THE OWENS-COLVIN SITE

OF THE SAFFORD VALLEY

By Pam Rule

EASTERN ARIZONA COLLEGE MUSEUM OF ANTHROPOLOGY
PUBLICATION NUMBER 3

Acknowledgements

Many people have contributed to the work that went into the collection, recording and organization of the information embodied in the Owen-Colvin site. Thanks are due first to Robert and Verna Rae Colvin and Rex and Jayne Owens for permission to excavate on their land. More thanks are due to Rex and Jayne for sharing their knowledge of the site and for providing many kinds of aid to the project.

Gay Kinkaid and the Coronado Chapter of the Arizona Archaeological Society contributed volunteer labor. You know who you are even if, in some cases, I do not.

Members of the Eastern Arizona College Museum Council have contributed in various ways, and Paul Phelps, EAC Public Information Office Director, has been both material helpful and forbearing in the process of producing a printable manuscript.

I am especially grateful for the sustained toil of my assistant, Gwen Dodge, who struggled with me through the process of finding, interpreting and rendering into a final manuscript the notes and manuscript that Pam left us.

Of Pat Gilman's editorial contribution I make more mention in the Forward.

And, thanks to anyone who made a contribution before I arrived and currently unknown to me.

Wes Jernigan

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Foreward

In April of 1989 Pam Rule died in a tragic accident, leaving this site report unfinished. Later in 1989 I was hired to replace Pam as Director of the Eastern Arizona College Museum of Anthropology and Instructor in Anthropology. I have also undertaken to finish Pam's report on the Owens-Colvin site. In this endeavor I have been greatly aided by Patricia Gilman who had edited a manuscript of the report. I have relied heavily on her editorial suggestions.

My intent throughout the process of finishing this work has been to preserve the integrity of it as a piece of research by Pam Rule. I have resisted all temptation to change or add to the text, and have tried to present everything as my understanding of her notes indicated she would have had it presented. I have also tried to learn from her work and learn from the site that she and her students partially excavated.

As Pam points out, this part of the Gila River drainage is not at all well studied, and is of unusual archaeological complexity. Her work at the Owens-Colvin site is the only professional excavation to have been done between the Bylas sites on the San Carlos Apache Reservation and the San Simon Village near Bowie. Thus, this report will loom large with respect to further study of the area. For that reason, I am offering to the reader a few observations of my own. I justify these observations on the grounds that Pam Rule was a scientist and would certainly have supported an exchange of ideas on the topics pertinent to this report. One thing that I feel needs to be stressed is the resemblance of the Owens-Colvin site to the sites excavated by Wasley and Johnson at Bylas, Arizona, in 1966. Particularly with respect to the pottery, there is a close resemblance between Owens-Colvin and AZ V:16:8 at Bylas. The Owens-Colvin site may be slightly earlier than AZ V:16:8 since it contains a higher percantage of Encinas Red-on-brown decorated pottery. On the basis of a comparison of these two sites with other sites in the area, I am persuaded that they both represent a continuation of the San Simon Mogollon tradition defined by Sayles in 1945 at the San Simon Village. This tradition is distinct from the Mogollon traditions in the mountains to the north and east of the Safford Valley, and remains so at least until the arrival here of the Salado. To call this tradition "Western Pueblo", as Wasley and Johnson have designated the Bylas sites, is misleading.

For reasons unclear to me, neither Wasley and Johnson, nor Pam Rule, give percentages for Gila Plain pottery sherds. Gila Plain is distinguishable from the local Alma Plain, and this is an important distinction. One's notion of who was occupying the Owens-Colvin site shift considerably when one learns that by far the larger part of the plainware at the Owens-Colvin site is Alma Plain, which is closely related to the predominant corrugated types at the site. So, despite the considerable amount of Hohokam material recovered, the utilitarian pottery is very largely Mogollon. I think it entirely likely that the Owens-Colvin site, in the time period represented by Pam's excavations, was an essentially San Simon Branch Mogollon village that engaged heavily in trade with nearby Hohokam villages. One unquestionable Hohokam village of the same time period lies only a few miles away. There may even have been some Hohokam living at the Owens-Colvin site itself. But I see no evidence of a mixing or blurring of these traditions despite their proximity and interaction. I believe that the Bylas sites are similarly explainable as either Mogollon or Hohokam sites reflecting intensive trade between the two peoples, but not cultural hybridization.

