. Units 39, 40, and 41 in the northern part of the excavation area, failed to produce an expected house but did yield the highest sherd density from the 2010 work—67 sherds per m<sup>2</sup>—making us wonder whether the circular pattern on the GPR scan indicated a midden rather than a structure.

In 2010, Ch-218 and Ch-254 were excavated at the same time, as was the case in other years, and materials from both sites entered the lab at the same time. As a result, the great disparity in numbers of sherds from the two sites was drawn to our attention yet again. The Structure 6 excavation units at Ch-254 yielded more than 10,000 sherds; while the Structure 6 excavation units were deeper, the Ch-218 excavation area was larger.

Three clusters of sherds were found in three different parts Structure 4. At Feature 14, thought to be the base of a fixed storage structure in the northern part of the house, nine sherds from a brown bowl (with an estimated diameter of 16 to 20 cm) were recovered (Lot 4609), but they may not have been part of the container plastered to the floor. Eight sherds of a Red-on-brown corrugated jar came from Feature 8 in the southwest sector of the floor (Lot 4611); only one of the sherds was painted. Seven sherds of a red-on-brown jar with faded paint came from Feature 7, located 70 cm inside the northeast wall (Lot 4612).

The southern zone Viejo period pottery complex is a brownware tradition in which most vessels were “brownware plus,” the “plus” referring to various decorative techniques (Figure 37). Few vessels were entirely smooth and plain; any such vessels tended to be bowls, which more typically had large undecorated areas. Jars generally were decorated in the shoulder, neck, and rim area, with plain lower portions.



**Figure 37.** Examples of sherds from the 2010 collections. Top row: left, Red-on-brown textured (Lot 4484, Unit 39, Level 4); middle (two sherds), Santa Ana polychrome (Lot 4376, Unit 32, Level 1); right: Red-on-brown with checker board design (Lot 4482, Unit 39, Level 2). Bottom row: left, corrugated with transverse designs (Lot 4237, Unit 1, Level 10; middle-left, Black-on-red (Lot 4580, Unit 44, Level 4); middle-right, unknown polychrome (Lot 4417, Unit 38, Level 2); right, brownware rim with lip indentations (Lot 4237, Unit 1, Level 1).

The project encountered mostly sherds, often fairly small ones, so our classification system necessarily differed from the Paquimé system (Di Peso et al 1974) that depended heavily on whole pots. The main sorting categories we used—Undecorated, Black, Red-slipped, Red-on-brown, Textured, and Other—have markedly different frequencies for body and rim sherds, as so many undecorated body sherds were actually part of decorated vessels. In Table 8, the Red-on-brown rim sherds include both red lips without other designs (9.6 percent) and sherds with red-on-brown designs below the lip (2.75 percent)

**Table 8. Sherds from 2010, by Category and Vessel Part.**

| <b>Category</b> | <b>Percent<br/>Body sherds<br/>N=3555</b> | <b>Percent<br/>Rim sherds<br/>N=218</b> |
|-----------------|---|---|
| Undecorated     | 71.4                                      | 45                                      |
| Black ware      | 4.4                                       | 6.4                                     |
| Red-slipped     | 3.1                                       | 3.7                                     |
| Red-on-brown    | 4   | 11.7                                    |
| Textured        | 12.7                                      | 22.9                                    |
| Other           | 4.2                                       | 10.5                                    |

In the lab, we separated (1) sherds showing combinations of decorative techniques that are most often used alone (as determined from sherds) and (2) sherds that did not fit the main categories or were rare examples of named types. The resulting categories, “Combinations” (informally, “Combos”) and “Other,” are considered together here (Table 9). Such sherds never account for a large percentage of assemblages.

**Table 9. “Combination” and “Other” Sherds, 2010.**

| <b>Description</b>  | <b>Number<br/>of Body<br/>Sherds</b> | <b>Number<br/>of Rim<br/>Sherds</b> |
|---|--------------------------------------|-------------------------------------|
| Soft white paste, no decorations                              | 64                                   | 3                                   |
| Red-on-white with soft white paste                            | 1                                    | 1                                   |
| White corrugated (soft white paste)                           | 15                                   | 1                                   |
| White textured with red paint (soft white paste)              | 4                                    | 1                                   |
| Red lip textured  |                                      | 6                                   |
| Textured with red paint combination (Figure 37, top left)     | 4                                    |                                     |
| Textured exterior with red-slipped interior                   | 1                                    | 1                                   |
| Red slipped interior with black line on exterior of bowl      |                                      | 1                                   |
| Brown jars with white bands on lip interiors                  |                                      | 2                                   |
| Black-on-brown  | 3                                    | 1                                   |
| Red-on-brown textured   | 1                                    |                                     |
| Black polychrome (Teseachic polychrome)                       | 1                                    |                                     |
| Black-on-red  | 1                                    |                                     |
| Polychrome with red-on-brown interior and polychrome exterior | 1                                    |                                     |
| Polychrome (see Figure 37, bottom middle-right)               | 1                                    |                                     |
| Santa Ana Polychrome (see Figure 37, top middle)              | 2                                    |                                     |

In Tables 10 and 11, which summarize the sherds by level, undecorated body sherds consistently account for more than 70 percent of the total. Intentionally produced black ware was found in all levels, as was red-slipped ware. The Red-on-browns showed a tendency to increase from Level 1 to Level 5, but the samples from the lower levels are small and possibly misleading.



**Table 10. Percentages of Body Sherds by Level, 2010.**

| <b>N = 3574</b> | <b>Level 1<br/>n = 1052</b> | <b>Level 2<br/>n = 1129</b> | <b>Level 3<br/>n = 907</b> | <b>Level 4<br/>n = 386</b> | <b>Level 5<br/>n = 100</b> |
|-----------------|-----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| Undecorated     | 73.5                        | 73.5                        | 73.64                      | 72.5                       | 79.5                       |
| Black           | 2.0                         | 2.6                         | 2.1                        | 5.9                        | 4.5                        |
| Red-slipped     | 3.4                         | 3.0                         | 3.1                        | 2.07                       | 2.2                        |
| Red-on-brown    | 3.8                         | 4.8                         | 4.7                        | 5.2                        | 4.5                        |
| Textured        | 12.7                        | 13.3                        | 12.3                       | 11.9                       | 6.8                        |
| Polychrome      | 0.2                         | 0                           | 0                          | 0                          | 0                          |
| Other           | 4.4                         | 4.3                         | 3.9                        | 2.3                        | 2.2                        |

**Table 11. Percentages of Rim Sherds by Level, 2010.**

| <b>N = 218</b>       | <b>Level 1<br/>n = 65</b> | <b>Level 2<br/>n = 67</b> | <b>Level 3<br/>n = 63</b> | <b>Level 4<br/>n = 21</b> | <b>Level 5<br/>n = 2</b> |
|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|--------------------------|
| Undecorated          | 43.1                      | 41.8                      | 49.2                      | 38.1                      | 50.0                     |
| Black                | 1.5                       | 4.5                       | 12.7                      | 4.8                       | 50.0                     |
| Red-slipped          | 1.5                       | 4.5                       | 4.8                       | 4.8                       | 0                        |
| Red-on-brown         | 0                         | 10.4                      | 9.5                       | 4.8                       | 0                        |
| Red lip              | 10.7                      | 5.9                       | 1.6                       | 9.2                       | 0                        |
| Textured             | 32.3                      | 19.4                      | 15.9                      | 28.6                      | 0                        |
| Santa Ana Polychrome | 0                         | 1.5                       | 0                         | 0                         | 0                        |
| Other                | 9.2                       | 10.4                      | 6.3                       | 9.2                       | 0                        |

Many of the Red-on-brown sherds had simple linear designs with different line widths, possibly part of complex designs. Interior or exterior lines circling the pot were common. The Red-on-brown category is the one most affected by the fact that we classified sherd collections with no whole vessels to guide us. Even so, we recognized the following established red-on-brown types:

- Anchondo Red-on-brown was distinguished by polishing over the red paint, which often resulted in smearing of the paint edges. Red areas tended to be larger than is the case with simple linear motifs.
- Mata Red-on-Brown included sherds with and without corrugation (which forms a vital part of the Casas Grandes type description). Sherds with pencil-thin red lines, arranged in branching patterns or nested triangles, were regarded as Mata Red-on-Brown, as were sherds with 2 mm wide lines.

For the polychrome sherds, a comparison with the 2010 excavations at Ch-254 was again irresistible. Two Santa Ana Polychrome sherds were found at the Quevedo Site that year, compared to 208 were recovered from Ch-254 (93 from Structure 6, 114 from the site surface collections). Santa Ana Polychrome consistently occurred in the upper levels at Ch-254, indicating that this local polychrome was added fairly late in the Viejo period. The radiocarbon and ceramic evidence is not precise enough to tell us whether the Quevedo Site mostly predated

the appearance of Santa Ana Polychrome and Mimbres Black-on-white, but this may well be the case.

Some design motifs occur across the analytical categories. They include simple linear designs in black or red, on tan to brown backgrounds, along with branching, nested triangle and chevron designs seen on the Red-on-brown sherds and some pattern scored and incised textured sherds (often over the scoring or corrugation). The patterns carry over to the local polychromes. Some unique treatments were also observed. One rim had diagonal impressions across the lip (Lot 4574, Unit 43, Level 2). A second rim had impressions at a right angle to the vessel wall (Lot 4237, Unit 1 Level 1; Figure 37, bottom right).

Based on rims, both bowls and jars were in use (Table 12). Bowls were mostly hemispherical with direct rims; one black and red bowl sherd had an abrupt angle between the wall and the apparently flat base (Lot 4580, Unit 44, Level 4; Figure 37). Jars had both direct rims and thickened everted rims. Rare forms included a plate about 16 cm in diameter, with a strongly everted rim and scored exterior; a plain brown everted rim everted about 45 degrees from the vessel wall (Lot 4454, Unit 34, Level 2); a crudely made plate or bowl with an everted rim (Lot 4483, Unit 39, Level 3); and an incurving plain brown rim from a *tecomate* (Lot 4574, Unit 42, Level 2).

**Table 12. Bowls versus Jars, 2010.**

| <b>Form</b>       | <b>Level 1</b> | <b>Level 2</b> | <b>Level 3</b> | <b>Level 4</b> | <b>Level 5</b> |
|-------------------|----------------|----------------|----------------|----------------|----------------|
| Bowls             | 25<br>38%      | 28<br>42%      | 33<br>52%      | 7<br>33%       | 0<br>0%        |
| Ollas             | 33<br>51%      | 38<br>57%      | 25<br>40%      | 13<br>62%      | 1<br>50%       |
| Other,<br>unknown | 7<br>11%       | 1<br>1%        | 5<br>8%        | 1<br>5%        | 1<br>50%       |
| <b>Total</b>      | <b>65</b>      | <b>67</b>      | <b>63</b>      | <b>21</b>      | <b>2</b>       |

Based on rim sherds suitable for estimating rim diameters, most vessel rims were in the 15 to 25 cm diameter range (Table 13). The few very large bowls suggests equally few occasions that required the mixing or serving of large amounts of food.

Table 14 summarizes the 2010 body sherds by unit and level.