I cannot honestly say to what extent Pam might have disagreed with this interpretation of the Owens-Colvin site. She was rightly cautious in her conclusions, while I foolishly stick my neck out. But I do so out of a passionate interest in the archaeology of this area, and I believe she would have approved of that.

Wes Jernigan

Chapter One

Introduction

The Owens/Colvin site (AZ CC:1:19 (ASM)) is located on a rocky first terrace of the Gila River south and east of the hamlet of Eden in Graham County, Arizona (SE 1/4 of Section 3, Township 5S, Range 24 E, Thatcher Quadrangle). The twelve- plus acre area has been impacted by the construction of a house and several graded roads in addition to minor pot hunting concentrated in cremation areas. At present the major site deposit is under excavation by owners Rex and Jayne Owens; the remainder of the site is the property of Robert and Verna Rae Colvin of Eden. We are deeply indebted to both parties for the opportunity to conduct excavations on their land.

Investigations at the Owens/Colvin site began in 1985 and ended in mid1988 after a total of 45 field days. The crew consisted of students and volunteers from Eastern Arizona College (EAC) and the Coronado Chapter of the Arizona Archeological Society. Initial test excavations were directed by Mr. Gay Kinkade, Bureau of Land Management archeologist and an officer of the Society. Intensive fieldwork was under the supervision of Dr. Pamela Rule, director of the EAC Museum of Anthropology. Recovered remains were analyzed at the museum and diagnostic specimens remain on curation there.

Problem Orientation

The Safford Valley is one of the least studied and most complex regions of the Southwest, confronting a researcher with a bewildering array of potterytypes, no established chronology, and a curious admixture of cultural traits.Local sites have suffered intensively from both agricultural activities and plundering, with most larger manifestions essentially destroyed. The Owens/Colvin site was an important exception to this rule and it was hoped that excavation there would aid in evaluating critical issues such as:

1) The nature of local Hohokam/Mogollon interaction.

2) The cultural reality of an apparently 'hybridized' local complex combinin traits of the Mogollon and Hohokam traditions.

3) Determination of the local ceramic sequence and its temporal associations.

Given very limited resources in time and personnel the small scale EAC excavations could do little more than begin to address these complex questions; accordingly many of the interpretations herein offered may be legitimately challenged as simplistic or premature. A start must be made somewhere, however, and in the absence of a detailed data base as much as possible must be made of evidence from one of the very few controlled excavations ever undertaken in the Safford Valley.

The author apologizes in advance for the occasionally tedious handling of descriptive data. Local cultural history is so poorly documented that the descriptive groundwork available to researchers in most of the Southwest is lacking and must be built up by the same painstaking methods used by the investigators of decades ago. Only after a firm descriptive and temporal foundation has been established will it be possible to approach the higher order questions already under consideration in better known areas of the Southwest.

The Excavations

Prior to beginning excavation the entire Owens/Colvin site was laid out ina four meter expanding grid system, each square of which was designated a UNIT. Units were further subdivided into two square meter SQUARES, which formed the basic excavation divisions until specific room boundaries were demarcated. Squares and rooms were dug in