**Table 13. Estimated Diameters of Vessel Rims by Level, 2010.**  
(Based on rim sherds)

| <b>Estimated Diameters</b> | <b>Level 1</b> | <b>Level 2</b> | <b>Level 3</b> | <b>Level 4</b> | <b>Level 5</b> |
|----------------------------|----------------|----------------|----------------|----------------|----------------|
| Unable to measure          | 3<br>4.6%      | 4<br>5.9%      | 7<br>11.1%     | 2<br>9.5%      | 1              |
| 10 cm or less              | 4<br>6.1%      | 0<br>0%        | 1<br>1.7%      | 1<br>4.7%      | 0              |
| 11–15 cm                   | 11<br>16.9%    | 6<br>8.9%      | 8<br>12.7%     | 5<br>23.9%     | 0              |
| 16–20 cm                   | 24<br>36.9%    | 39<br>58.2%    | 24<br>38.1%    | 6<br>28.6%     | 1              |
| 21–25 cm                   | 12<br>18.5%    | 8<br>11.9%     | 9<br>14.3%     | 4<br>19.0%     | 0              |
| 26–30 cm                   | 9<br>13.8%     | 10<br>13.4%    | 11<br>17.5%    | 2<br>9.5%      | 0              |
| 31+ cm                     | 2<br>3.0%      | 0<br>0%        | 3<br>4.7%      | 1<br>4.7%      | 0              |
| Total                      | 65             | 67             | 63             | 21             | 2              |

**Table 14. Body Sherds, 2010.**

| <b>Lot No.</b> | <b>Unit</b> | <b>Level</b> | <b>Undecorated</b> | <b>Black</b> | <b>Red-slipped</b> | <b>Red-on-brown</b> | <b>Textured</b> | <b>Other</b> | <b>Total</b> | <b>Weight (grams)</b> |
|----------------|-------------|--------------|--------------------|--------------|--------------------|---------------------|-----------------|--------------|--------------|-----------------------|
| 4237           | 1           | 1            | 14                 | 1            | 2                  | 1                   | 4               |              | 22           | 99                    |
| 4269           | 1           | 2            | 14                 | 4            |                    |                     | 1               | 3            | 22           | 91                    |
| 4312           | 1           | 3            | 10                 | 1            | 1                  | 1                   |                 | 2            | 15           | 70                    |
| 4306           | 1           | 4            | 2                  |              |                    |                     |                 | 1            | 3            | 24                    |
| 4239           | 2           | 1            | 10                 | 1            | 4                  | 2                   | 1               |              | 18           | 74                    |
| 4278           | 2           | 2            | 46                 | 4            | 1                  | 3                   | 7               |              | 61           | 209                   |
| 4319           | 2           | 3            | 5                  |              |                    |                     |                 |              | 5            | 53                    |
| 4236.1         | 3           | 1            | 4                  |              |                    |                     |                 |              | 4            | 39                    |
| 4236.2         | 3           | 1            | 8                  |              |                    |                     | 1               |              | 9            | 61                    |
| 4280           | 3           | 2            | 14                 | 1            | 2                  |                     |                 | 2            | 19           | 99                    |
| 4309           | 3           | 3            | 6                  |              | 2                  | 1                   |                 |              | 9            | 45                    |
| 4453           | 3           | 3            | 13                 |              |                    | 1                   |                 | 3            | 17           | 75                    |
| 4238           | 4           | 1            | 7                  |              |                    |                     | 2               |              | 9            | 51                    |
| 4276           | 4           | 2            | 16                 |              | 1                  |                     | 4               |              | 21           | 108                   |
| 4452.1         | 4           | 3            | 13                 |              |                    |                     | 3               | 4            | 20           | 151                   |
| 4452.2         | 4           | 3            | 4                  |              |                    |                     |                 |              | 4            | 19                    |
| 4470           | 4           | 4            | 14                 |              |                    |                     | 6               | 1            | 21           | 90                    |
| 4277           | 5           | 1            | 12                 |              |                    | 2                   | 3               |              | 17           | 81                    |
| 4279           | 5           | 2            | 2                  |              |                    |                     | 2               | 1            | 5            | 245                   |
| 4282           | 5           | 3            | 32                 | 4            | 2                  | 4                   | 3               | 2            | 47           | 212                   |
| 4451           | 5           | 4            | 17                 | 1            |                    | 2                   | 1               |              | 21           | 209                   |
| 4307           | 6           | 1            | 18                 |              | 2                  | 1                   | 3               | 7            | 31           | 141                   |
| 4293           | 6           | 2            | 23                 | 1            | 2                  | 1                   |                 |              | 28           | 152                   |
| 4487           | 6           | 3            | 18                 |              | 1                  |                     | 2               | 3            | 24           | 96                    |
| 4450           | 6           | 4            | 6                  | 2            |                    |                     | 4               |              | 12           | 73                    |
| 4284           | 7           | 2            | 9                  |              | 2                  | 1                   | 4               | 1            | 17           | 97                    |

**Table 14. Body Sherds, 2010.**

| <b>Lot No.</b> | <b>Unit</b> | <b>Level</b> | <b>Undecorated</b> | <b>Black</b> | <b>Red-slipped</b> | <b>Red-on-brown</b> | <b>Textured</b> | <b>Other</b> | <b>Total</b> | <b>Weight (grams)</b> |
|----------------|-------------|--------------|--------------------|--------------|--------------------|---------------------|-----------------|--------------|--------------|-----------------------|
| 4449           | 7           | 3            | 35                 | 4            | 2                  | 1                   | 10              | 2            | 54           | 372                   |
| 4561           | 7           | 4            | 15                 |              | 1                  | 1                   | 1               | 1            | 19           | 156                   |
| 4281           | 8           | 1            | 6                  | 2            | 1                  | 1                   | 2               | 1            | 13           | 63                    |
| 4292           | 8           | 2            | 22                 |              | 1                  | 2                   | 1               | 1            | 27           | 220                   |
| 4339           | 8           | 3            | 34                 | 1            | 1                  | 4                   | 7               | 1            | 48           | 283                   |
| 4283           | 9           | 1            | 17                 |              | 1                  | 1                   |                 |              | 19           | 121                   |
| 4291           | 9           | 1            | 22                 | 3            | 3                  | 1                   | 1               | 1            | 31           | 247                   |
| 4315           | 10          | 1            | 31                 |              |                    |                     | 6               | 1            | 38           | 133                   |
| 4308           | 10          | 2            | 23                 | 2            | 2                  |                     | 8               |              | 35           | 165                   |
| 4448           | 10          | 3            | 40                 | 5            |                    | 2                   | 3               | 1            | 51           | 353                   |
| 4305           | 11          | 1            | 8                  |              |                    |                     |                 |              | 8            | 35                    |
| 4349           | 11          | 2            | 17                 |              | 1                  |                     | 3               | 1            | 22           | 99                    |
| 4311.1         | 12          | 1            | 4                  |              |                    |                     | 1               |              | 5            | 41                    |
| 4311.2         | 12          | 1            | 16                 |              | 1                  | 1                   | 2               |              | 20           | 69                    |
| 4316           | 12          | 3            | 18                 | 2            | 2                  |                     | 3               | 1            | 26           | 175                   |
| 4310           | 13          | 1            | 10                 |              |                    |                     | 1               | 1            | 12           | 63                    |
| 4313           | 13          | 2            | 27                 | 3            | 2                  | 2                   | 5               |              | 39           | 393                   |
| 4342           | 14          | 1            | 6                  | 1            | 1                  | 2                   | 2               | 2            | 14           | 67                    |
| 4317           | 14          | 2            | 30                 |              | 5                  | 2                   | 4               | 3            | 44           | 162                   |
| 4345           | 14          | 3            | 24                 | 1            | 1                  |                     | 4               |              | 30           | 106                   |
| 4601           | 14          | 4            | 6                  |              |                    | 1                   | 1               |              | 8            | 32                    |
| 4314           | 15          | 1            | 7                  |              | 1                  | 1                   | 1               | 1            | 11           | 62                    |
| 4338.1         | 15          | 2            | 36                 |              | 3                  |                     | 11              | 4            | 54           | 237                   |
| 4338.2         | 15          | 2            | 4                  |              |                    |                     |                 |              | 4            | 17                    |
| 4348           | 15          | 3            | 19                 | 1            |                    | 1                   |                 | 4            | 25           | 145                   |
| 4471           | 15          | 4            | 6                  | 3            |                    | 3                   |                 |              | 12           | 144                   |

**Table 14. Body Sherds, 2010.**

| <b>Lot No.</b> | <b>Unit</b> | <b>Level</b> | <b>Undecorated</b> | <b>Black</b> | <b>Red-slipped</b> | <b>Red-on-brown</b> | <b>Textured</b> | <b>Other</b> | <b>Total</b> | <b>Weight (grams)</b> |
|----------------|-------------|--------------|--------------------|--------------|--------------------|---------------------|-----------------|--------------|--------------|-----------------------|
| 4318           | 16          | 1            | 3                  |              |                    |                     |                 |              | 3            | 16                    |
| 4346           | 16          | 2            | 9                  |              | 1                  | 1                   | 2               | 1            | 14           | 93                    |
| 4344           | 16          | 3            | 8                  |              |                    | 3                   | 2               | 1            | 14           | 72                    |
| 4341           | 17          | 1            | 5                  |              |                    |                     |                 |              | 5            | 15                    |
| 4447           | 17          | 2            | 13                 |              |                    |                     | 2               | 1            | 16           | 78                    |
| 4446           | 17          | 3            | 5                  | 5            |                    |                     | 1               |              | 11           | 164                   |
| 4445           | 17          | 4            | 3                  | 1            |                    | 1                   |                 |              | 5            | 45                    |
| 4347           | 18          | 1            | 7                  |              |                    | 1                   | 3               | 3            | 14           | 36                    |
| 4444           | 18          | 2            | 17                 | 2            | 1                  | 1                   | 4               | 1            | 26           | 110                   |
| 4443           | 18          | 3            | 12                 | 4            |                    | 1                   |                 | 1            | 18           | 98                    |
| 4625           | 18          | 4            | 3                  |              |                    |                     |                 |              | 3            | 11                    |
| 4340           | 19          | 1            | 14                 |              |                    |                     | 4               | 3            | 21           | 107                   |
| 4350           | 19          | 2            | 31                 | 1            | 1                  | 3                   | 2               | 1            | 39           | 186                   |
| 4442           | 19          | 3            | 21                 | 2            |                    | 2                   | 3               |              | 28           | 185                   |
| 4343           | 20          | 1            | 12                 | 2            | 1                  |                     | 2               | 1            | 18           | 117                   |
| 4441           | 20          | 2            | 14                 | 2            |                    |                     | 3               |              | 19           | 139                   |
| 4378           | 21          | 1            | 6                  | 1            | 4                  |                     | 2               |              | 13           | 44                    |
| 4440           | 21          | 2            | 18                 |              | 1                  |                     | 6               | 3            | 28           | 224                   |
| 4472           | 21          | 3            | 3                  |              | 5                  | 1                   |                 |              | 9            | 52                    |
| 4377           | 22          | 1            | 26                 |              | 1                  |                     | 4               | 2            | 33           | 96                    |
| 4302           | 22          | 2            | 33                 | 5            | 4                  | 4                   | 9               | 2            | 57           | 239                   |
| 4439           | 22          | 3            | 24                 | 3            | 3                  | 3                   | 5               | 2            | 40           | 152                   |
| 4543*          | 22          | 4            |                    |              |                    |                     | 1               |              | 1            | 5                     |
| 4388           | 23          | 1            | 20                 |              | 1                  | 1                   | 4               |              | 26           | 134                   |
| 4389           | 23          | 2            | 16                 |              |                    |                     |                 |              | 16           | 123                   |
| 4438           | 23          | 3            | 7                  |              |                    |                     |                 | 1            | 8            | 35                    |



**Table 14. Body Sherds, 2010.**

| <b>Lot No.</b> | <b>Unit</b> | <b>Level</b> | <b>Undecorated</b> | <b>Black</b> | <b>Red-slipped</b> | <b>Red-on-brown</b> | <b>Textured</b> | <b>Other</b> | <b>Total</b> | <b>Weight (grams)</b> |
|----------------|-------------|--------------|--------------------|--------------|--------------------|---------------------|-----------------|--------------|--------------|-----------------------|
| 4473           | 23          | 4            | 3                  |              |                    |                     |                 |              | 3            | 17                    |
| 4393           | 24          | 1            | 28                 | 3            | 2                  | 2                   | 4               | 2            | 41           | 295                   |
| 4437           | 24          | 2            | 17                 |              |                    | 1                   | 6               |              | 24           | 199                   |
| 4387           | 25          | 1            | 21                 | 4            | 3                  | 3                   | 8               |              | 39           | 260                   |
| 4436           | 25          | 2            | 52                 |              |                    | 1                   | 8               | 2            | 63           | 366                   |
| 4394           | 26          | 1            | 4                  |              |                    |                     | 2               | 1            | 7            | 31                    |
| 4386           | 26          | 2            | 2                  | 3            |                    | 4                   | 3               |              | 12           | 128                   |
| 4385           | 26          | 3            | 1                  | 2            | 2                  | 2                   | 2               | 2            | 11           | 154                   |
| 4474           | 26          | 4            | 5                  | 3            |                    |                     | 2               |              | 10           | 42                    |
| 4382           | 27          | 1            | 7                  |              |                    | 1                   |                 |              | 8            | 61                    |
| 4379           | 27          | 2            | 7                  |              |                    | 1                   | 1               | 2            | 11           | 45                    |
| 4475           | 27          | 4            | 4                  |              |                    |                     |                 |              | 4            | 16                    |
| 4384           | 28          | 1            | 4                  |              |                    | 2                   |                 | 1            | 7            | 35                    |
| 4435           | 28          | 2            | 8                  |              |                    |                     |                 |              | 8            | 59                    |
| 4434           | 28          | 3            | 11                 |              |                    |                     |                 | 1            | 12           | 95                    |
| 4476           | 28          | 4            | 2                  | 1            |                    |                     | 4               |              | 7            | 47                    |
| 4383           | 29          | 1            | 12                 |              | 1                  | 1                   | 2               |              | 16           | 129                   |
| 4433           | 29          | 2            | 5                  | 2            |                    |                     | 2               |              | 9            | 64                    |
| 4477           | 29          | 5            | 11                 |              |                    | 1                   | 3               |              | 15           | 212                   |
| 4390           | 30          | 1            | 6                  | 1            | 1                  | 1                   | 1               |              | 10           | 80                    |
| 4432           | 30          | 2            | 21                 | 2            | 1                  | 3                   | 2               | 1            | 30           | 160                   |
| 4431           | 30          | 3            | 9                  |              |                    |                     |                 |              | 9            | 44                    |
| 4430           | 30          | 4            | 6                  |              |                    | 1                   |                 |              | 7            | 58                    |
| 4392           | 31          | 1            | 3                  |              | 1                  |                     |                 |              | 4            | 53                    |
| 4429           | 31          | 2            | 11                 | 1            |                    |                     | 3               | 1            | 16           | 78                    |
| 4428           | 31          | 3            | 3                  |              |                    |                     | 4               |              | 7            | 41                    |

**Table 14. Body Sherds, 2010.**

| <b>Lot No.</b> | <b>Unit</b> | <b>Level</b> | <b>Undecorated</b> | <b>Black</b> | <b>Red-slipped</b> | <b>Red-on-brown</b> | <b>Textured</b> | <b>Other</b> | <b>Total</b> | <b>Weight (grams)</b> |
|----------------|-------------|--------------|--------------------|--------------|--------------------|---------------------|-----------------|--------------|--------------|-----------------------|
| 4478           | 31          | 4            | 14                 | 1            |                    | 1                   |                 | 2            | 18           | 115                   |
| 4376           | 32          | 1            | 13                 |              |                    | 2                   | 2               | 4            | 21           | 119                   |
| 4427           | 32          | 2            | 20                 | 1            |                    |                     |                 | 4            | 25           | 142                   |
| 4426           | 32          | 4            | 32                 | 8            |                    | 2                   | 4               |              | 46           | 305                   |
| 4391           | 33          | 1            | 13                 |              |                    | 1                   | 3               | 1            | 18           | 84                    |
| 4455           | 33          | 2            | 15                 | 6            |                    | 2                   | 7               |              | 30           | 459                   |
| 4425           | 33          | 3            | 25                 |              |                    | 1                   | 8               |              | 34           | 84                    |
| 4374           | 34          | 1            | 14                 |              |                    |                     |                 |              | 14           | 100                   |
| 4454           | 34          | 2            | 8                  |              |                    | 1                   | 1               |              | 10           | 62                    |
| 4424           | 34          | 3            | 28                 |              |                    | 3                   | 3               |              | 34           | 286                   |
| 4381           | 35          | 1            | 10                 | 1            | 1                  |                     |                 | 3            | 15           | 90                    |
| 4423           | 35          | 2            | 11                 |              |                    |                     | 1               |              | 12           | 70                    |
| 4420           | 35          | 3            | 11                 | 1            |                    | 1                   | 1               |              | 14           | 115                   |
| 4422           | 35          | 3            | 23                 |              | 4                  |                     | 1               | 2            | 30           | 166                   |
| 4479           | 35          | 4            | 10                 | 2            | 1                  | 1                   |                 |              | 14           | 59                    |
| 4380           | 36          | 1            | 8                  |              |                    |                     |                 |              | 8            | 45                    |
| 4421           | 36          | 2            |                    |              |                    |                     |                 |              | 0            | 0                     |
| 4375           | 37          | 1            | 10                 |              |                    |                     |                 |              | 10           | 40                    |
| 4419           | 37          | 2            | 11                 | 5            | 1                  | 2                   | 5               |              | 24           | 161                   |
| 4480           | 37          | 4            | 10                 |              | 1                  | 2                   | 4               |              | 17           | 102                   |
| 4373           | 38          | 1            | 15                 |              | 1                  |                     | 1               | 1            | 18           | 92                    |
| 4418           | 38          | 2            | 20                 | 2            | 2                  | 1                   | 5               | 1            | 31           | 92                    |
| 4417           | 38          | 3            | 12                 |              |                    |                     | 2               | 1            | 15           | 76                    |
| 4481           | 39          | 1            | 75                 |              | 1                  | 2                   | 16              |              | 94           | 663                   |
| 4482           | 39          | 2            | 23                 | 4            |                    | 3                   | 3               | 4            | 37           | 299                   |
| 4483           | 39          | 3            | 48                 |              |                    | 4                   | 18              |              | 70           | 857                   |

**Table 14. Body Sherds, 2010.**

| <b>Lot No.</b> | <b>Unit</b>        | <b>Level</b> | <b>Undecorated</b> | <b>Black</b> | <b>Red-slipped</b> | <b>Red-on-brown</b> | <b>Textured</b> | <b>Other</b> | <b>Total</b> | <b>Weight (grams)</b> |
|----------------|--------------------|--------------|--------------------|--------------|--------------------|---------------------|-----------------|--------------|--------------|-----------------------|
| 4484           | 39                 | 4            | 25                 | 6            | 2                  | 3                   | 5               |              | 41           | 500                   |
| 4563           | 39                 | 5            | 4                  |              |                    |                     | 1               |              | 5            | 71                    |
| 4564           | 39                 | 6            | 9                  | 1            |                    | 2                   | 1               |              | 13           | 79                    |
| 4485           | 40                 | 1            | 104                | 4            |                    | 5                   | 30              | 1            | 144          | 1299                  |
| 4486           | 40                 | 3            | 31                 | 2            | 1                  | 1                   | 7               |              | 42           | 331                   |
| 4565           | 40                 | 4            | 42                 |              |                    | 1                   | 5               |              | 48           | 407                   |
| 4566           | 40                 | 5            | 8                  | 1            | 1                  | 1                   |                 |              | 11           | 60                    |
| 4567           | 41                 | 1            | 29                 | 1            |                    | 1                   | 4               |              | 35           | 263                   |
| 4568           | 41                 | 2            | 35                 | 1            |                    | 1                   | 10              | 1            | 48           | 391                   |
| 4569           | 41                 | 3            | 17                 | 8            | 2                  | 3                   | 3               |              | 33           | 170                   |
| 4570           | 42                 | 1            | 20                 | 1            | 1                  | 1                   | 3               |              | 26           | 312                   |
| 4571           | 42                 | 2            | 11                 |              |                    |                     | 6               | 1            | 18           | 162                   |
| 4573           | 43                 | 1            | 19                 |              | 1                  |                     | 1               | 11           | 32           | 165                   |
| 4574           | 43                 | 2            | 41                 |              |                    | 1                   | 5               |              | 47           | 271                   |
| 4575           | 43                 | 3            | 35                 |              |                    |                     | 6               |              | 41           | 53                    |
| 4576           | 43                 | 4            | 11                 |              |                    |                     | 1               |              | 12           | 114                   |
| 4577           | 44                 | 1            | 42                 |              |                    | 2                   | 4               |              | 48           | 207                   |
| 4578           | 44                 | 2            | 16                 |              | 1                  |                     | 2               | 4            | 24           | 144                   |
| 4579           | 44                 | 3            | 36                 |              |                    | 3                   | 11              | 2            | 52           | 377                   |
| 4580           | 44                 | 4            | 35                 | 4            | 3                  | 1                   | 8               | 4            | 55           | 326                   |
| 4581           | 44                 | 5            | 14                 |              |                    | 1                   |                 |              | 15           | 97                    |
| 4582           | 45                 | 1            | 9                  | 7            |                    | 1                   | 3               |              | 20           | 160                   |
| 4583           | 45                 | 2            | 22                 |              |                    |                     | 2               | 3            | 27           | 149                   |
| 4626           | Exterior of W wall |              | 7                  |              |                    |                     | 1               |              | 8            | 68                    |
| 4613           | Fea. 10            | floor, 4     | 1                  |              |                    |                     |                 |              | 1            | 6                     |
| 4617           | Fea. 14            | floor, 5     | 2                  |              |                    |                     |                 |              | 2            | 14                    |

**Table 14. Body Sherds, 2010.**

| <b>Lot No.</b> | <b>Unit</b> | <b>Level</b> | <b>Undecorated</b> | <b>Black</b> | <b>Red-slipped</b> | <b>Red-on-brown</b> | <b>Textured</b> | <b>Other</b> | <b>Total</b> | <b>Weight (grams)</b> |
|----------------|-------------|--------------|--------------------|--------------|--------------------|---------------------|-----------------|--------------|--------------|-----------------------|
| 4609           | Fea. 14     | floor        | 9                  |              |                    |                     |                 |              | 9            | 38                    |
| 4612           | Fea. 7      | floor        | 4                  |              |                    | 3                   |                 |              | 7            | 311                   |
| 4610           | Fea. 8      | floor        | 6                  |              |                    | 1                   | 1               |              | 8            | 176                   |
| 4611           | Fea. 9      | floor, 4     | 3                  |              |                    |                     | 2               |              | 5            | 53                    |
| Total          |             |              | 2539               | 166          | 108                | 166                 | 451             | 142          | 3574         | 23145                 |
| Percent        |             |              | 71.3               | 4.6          | 3.0                | 4.2                 | 12.7            | 3.9          | 99.7         |                       |

\*Cleaning floor of excavation.

## **Flaked Stone**

Appendix C is a report on the flaked stone from the 2010 season, for several sites, by Tanya Chiykowski. As that report indicates, the Quevedo site flaked stone included 203 items of rhyolite, chert, basalt, and obsidian. The formal tools included a drill and a uniface.

## **Ground Stone**

All ground stone artifacts found in 2010 came from inside or immediately outside Structure 4 (Table 15). A complete mano came from Level 3 in the fill (Specimen 4608-1), while a metate (Specimen 4614-1) was found on the occupation surface outside the house. The other ground artifacts were found on the floor of Structure 4 and are considered part of a floor assemblage.

The ground stone industry, like the flaked stone industry, was expedient. Cobbles of appropriate sizes and shapes were selected, and minimal effort was expended on further shaping.

The metates had trough-shaped grinding areas, with flat areas at one end that could have served as a mano rest. Specimen 4614-1, a fragment, had a trough area only 1.3 cm deep at the break.

Most of the ground stone was found in indoor grinding areas (Structure 4, Features 1 and 2). The complete trough metate (4470-3) was propped up at an angle (presumably for grinding) by a rock (4470-1) placed under the proximal end. The metate itself was made on a large, flat, irregular cobble 45 cm long; the grinding area was 33 cm long, 21.5 to 26 cm wide, and 3.5 cm deep. The naturally flat proximal end was 12 cm long.

The broken metate (4563-1) next to the complete one was placed on its side, perhaps to provide a small stand next to the complete metate. The naturally flat area on the top of the metate fragment, at the proximal end, measured 22 by 15 cm, while the remaining grinding area was 21 cm long. The maximum depth of the trough was 6 cm.

A metate fragment (4614-1) was found Unit 15, Level 4 outside the south wall of Structure 4. Like the two other metates, it had a large naturally flat area at the proximal end. The nearly flat grinding area within the trough was 5.8 cm long (to the break) and 8.2 cm wide.

Most of the manos had a single slightly convex grinding surface, and most had not been worn out. Four manos were found near the metates in Features 1 and 2, in Units 4, 5, and 30 (4430-2; 4451-2, -3 and -4) and a half mano was found by the “main” metate (4470-2).

Specimen 4451-4 had the most convex grinding face of the assemblage. Specimen 4451-3 was unusual in having two almost flat grinding faces.

A stone ball and a flat rock formed part of Features 1 and 2.

The 2010 ground stone collection did not include axes. Those were quite rare at this site, unlike at Ch-254.

**Table 15. Ground Stone Artifacts, 2010.**

| <b>Lot No.</b> | <b>Unit</b> | <b>Context</b> | <b>Level</b> | <b>Item</b>   | <b>Description</b>                     | <b>Measurements<br/>(cm)</b> |
|----------------|-------------|----------------|--------------|---------------|--|------------------------------|
| 4592-1         | 36          | Str. 4, Fea. 6 | Floor        | Mano          | Complete; basalt                       | 17.4 by 13.4 by 8            |
| 4614-1         | 15          | Outside Str. 4 | 4            | Metate        | Proximal end, trough metate; basalt    | 20 by 10 by 18               |
| 4608-1         | 19          | Str. 3, fill   | 3            | Mano          | Complete; basalt                       | 17.5 by 12.5 by 9.5          |
| 4470-2         | 4           | Str. 4, Fea. 1 | Floor        | Mano          | Fragment; basalt                       | 8.7 by 9.9 by 7.7            |
| 4451-2         | 5           | Str. 4, Fea. 2 | Floor        | Stone ball    | Basalt                                 | 6.3 by 6.0 by 5.6            |
| 4430-3         | 30          | Str. 4, Fea. 2 | Floor        | Rough grinder | Basalt                                 | 12.3 by 9.1 by 7.3           |
| 4451-3         | 5           | Str. 4, Fea. 2 | Floor        | Mano          | Complete; basalt; two grinding faces   | 23.5 by 12.3 by 6.7          |
| 4430-2         | 30          | Str. 4, Fea. 2 | Floor        | Mano          | Complete; basalt                       | 16.9 by 12.6 by 7.65         |
| 4470-1         | 4           | Str. 4, Fea. 1 | Floor        | Support       | Basalt                                 | 15.1 by 13.2 by 6.5          |
| 4451-1         | 39          | Str. 4, Fea. 2 | Floor        | Mano          | Basalt                                 | 16.9 by 11.7 by 7.3          |
| 4451-4         | 39          | Str. 4, Fea. 2 | Floor        | Mano          | Basalt                                 | 17.6 by 11.1 by 5.5          |
| 4430-1         | 30          | Str. 4, Fea. 2 | Floor        | Support       | Basalt                                 | 18 by 13 by 6                |
| 4470-3         | 4           | Str. 4, Fea. 1 | Floor        | Metate        | Whole trough metate; basalt; expedient | 45 by 32 by 15.5–21          |
| 4430-2         | 30          | Str. 4, Fea. 1 | Floor        | Metate        | Fragment; trough metate                | 39 by 25 by 14–17            |



## Other Artifacts

A single Vermetid tubular bead was recovered from Unit 40, Level 4 (lot 4460), in the northern group of tests now thought to be a midden area (Figure 38). One Olivella bead (Lot 4528, Unit 3) rested directly on the floor of Structure 4.



**Figure 38.** Vermetid bead. Lot 4460, Unit 40, Level 4.

Four pieces of worked bone were found in 2010. A scapula rasp came from the northern units thought to represent a midden (Lot 4481, Unit 39, Level 1) (Figure 39). A tubular bone bead (Lot 4291, Unit 9, Level 2; 1.2 cm long, 0.6 cm in diameter) was recovered from the interior house fill on the west side of Structure 4. A piece of worked long bone, probably deer (Lot 4338, Unit 15, Level 2) came from fill outside the west wall of Structure 4. The midsection of a burned and highly polished awl (Lot 4418, Unit 38, Level 2; 4.25 cm long and 0.8 cm wide) was collected from the fill between Structures 3 and 4.



**Figure 39.** Scapula rasp. Unit 4481, Unit 39, Level 1.

Two small pieces of yellow ocher were found. One was found in the same unit and level as the bone bead (Lot 4291, Unit 9, Level 2; 1.5 by 0.9 by 0.6 cm). The other came from the fill in the west side of Structure 4 (Lot 4292, Unit 8, Level 2; 1.5 by 1.4 x 0.8 cm).

### **Botanical Remains**

Natalia Martínez analyzed one 2010 flotation sample from the Quevedo site:

Site 218, of the Viejo period, is on an alluvial terrace of the río Santa María where there are a variety of woodland species related to the river and cultivation was possible in the immediate area. The analysis consists of one flotation sample from Unit 1, with coordinates N153.5 E 72.6, in which 5.1 grams of pine (*Pinus* sp.) wood were identified. Although only the genus was determined, this sample may correspond to *Pinus cembroides*, *Pinus chihuahuana*, or *Pinus englemannii*, species identified by Karen Adams and Phyllis Doleman on the bajadas of the mountains near Oscar Soto Maynez (in the Santa María Valley, near the site in question). It is worth mentioning that in the previous analysis done for the 2008 field season, the wood identified at this site was juniper (*Juniperus* sp.). Given that these varieties of wood are not found on the alluvial plain where the site is located, the inhabitants probably obtained the wood from higher terrain west of the site [Martínez 2012:110; tr. by D. Phillips].

## Chapter 4

### RADIOCARBON DATES

The four radiocarbon dates from the Quevedo Site include two run in 1996 and two run in 2008 (Table 16). The two dates from Structure 1 were run at the University of Arizona. Sample AA27385 (PAC sample Ch-14C-53) was recovered from the floor of Structure 1. Sample AA 30282 was collected near the same floor. We associated both samples with the occupation of the structure. Stewart et al. (2005:237) conclude that the two dates are virtually identical, and that the structure dates to cal A.D. 990–1260 at the 2 sigma range.

The Structure 2 samples were run at the 14Chrono Laboratory, Queen's University, Belfast. Both samples were collected from just above the floor. Compared to the Structure 1 dates, these two dates are tighter at the 2 sigma range, but both fall within the 2 sigma date range derived from the first structure. In other words, the dates from the two excavated structures are similar. Given the dates, assignment of the site to the late Viejo period (1000s and first half of the 1100s) is not unreasonable (and consistent with the presence of Mimbres black-on-white pottery).

**Table 16. Radiocarbon Dates from the Quevedo Site.**

| Lab Sample Number | Structure | Material               | Radiocarbon Age | 2 Sigma Calibrated Age (A. D.) <sup>1</sup> |
|-------------------|-----------|------------------------|-----------------|---|
| AA-27385          | 1         | <i>Zea</i> kernel      | 860 ± 50        | 1150–1266                                   |
| AA-30282          | 1         | <i>Phragmites</i> stem | 955 ± 60        | 988–1214                                    |
| UBS 10439         | 2         | <i>Zea</i>             | 941 ± 19        | 1063–1155                                   |
| UBS 10440         | 2         | <i>Zea</i>             | 936 ± 10        | 1033–1155                                   |

<sup>1</sup>With highest probability. See also Stewart et al. (2005:209).



## Chapter 5

### DISCUSSION

Ch-218, the Quevedo Site, was in our sights for 20 years, having been recorded during our first field season, in 1990. At the time it was categorized as a small brownware site with few surface artifacts. Because it was so close to our field headquarters in Oscar Soto Maynez, on a well-used road that we travelled from time to time, we visited the site often over the years.

Our first impression would have been our last, had it not been for an adobe wall exposed in a modern adobe borrow pit. The wall intrigued Art MacWilliams, who kept an eye on the site and eventually excavated what remained of the adobe walled structure during two field seasons. After MacWilliams was no longer a regular project member, he continued to visit the project and show an interest—and interested others—in the site.

Incidentally, the presence of the adobe borrow pit supports local lore that prehistoric ruins with adobe architecture are good places to mine adobe. We saw the same thing happen at Ch-11, the Raspadura Site, where Mound 18 was mined by front end loaders for, we are told, adobe making material.

During the 2005 GPR survey that seemed to show round adobe wall base structures so clearly, Ch-218 was a natural candidate for further testing of the method, as well as very near and convenient. To our surprise, the GPR survey identified 21 circular anomalies in the 4 to 7 m diameter range, making it a significant settlement during the Viejo period. We hoped to excavate a number of the houses but due to various circumstances, only four structures were excavated, three of them domestic structures and one the smaller storage house excavated in 2010.

The site presents various puzzles. The GPR survey indicated depths for adobe walls that were greatly reduced in the actual testing. This is in contrast to Ch-254 (the Calderón Site), where the depths indicated by GPR were very close to reality. In addition, not all of the circular images for the Quevedo Site turned out to represent adobe-walled structures—as was the case in Units 39, 40, and 41, excavated in 2010.

The difference in surface artifact densities between Ch-218 and Ch-254 might be attributable to the progressively deeper plowing of Ch-254 and the lack of recent plowing at Ch-218, but the same situation holds for excavated artifacts. There are fewer artifacts at Ch-218, however one compares the two sites.

And we often wondered why anyone would build their settlement at that location, which today is a windswept, bare terrace edge populated with a variety of biting and stinging creatures.

While the age of the site is not known with precision, we have opted to combine the 2  $\sigma$  ranges from radiocarbon dates (Chapter 4) with the near-absence of Mimbres Black-on-white and Santa Ana polychrome to infer that most of the site occupation preceded the local introduction of those

types. If so, the Quevedo Site is at least roughly contemporary with the pre-Mimbres Black-on-white, pre-Santa Ana Polychrome part of the sequence at Ch-254.

The internal chronology of the site remains unclear. While we identified 21 round structures anomalies in the right range for domestic structures, we have no indication of how many of these were occupied at one time, or for how long.

The Quevedo Site is the second largest known Viejo period settlement, by house count, in the Santa María valley. Within the area covered in the GPR survey, no obvious community house was identified—meaning that no oversized circular anomaly was present. Perhaps people from this settlement went to the nearby Calderón site for ceremonial occasions requiring a community house.<sup>1</sup>

The site deserves more thorough investigation. The chances are that the site will remain available for further study, despite local looting, as the surface indications are so sparse.

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<sup>1</sup> This assumes that Structure 1 at Ch-254 was a community structure, as most members of PAC have accepted. Tanya Chiykowski, who excavated Structure 6 at Ch-254 in 2010, argues that Structure 1 at Ch-254 was a domestic structure, based on the lack of a clear size differential between Structure 1 and other structures at the site, and on the fact that the community houses identified by Di Peso et al. (1974) at the Convento and Los Reyes sites were much larger than the domestic structures (Chiykowski 2011). Still, the size differential could have been less in the southern zone than to the north.



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## Appendix A

### TWO PROBLEMATIC SITES IN THE PICACHO VALLEY

Two tested sites, along the arroyo Picacho in the upper Santa María drainage, yielded modest pottery assemblages and thus date to the Ceramic period. However, they do not fit into either the Viejo period or the Medio period. Unfortunately, neither produced radiocarbon samples.

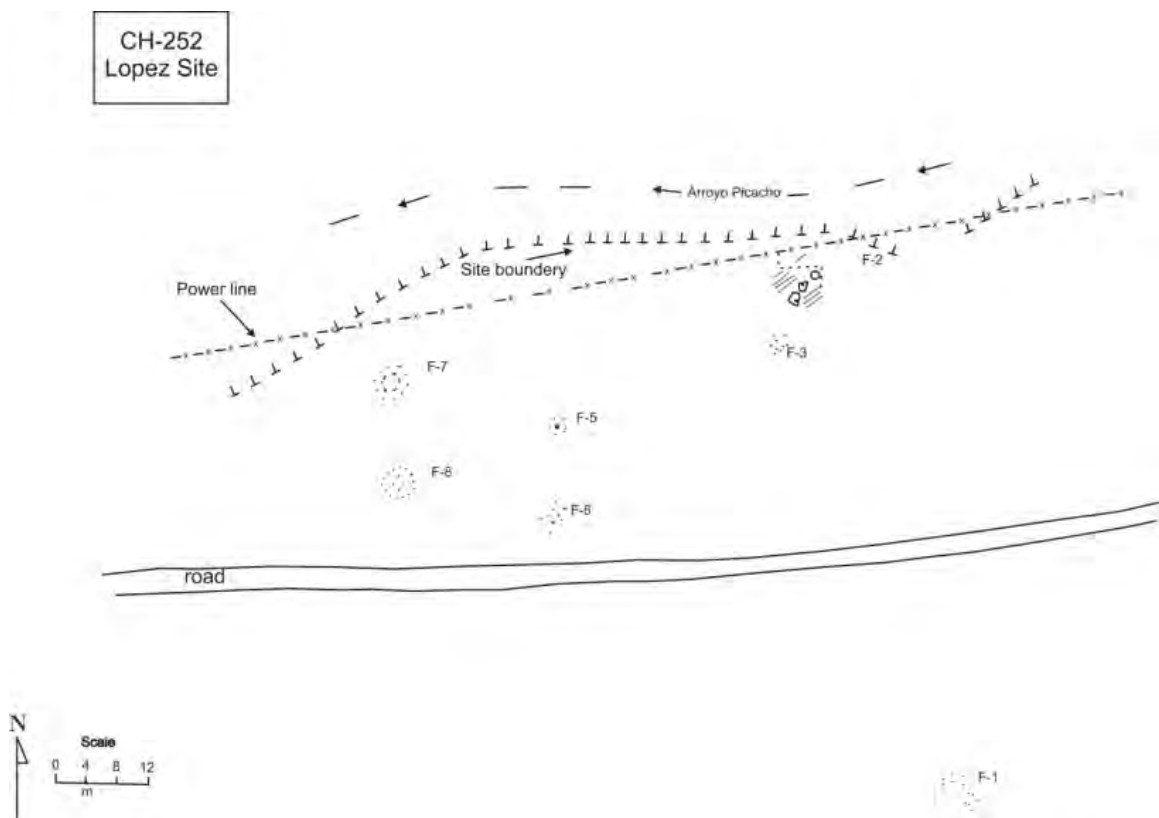
#### CH-252, the Lopez Site

This site, first recorded and mapped in 1996 and tested in 1999 and 2007, is north of Cerro Picacho, on a terrace south of the arroyo Picacho and CH-156 (a Medio period site) (Figure A.1). Cerro Picacho is covered by oak woodland. Today, the Picacho valley is mostly used for pasturage and forestry. The broader parts of the local valley bottoms are farmed by the Ejido Francisco Zarabia to the east and the Ejido Guadalupe Victoria to the west.



**Figure A.1.** Arroyo Picacho area and the location of CH-252. Image source: Google Earth.

In 1996, the site was recorded as several discrete rock alignments and two small mounds, along with a sparse scatter of stone artifacts (Figure A.2). The two small mounds were possibly structures. During later visits that year, a few sherds were collected from the site surface and from backdirt from a modern post hole. The limited variability in the pottery, coupled with the rock alignments and low mounds, suggested that the site might pertain to the elusive early Viejo period (or to a still earlier, undefined period). Given this fact and the PAC's goal of establishing a chronology for the Viejo period, we tested the site in 1999 and 2007.



**Figure A.2.** CH-252. Rendering of a sketch map made in 1996, by Loy Neff. Features 1 through 6 were identified as rock alignments, while Features 7 and 8 were identified as raised mounds.

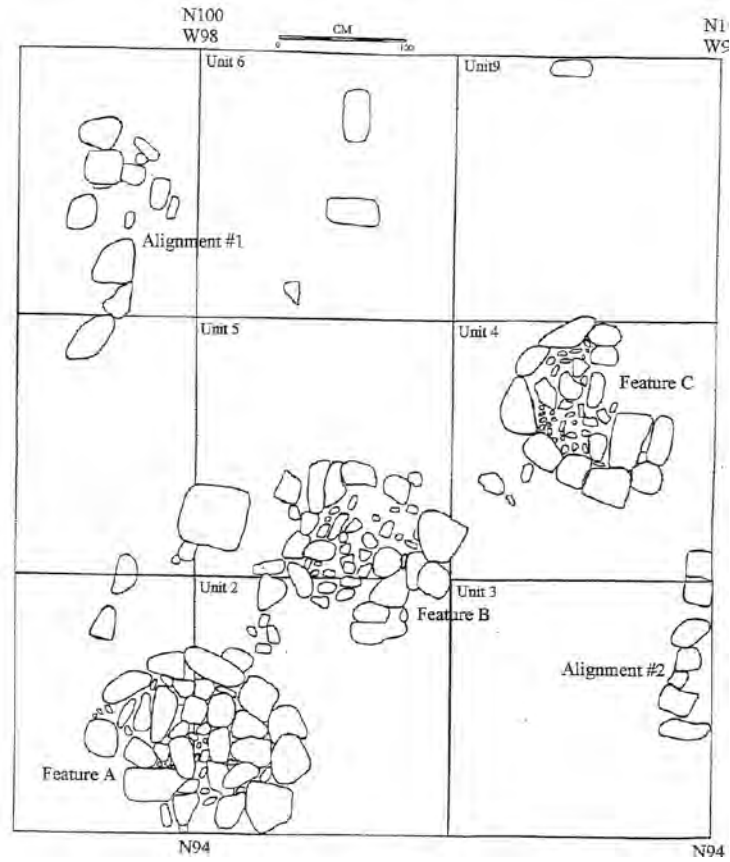
### Testing in 1999

In 1999 we returned to the site to test one of the mapped features, in the hope of obtaining datable materials. Some of the features noted in 1996 were no longer visible. Instead, cultural deposits appeared to be quite shallow over the entire site. This was certainly the case at Feature 2, which on testing proved to include three circular rock features and other rock alignments (Figure A.3.). These were completely excavated. The three circular features were regarded as probable cultural features, while the other alignments were seen as possibly natural.

### Testing in 2007

In 2007 we placed a test pit was placed in Neff's Feature 8, one of the two small mounds on his 1996 site map and regarded as possible remnants of structures (Figure A.4). Feature 7, the other low mound, had been disturbed (perhaps by looters) so was not selected for testing. A 1 by 1 m unit, designated 2007 Unit 1, was placed in the center of the feature.

Seven unworked rhyolite flakes (Lot 2535) came from the top of this level, none from the lower part. At 10 cm BD, we found a piece of bottle glass, perhaps introduced through the animal burrowing visible in the walls of the unit (Figure A.5). No other artifacts were found in the unit.



**Figure A.3.** Plan of CH-252, Feature 2, after excavation.



**Figure A.4.** CH-252, Feature 8. Left: looking west across Feature 8 prior to excavation. Right: Feature 8, Unit 1, after clearing vegetation but before excavation.





**Figure A.5.** Profile of Feature 8, Test 1, showing Levels 1–3. View to west.

The stratigraphy of the nearby bank of arroyo Picacho (Figure A.6) is practically identical to that of Feature 8, in that both have compacted ash above dark clay. As only a few flakes were recovered from the uppermost part of the test, the stratigraphic similarities led us to conclude that the mound was a natural erosional remnant.



**Figure A.6.** South bank of arroyo Picacho. The sequence of white ash over dark clays is the same as in Feature 8, Unit 1.

## Artifacts

The sherds collected in 1996 were mostly plain wares in a variety of shades of brown, with small amounts of red-slipped and textured wares (Table A.1). The absence of red-on-brown and black pottery suggested that the site could be early Viejo period, or even pre-Viejo.

**Table A.1. CH-252, Surface Pottery from 1996.**

| Feature | Lot Number | Brown | Red-slipped | Textured | Total |
|---------|------------|-------|-------------|----------|-------|
| 2A      | 7004       | 2     |             |          | 2     |
| 2B      | 7005       | 3     |             |          | 3     |
| 2C      | 7006       | 4     |             |          | 4     |
| 3       | 7007       | 17    | 2           |          | 19    |
| 4       | 7010       | 39    |             | 3        | 42    |
| 7       | 7008       | 2     |             |          | 2     |
| Total   |            | 67    | 2           | 3        | 72    |
| Percent |            | 93    | 3           | 4        |       |

In 1996 no flaked stone was collected, although its presence was noted. No ground stone was observed.

Table A.2 summarizes the pottery obtained in 1999.

**Table A.2. CH-252, Excavated Sherds from 1999**

| Unit, Level | Lot Number | Brown | R/Br | Text. | Red-on-Slate | B/Br | Total |
|-------------|------------|-------|------|-------|--------------|------|-------|
| Unit 1, L 2 | 9146       | 1     |      |       |              |      | 1     |
| Unit 2, L1  | 9147       | 9     |      |       |              |      | 9     |
| Unit 2, L2  | 9148       | 49    |      | 2     |              |      | 51    |
| Unit 2, L3  | 9149       | 13    |      | 2     |              |      | 15    |
| Unit 3, L2  | 9150       | 5     |      |       |              |      | 5     |
| Unit 4, L2  | 9151       | 28    |      |       |              |      | 28    |
| Unit 5, L2  | 9152       | 24    |      | 1     |              |      | 25    |
| Unit 5, L3  | 9153       | 58    | 1    | 1     | 1            | 1    | 62    |
| Unit 6, L2  | 9154       | 1     |      |       | 2            |      | 3     |
| Unit 7, L1  | 9155       | 3     |      |       |              |      | 3     |
| Unit 7, L2  | 9156       | 2     |      | 1     |              |      | 3     |
| Unit 8, L2  | 9157       | 4     |      |       |              |      | 4     |
| Unit 9, L2  | 9158       | 23    |      | 1     |              |      | 24    |
| Total       |            | 220   | 1    | 8     | 3            | 1    | 233   |
| Percent     |            | 94.4  | 0.4  | 3.4   | 1.2          | 0.4  |       |

The 1996 and 1999 collections of pottery have similar proportions of undecorated brown sherds, textured sherds, and red-slipped sherds. The larger sample from 1999 also includes one red-on-brown sherd and one black-on-brown sherd. Together, the assemblages continued to suggest that the site was earlier than the known Viejo period sites of the area. No sherds were collected during the 2007 testing.

Our 1999 *Informe* (Kelley et al. 2000) noted that rhyolite flakes and a small biface of yellow chert were found that year, and the flaked stone column was checked for each lot assigned to CH-252 in the project's Lot Book. An artiodactyl scapula, probably from a deer, was found during the 1999 excavations, and other unidentified animal bones were noted for Lots 9148, 9149, 9150, 9152, 9153, and 9156. No radiocarbon samples were obtained. No grinding tools were observed or collected during the 1999 excavation or during the 2007 testing.

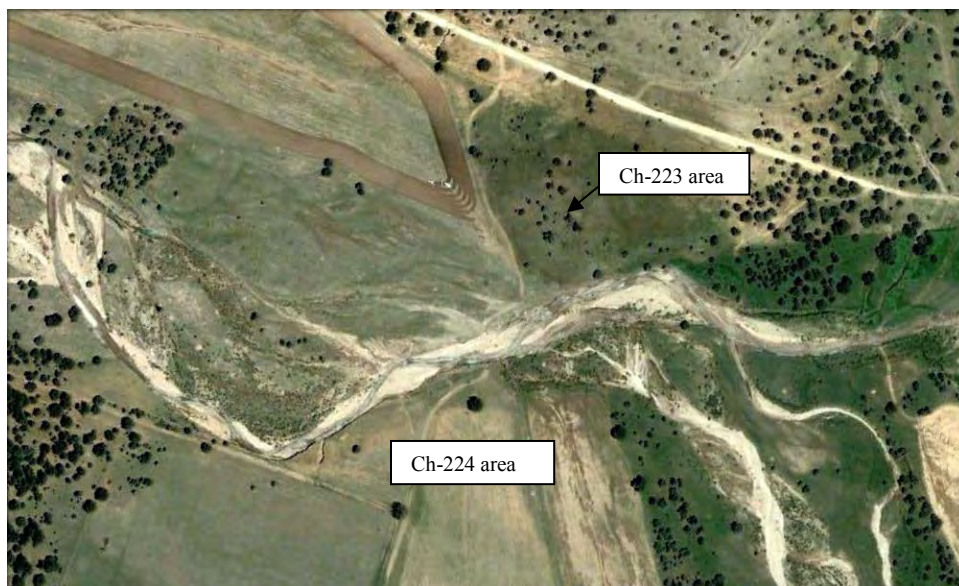
The site may be pre-Viejo, and we have at times considered it as such (Kelley et al. 2000:70). If it is from the Viejo period, it may be earlier than our confirmed Viejo period sites or is a special function site, or both. The failure to find grinding tools in 1996, 1999, and 2007, together with the artiodactyl scapula, hint that the site was a campsite used for hunting.

### **CH-223, The Rock Site**

This enigmatic site, first recorded in 1992, is unlike any other recorded in the PAC study area. The Rock site is 3 km upstream from (east of) sites CH-252 and CH-156, in the Picacho valley, 1 km west of the Ejido Francisco Zarabia, near the confluence of arroyo Picacho and arroyo los Tanques. The location is unusual in being so far from the main valley, but such side drainages have rarely been surveyed.

The site is on a spur of igneous rock that extends into the valley, and overlooks a locally broader section of the Picacho valley. Today, that same section of valley contains some of the fields of Ejido Francisco Zarabia, so it is likely that the inhabitants of CH-223 had fields in the same place. PAC registered the fields below the site as Ch-224 because of a dispersed surface scatter of flaked stone and occasional grinding stones (Figure A.7).

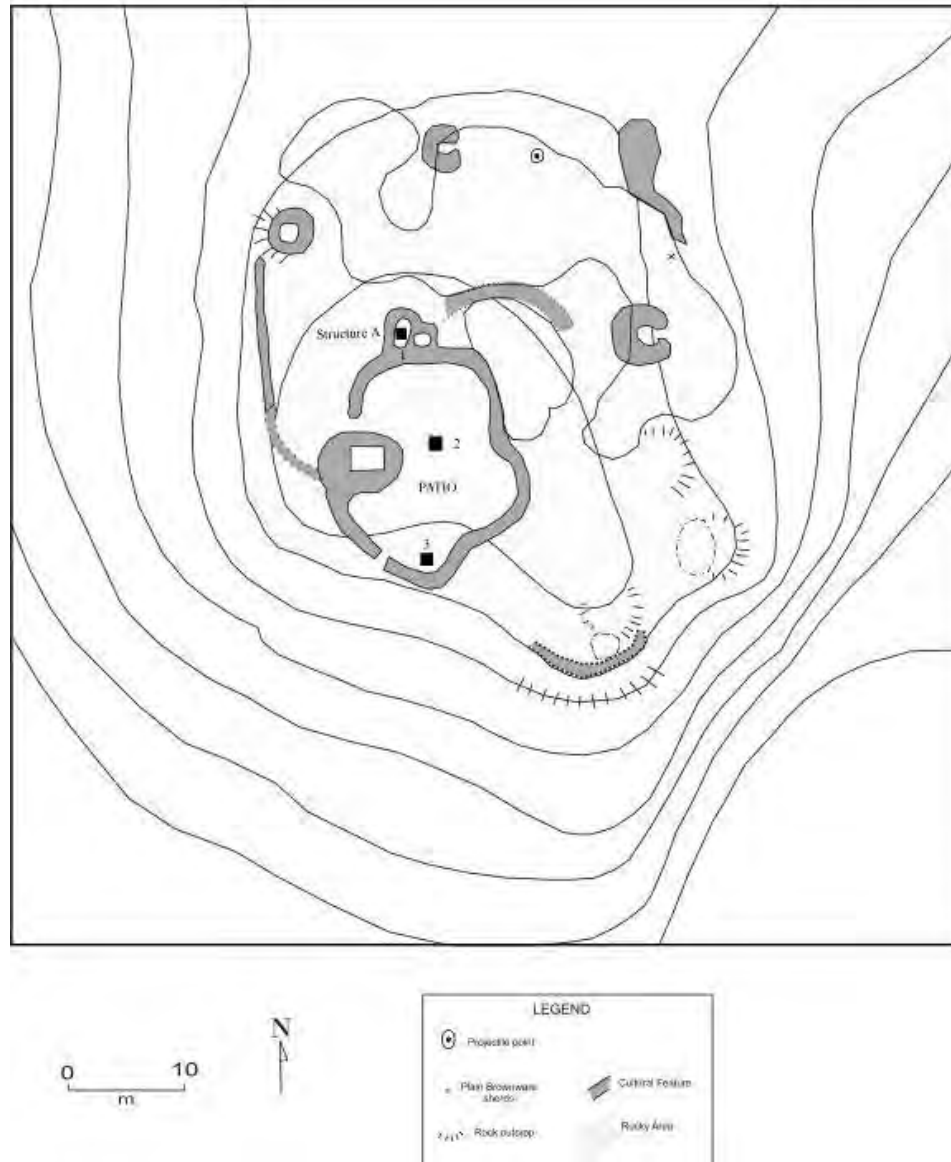
A shallow, discontinuous soil covered the igneous bedrock, and cultural deposits were shallow. Visible features consist of low cobble wall remains marking foundations of at least five small structures, plus curving walls outlining two larger areas that we called "patios" (Figure A.8). Surface artifacts proved to be sparse on each of our several visits, but the observed pottery led us to think this might be a pre-Chihuahua Culture, but Ceramic period, site. The site was sketch-mapped in 1992 and again in 2007 (Figure A.9). In 1996 one of the structures was excavated down to sterile (Test 96-1), and two 1 by 1 m tests were placed in the plaza area (Tests 96-2 and 96-3).



**Figure A.7.** Arroyo Picacho and the locations of CH-223 and CH-224.  
Image source: Google Earth.



**Figure A.8.** A “patio wall” at CH-223. View to SSE. The Picacho valley floor is visible at the upper right, beyond the edge of the igneous spur. Ann Marie Duma and Art MacWilliams at the site in 1996. Photo 96-3-2.



**Figure A.9.** Map of CH-223.

The 1996 excavations were intended to locate deeper deposits and materials for radiocarbon dating. One small, circular feature was excavated, and two 1 by 1 m units were placed in the central cleared area of the site. None of the cultural deposits was more than 25 cm deep, no stratigraphy was noted, and no macrobotanical materials were obtained.

### **Test 96-1**

Test 96-1 was in a circular, stone-outlined structure, 2 m in diameter, with an opening to the east (Figure A.10).





**Figure A.10.** CH-223, Test 96-1. Top: area prior to excavation in 1996. View to west, down the Picacho valley. The sierra in the distance is on the west side of the Santa María Valley. Photo 96.3-1. Bottom: the excavated feature. View to the west. Photo 96-3-9.

The foundation walls were made of large, rather rectangular blocks of native stone, one and two courses high, with fallen rock in the feature interior and around its exterior. No interior features or artifacts were found. The interior occupation surface was just above the uneven bedrock.

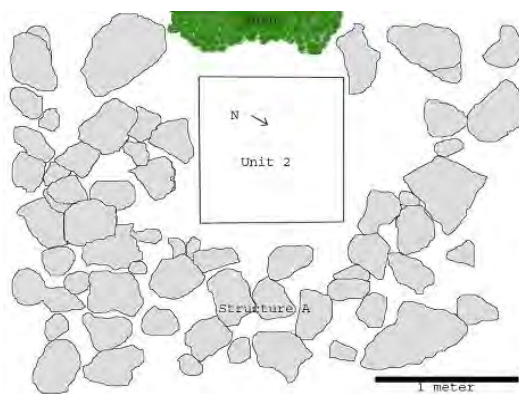
Tests 96-2 and 3 confirmed the shallowness of the deposits in the “plaza” areas, and produced a few artifacts.

## Test 2007-2

In 2007 we again tested the site, in an effort to find radiocarbon samples. Test 2007-2 was a 1 by 1 m unit in the center of a semi-circular architectural feature, designated “Structure A” (Kelley et al. 2008) (Figures A.11 and A.12).



**Figure A.11.** CH-223, Structure A, cleared of vegetation in 1996. This was the largest structure on the site. View to southwest across the Picacho Valley. Photo 96-3-3.



**Figure A.12.** Plan of CH-223, Structure A, with location of Unit 2007-2



The structure consisted of two surviving courses of heaped, unworked basalt boulders and cobbles, with no visible signs of binding mortar, and a scatter of collapsed stones around the perimeter. The approximate exterior dimensions of the structure were 3 m (north-south) by 4 m (east-west). The exact interior dimensions could not be ascertained because we did not identify any walls within the test pit. The entrance to the structure may have been to the west, as there were fewer stones on that side.

In Level 1 (0–20 cm BD; Figure A-13) the soil was soft, dark brown soil, with occasional rodent burrows. An abundance of basalt stones of various sizes was found, but with no pattern. Some of the larger stones were probably wall fall. About 10–20 cm BD we found five pieces of ground stones (one metate fragment, three mano fragments, and one incised stone). The ground stone could not be tied to an occupation surface or level; the soil continued to be soft, dark, and brown throughout the unit. The collected artifacts consisted of numerous flakes and a few small sherds.



**Figure A.13.** CH-223, Unit 2007-1. Left: base of Level 1. Middle: base of Level 3 (at bedrock); mistakenly labeled “Level 4.” Right: west profile.

Level 2 (21–25 cm BD) was an arbitrary level, separated from Level 1 to further check for a possible surface associated with the ground stone tool fragments. The soil matrix was no different from that in Level 1, and there was no discernible change in artifacts.

Level 3 (26–46 cm BD) contained a similar loose dark brown soil, interspersed with many stones, but with a noticeable drop in the number of artifacts. At 46 cm BD we hit a sterile level of fragmented, soft, yellowish bedrock in the center of the unit. A one peso coin dated 2005 was placed on the bottom of the unit before backfilling.

### Test 2007-3

This unit was in the center of the “patio,” where grass litter covered the surface. The soil was light brown and included a few igneous rocks (none of them large) (Figure A.14). Some of the stones were extremely brittle and seemed to have been fire-cracked rock (FCR). A large rodent burrow crossed the NE corner of the unit. A core and a possible hammerstone were found next to each other, possibly still in situ, not far above the bedrock, at 16–28 cm BD.



**Figure A.14.** CH-223, Test 3, after excavation.

#### **Test 2007-4**

This test was placed at the south end of the patio. The soil matrix was light brown, with a few igneous rocks (none of them large). Uneven bedrock was exposed at 27 to 45 cm BD.

#### **Pottery**

The first surface collection, made in 1992, consisted of five plain brown sherds (including two rims, one thickened) and a single Babícora Polychrome sherd found at the extreme south edge of the site. The larger collection made in 1996 was also dominated by undecorated brown sherds, but also yielded black-on-tan, red-on-brown, and textured sherds (Table A.3).

The three sherds recorded as black-on-tan, from the two “patio” areas, were quite eroded and black paint was present only in patches. The red-on-brown sherd from Test 3 was eroded and the red was difficult to see. In the lab the red seemed to be lines rather than slip, so the sherd probably was a Viejo period red-on-browns.

In 2005, another surface collection was made at Ch-223. This one yielded nine plainware sherds in colors ranging from brown to tan to terracotta. One sherd with a tan interior and gray paste exhibited a firing cloud. A second sherd had dark brown designs (triangular motifs, with the points opposed but not touching) on a tan background. A textured olla rim was also collected; it had shallow finger impressions on the rim exterior.

**Table A.3. CH-223, Sherds from 1996.**

| Provenience                   | Lot Number | Brown | Black-on-tan | R/Br | Text. | Total |
|-------------------------------|------------|-------|--------------|------|-------|-------|
| General Surface               | 7001       | 97    | 2            |      | 14    | 113   |
| Surface of rock feature to W  | 7002       | 1     |              |      |       | 1     |
| Surface, N end of open area   | 7003       | 7     | 1            |      |       | 8     |
| Test 1, (excavated structure) | 7015       | 1     |              |      |       | 1     |
| T3, L1                        | 7017       | 99    |              | 1    | 9     | 109   |
| T2, L1                        | 7018       | 8     |              |      | 3     | 11    |
| Total                         |            | 213   | 3            | 1    | 26    | 243   |
| Percent                       |            | 87.6  | 1.2          | 0.4  | 10.6  |       |

Additional categories were added with subsequent collecting, including a second Babícora polychrome sherd and some eroded painted sherds (see also Figure A.15). In spite of the surface finds of Babícora polychrome, the assemblage appears to date to the Viejo period or earlier. Admittedly, the assemblages from this site and Ch-252 are not large, but the difference in the frequencies of textured sherds suggest that Ch-223 might be later than Ch-252.



**Figure A.15.** An unusual checkerboard design on a black-on-brown sherd.  
CH-223, surface (Lot 2515).

### Stone Artifacts

Test 1996-3, at the south of the “plaza,” produced the most flaked stone as well as the most sherds (Table A.4).

**Table A.4. CH-223, Flaked Stone from 1996.**

| <b>Provenience</b> | <b>Lot Number</b> | <b>Flakes</b> | <b>Cores</b> | <b>Proj. Points</b> | <b>Total</b> |
|--------------------|-------------------|---------------|--------------|---------------------|--------------|
| Surface            | 7001              |               |              | 1                   | 1            |
| Test 1, L1 N       | 7015              | 7             |              |                     | 7            |
| Test 1, L1 S       | 7016              | 12            |              |                     | 12           |
| Test 3             | 7017              | 178           | 1            | 1                   | 180          |
| Test 2             | 7018              | 37            |              |                     | 37           |
| Total              |                   | 234           | 1            | 2                   | 237          |

Most of the 1996 flakes were basalt; rhyolite, chert, quartzite, and obsidian flakes were also found. A complete point from Test 3 (Lot 7017) was small (1.1 by 0.7 by 0.1 cm), with a very slightly convex base and corner notches. A point found on the site surface (Lot 7001-1) was crudely made, with a convex base and a single elongated side notch on one side (1.9 by 1.0 by 0.5 cm). The tip was broken. Both points fall within the known range of Viejo period point forms.

The 2007 ground stone included a possible metate fragment and three mano fragments, along with an incised rock (Figure A.16), all from Test 2007-2.



**Figure A.16.** CH-223, engraved stone.

In 2007, flaked stone was abundant but in most cases unmodified. As was the case with the sherds, most of the 2007 flaked stone was concentrated in the upper few centimeters of fill. The only recorded shaped tools came from Level 1 of Test 4, where two small obsidian points, a large chert biface with use wear along one edge, and a small scraper on a rhyolite flake were recovered. Most of the flakes and cores were rhyolite, with minor amounts of basalt, chert, and quartzite.

## **Summary and Discussion**

CH-223, known to PAC members as the Rock Site, is unlike any other southern zone site known to us. The volcanic spur on which the site is located provided an abundance of cobbles for construction and, to some extent, the plazas and structures were created by clearing away naturally occurring cobbles. The original form of the small, round structures with heavy stone foundations is unclear. The amount of fallen rock shows that several courses of rough masonry were present. It seems likely that the upper part of these structures, with interior diameters of only 1 to 2 m<sup>2</sup>, were made of hide or thatch. The site also had low stone walls delimiting at least two outside areas.

The small structure excavated in 1996 produced neither interior features nor abundant artifacts. Testing in 2007, in the largest of the stone-outlined structures, did not expose an obvious occupation surface, albeit several pieces of ground stones may have been associated with an unprepared surface. Cobbles were numerous throughout the fill of all tests. The absence of identifiable occupation surfaces, as well as the small sizes of the structures, suggest that these structures were not used year-round or even for extended periods.

The only artifacts recovered from Test 2007-3 were close enough to bedrock to suggest that the surface of the patio was on or very close to bedrock.

Our efforts to find radiocarbon samples were unsuccessful. The presence of decorated brown wares and the lack of Mimbres Black-on-white and Santa Ana Polychrome may place the site early in the Viejo period. It may have been a site used only for farming and hunting (with the main occupation somewhere else in the Santa María Valley). The site's location—well within a side valley—strikes us as unusual, as does the architecture, but these impressions may be due to the lack of survey data from comparable topographic locations. Both CH-252 and CH-223 belong to the lengthy period of ceramic production in the southern zone, but neither can be firmly fixed in time.

## Appendix B

### PEDESTRIAN SURVEY OF THE PICACHO VALLEY<sup>1</sup>

*Loy Neff*

The pedestrian archaeological survey of arroyo el Picacho took place on June 16–20, 2008. In alphabetical order, the crew included Rafael Cruz Antillón, Warren Hill, Loy C. Neff, Alberto Peña Rodríguez, and Francisco Zuñiga-Lopez.

Between two and five archaeologists examined 100 percent of selected farmers' fields. The fields were selected in a checkerboard pattern (i.e., alternating fields), on the north and south sides of the east-west road across the valley, south and southeast of Francisco Sarabia (Figure B.1). The crew walked parallel transects, either north-south or east-west, at 15 to 20 m intervals. As much as possible, fence lines were used to define the limits of surveyed areas. This method yielded a final sample of roughly 50 percent (as estimated from the map) of the more open portions of the valley bottom.

We changed methods when we shifted to the narrows in the valley, just east of Cerro El Picacho, at a north-south fence line with a cattle guard. Two archaeologists walked transects parallel to the arroyo, with one archaeologist 5 to 10 m from the arroyo and the other 15 to 20 m away. The two-person crew walked on one side of the arroyo, then back on the other side of the arroyo. This method generally yielded survey coverage of 25 to 30 m on each side of the arroyo and a 50 to 60 m wide survey in the narrow, uncultivated portion of the Picacho Valley.

Three sites were revisited to collect GPS data and photograph selected features: at CH-156 (el Picacho), CH-252 (a previously recorded site on the south side of arroyo Picacho, southeast of el Picacho), and CH-223 (the Rock site). We did not re-visit CH-25, small mound west of CH-156, identified in 1996.

One previously unrecorded site was identified: PAC 08-4, an artifact scatter consisting mostly of rhyolite flakes representing early stage reduction (primary and secondary flakes). The surface assemblage also included two ground stone fragments (Figure 6). This site is in the flats just east of the cattle guard and gate, where the valley opens up to the east (Figure B-2). The site measures 46 meters north-south by 44 meters east-west.

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<sup>1</sup> In 2008, Loy Neff led pedestrian surveys of portions of two arroyos. One was of arroyo Raspadura; the survey is not described here as it provided no information relevant to the Viejo period. The other was of arroyo Picacho, and extended from near Francisco Sarabia to the point at which the Picacho's valley opens into the Santa María Valley. The area was chosen for survey because of the known presence of CH-223, CH-156 and CH-152—all of which could be relevant to discussions of the Viejo period. The details on these surveys can be found in the project files.









**Figure B.2.** PAC 08-4. View to the east-northeast.

We recorded three isolated occurrences (IOs) of artifacts. IO-2 was a scatter of five rhyolite blocky cores and initial reduction (primary) flakes. IO-3 was a small obsidian point with the distal portion missing. One projectile point base was collected as IO-4. This was a large, corner-notched point base made of black igneous material (basalt?).

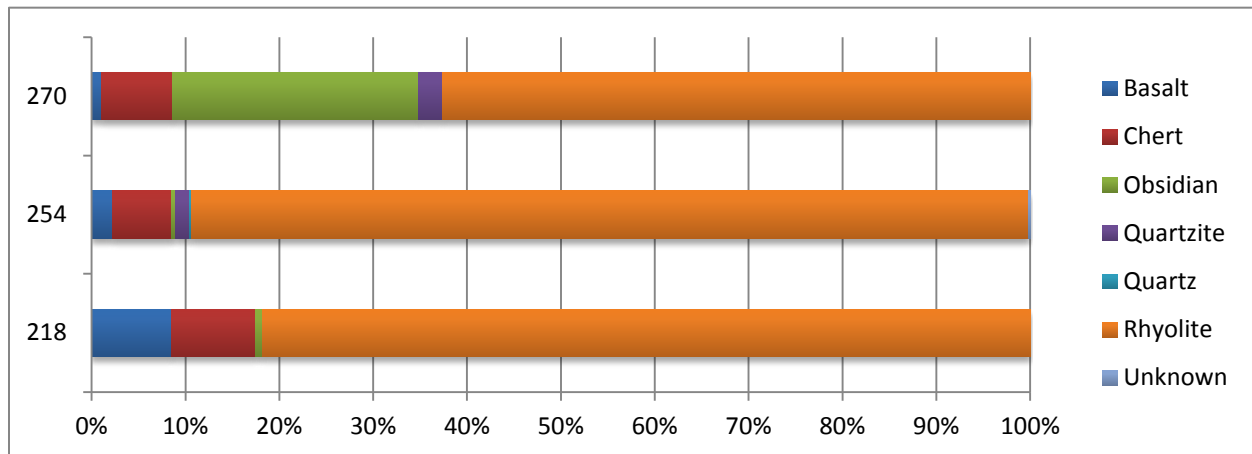
## Appendix C

### LÍTICA TALLADA RECUPERADA EN 2010

*Tanya Chiykowski*

La litica tallada se describe aquí para los tres sitios investigados en el Valle del río Santa María durante la temporada de campo de 2010. Los sitios del valle produjeron más de 1400 artefactos líticos tallados, para un total de 12.8 kg de peso. Estos fueron registrados con información de procedencia estándar, incluidos el tipo de ubicación, material, color, peso y artefacto. La etapa de producción y peso se registraron para de consistencia con reportes anteriores del PAC. La calidad de material, la corteza y la longitud y anchura fueron registradas para futuros análisis. Tipo de plataforma, la dirección de cicatriz de lasca y la terminación se registraron en las lascas.

Ch-270 es un sitio único debido a la presencia de un escondite de 37 “lágrimas de Apache” en obsidiana con un peso de entre 0.7 y 14.5 g con un promedio de 2.3 g (véase la Figura C.1). Estos en su mayoría no eran verificados y están en su forma original, que es interesante dada una casi completa falta de otros artefactos de obsidiana del sitio en la colección de 2010 (dos pequeñas lascas de la excavación y una punta de recogida en la superficie de las excavaciones). Sin embargo, este escondrijo indica que lágrimas de Apache fueron recogidas y curadas, probablemente para uso futuro.



**Figura C.1.** Tipo de material por peso.

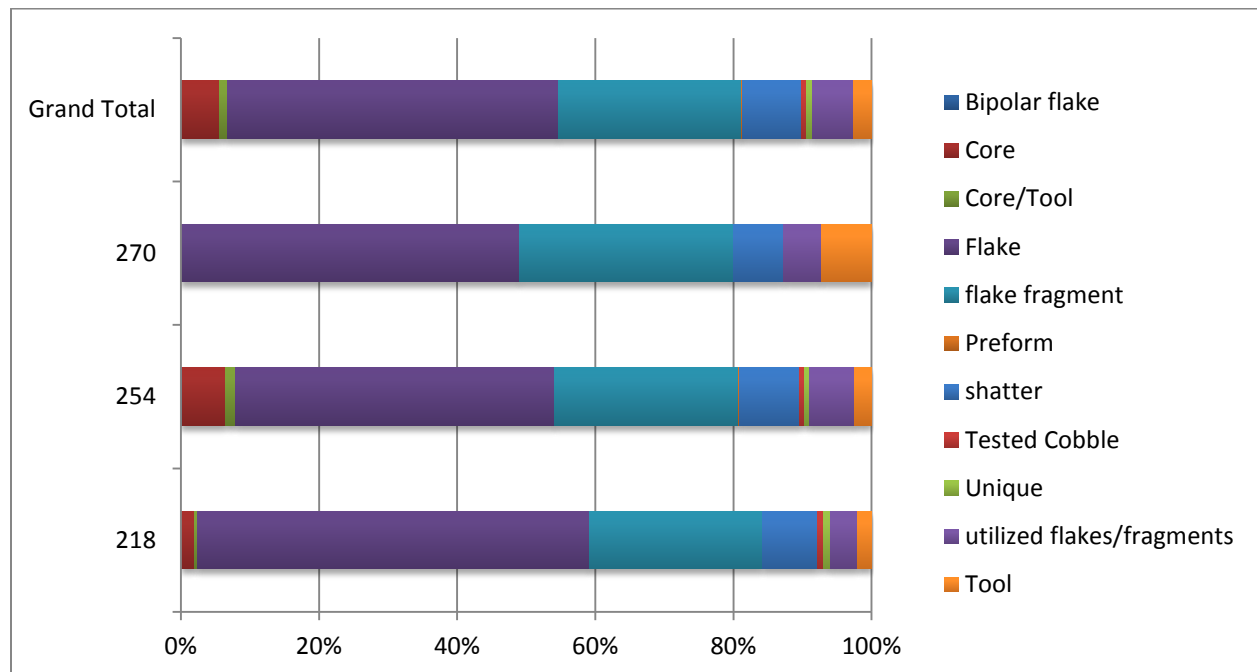
Una prospección terrestre en Ch-254 recogió artefactos de piedra y cerámica; dicha colección no se hizo en Ch-218, por lo que resulta difícil comparar ambos conjuntos de piedra tallada. Por lo tanto, sólo materiales de contextos de casas excavados se comparan aquí. Por ende, Ch-218 y Ch-254 tienen cantidades comparables de tipos de material (Cuadro C.1), sin embargo, por peso Ch-218 tiene una mayor proporción de materiales que no son riolita. En general, Ch-254 tenía casi 2.5 veces el peso del material en la Estructura 6 que los que fueron encontrados en las excavaciones de Ch-218.

**Cuadro C.1. Tipo de Material por Conteo.**

|               | Basalto | Silex | Obsidiana | Cuarcita | Cuarzo | Riolita | Sin<br>Deter-<br>minar | Total |
|---------------|---------|-------|-----------|----------|--------|---------|------------------------|-------|
| <b>Ch-218</b> | 10      | 19    | 10        |          |        | 164     |                        | 203   |
| <b>Ch-254</b> | 57      | 111   | 54        | 19       | 3      | 864     | 2                      | 1110  |
| <b>Ch-270</b> | 2       | 10    | 40        | 2        |        | 38      |                        | 92    |

Este es un patrón común observado durante varias temporadas de campo con Ch-254 que tiene sustancialmente más artefactos que Ch-218, tanto en la superficie y en las estructuras excavadas.

Utilizando sólo los materiales excavados, en general los tipos de artefacto se comparan aquí por sitio en términos de los tipos básicos de artefacto (Figura C.2). Ch-254 tiene una mayor proporción de fragmentos de lascas, probablemente debido a la extensa actividad de arado en el sitio, mientras que Ch-218, con una proporción menor de fragmentos, ha recibido muy poca perturbación debido al arado u otras actividades. Ch-254 tiene una amplia variedad de tipos de herramienta especializada. Ambos sitios tenían herramientas generales que no podrían ser clasificados con más detalle. Ch-218 tenía un taladro bien formado, un objeto que no se encuentra dentro de la excavación de la estructura 6 en Ch-254.



**Figura C.2. Tipo de artefacto por sitio.**

Como se mencionó anteriormente, un escondite de lágrimas de Apache domina el conjunto lítico de Ch-270. Aunque el conjunto general lo constituyen herramientas pequeñas, formales, y utiliza

menos formal copos conforman una porción mayor de tipos de artefacto en Ch-270 que en otros sitios. Sin embargo, hay pocas pruebas de que la secuencia de producción en este sitio.

Aunque el conjunto general fue pequeño herramientas formales, y herramientas menos formales sobre lascas utilizadas conforman una porción mayor de tipos de artefacto en Ch-270 que en otros sitios. Sin embargo, hay poca evidencia de la secuencia de producción en este sitio.

Ch-270 tiene la mayor proporción de material de “alta calidad,” es decir materiales de grano fino, porque la mayor parte de la muestra se compone de la obsidiana “Lágrimas de Apache.” Ch-254 tiene una proporción más alta de material fino que Ch-218, reflejando quizás mejor acceso a las materias primas de alta calidad. A pesar de ello, las lascas en 254 muestran menos corteza, sugiriendo que el material que estaban recibiendo estaba en la fase más avanzada de producción que en el caso de Ch-218.

Se registraron 35 herramientas de las cuales 16 fueron de contextos excavados (Cuadros C.2 y C.3; Figura C.3). Aproximadamente la mitad no pudo ser más específicamente clasificada; estos eran en su mayoría lascas retocadas o núcleos agotados con ángulos de borde no específicos. Las puntas de proyectil constituyen la forma más común, debido a su visibilidad. Sólo cuatro fueron recuperadas de contextos excavados y todas estas procedían Ch-254, todas eran pequeñas, con muescas laterales sobre obsidiana y sílex. Tres de ellas estaban en el rasgo de basurero (Rasgo 8) en los niveles superiores de la Estructura 6, junto con micro desechos de talla que visualmente coinciden con el tipo de material--lo que sugiere que las puntas se hicieron o re-afilaron en el sitio. Ninguno de las puntas del basurero se afilaron hasta su agotamiento, pero la de obsidiana, situada en el piso exterior SW de la casa (Rasgo 2) se afiló hasta su agotamiento.

**Cuadro C.2. Proveniencia por Sitio de las Herramientas de Piedra Tallada.**

|                            | CH-218 | CH-254 | CH-270 | TOTAL |
|----------------------------|--------|--------|--------|-------|
| <b>Tajador</b>             |        | 1      |        | 1     |
| <b>Taladro</b>             | 1      | 2      |        | 3     |
| <b>Herramienta general</b> | 2      | 11     | 1      | 14    |
| <b>Punta</b>               |        | 7      | 2      | 9     |
| <b>Raspador</b>            |        | 5      | 1      | 6     |
| <b>Unifaz</b>              | 1      |        |        | 1     |
| <b>Grand Total</b>         | 4      | 27     | 4      | 35    |

**Cuadro C.3. Herramientas de los Contextos Excavados.**

|               | Taladro | Herramienta General | Punta | Raspador |
|---------------|---------|---------------------|-------|----------|
|               |         |                     |       |          |
| <b>Ch-218</b> | 1       | 3                   |       |          |
| <b>Ch-254</b> |         | 4                   | 4     | 4        |



**Figura C.3.** Algunos artefactos de piedra de la temporada de campo de 2010.

Los raspadores también se encontraron. No se encontró ninguno de contextos excavados en Ch-218. Dos de los especímenes de Ch-254 fueron utilizados en productos de origen animal. Tres puntos de taladro, dos de riolita y de cuarzo, también fueron recuperados. Tipos de artefacto único fueron encontrados en colecciones de superficie que incluyen una cuña, un unifaz y un tajador.

En general, muy pocas herramientas formales fueron recuperadas. Las lascas utilizadas fueron mucho más numerosas que las herramientas formales, y este es el caso para los tres sitios. El tamaño de las piezas de lítica tallada y los patrones de tallado sugieren que en el sitio poco o ninguna preparación de núcleo. Esto, como todos los demás conjuntos de piedra tallada de la cultura de, indica una tradición oportunista/expediente de piedra tallada. Una prueba más la naturaleza oportunista de la tradición es el hecho de que pocos artefactos mostraban mucho desgaste.