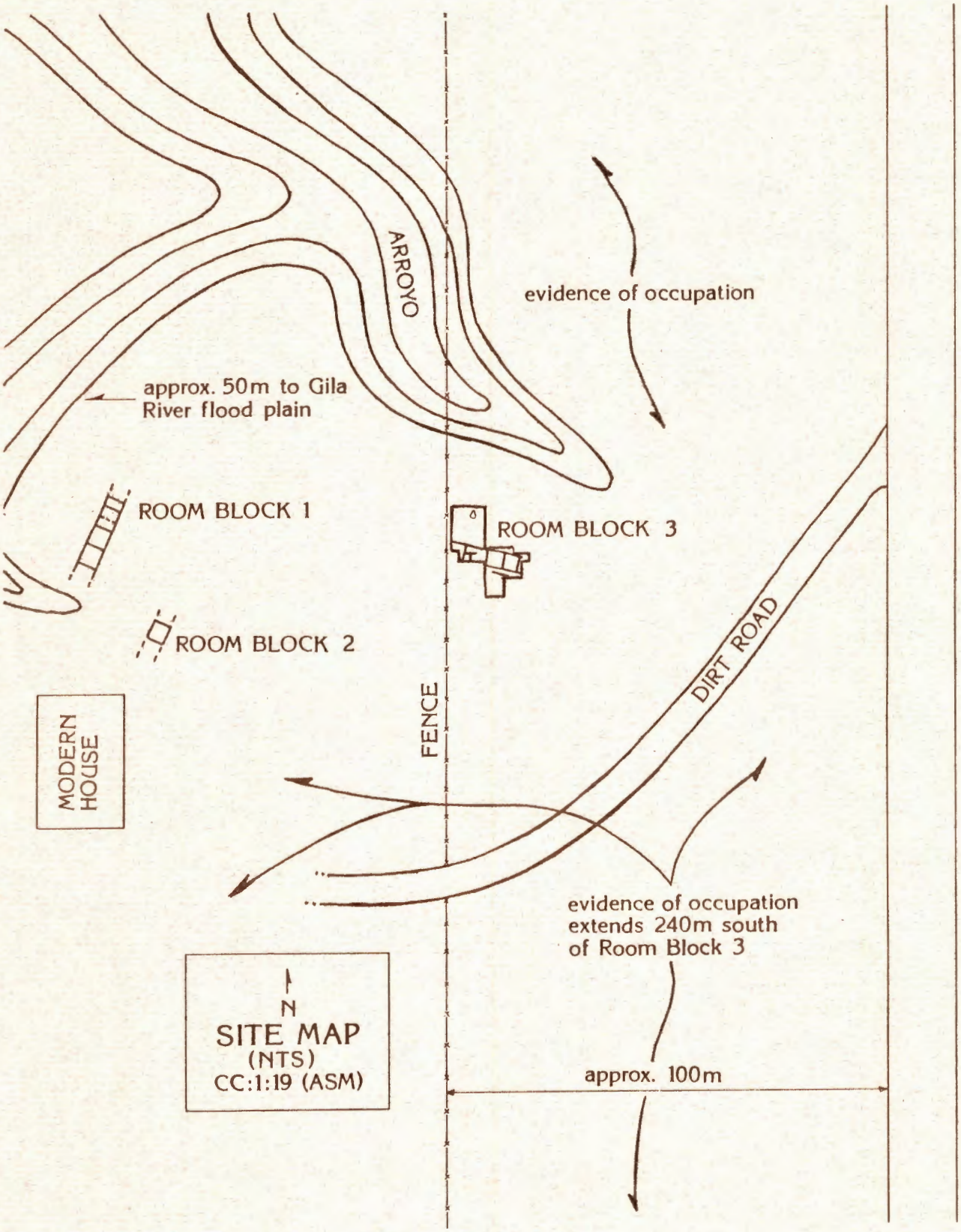


Figure 1. Site Map

natural levels, with all materials screened through a 1/4 inch mesh and bagged separately.

Following initial site testing by volunteers from the Coronado Chapter of the Arizona Archeological Society, the EAC excavations focused on three areas of the site exhibiting surface traces of architectural remains. Room Block 1 was a very shallow, primarily single occupation component located at the extreme western edge of the terrace immediately above the broad floodplain of the Gila.

A total of nine complete and partial rooms were excavated at this feature, accounting for approximately one third of its extent (Figure 1, Figure 2).

East and slightly south of Room Block 1 was a heavily disturbed Room Block feature designated Room Block 2. Excavations here were confined to the northernmost room of the feature, the sole portion of the room block located within Colvin property. This single room proved to be the richest unit excavated at the site (Figure 3).

Room Block 3 (Figure 4) and its associated midden lay immediately east of the Owens/Colvin property line and provided the primary focus for the 1987-88 EAC excavations. The major portion of the midden and the central section of the room block were excavated, the latter consisting of three repeatedly remodeled rooms and two fragmentary alignments resulting from a later rebuilding on alternative foundations. The western end of Room Block 3 is on Colvin property and remains unexcavated; the eastern end beyond the excavation limits was heavily damaged by pot hunting prior to acquisition by the current owners.

Architecture

All excavated structures were contiguously arranged square to rectangular rooms similar to those described by Breternitz (1959: 55-60) for the 'Post-Nantack Phase' at Nantack Village, Point of Pines. These structures apparently represent the final site occupation, postdating a pithouse horizon reported by the site owners (Owens and Owens, personal communication).

At CC:1:19 room shape may be strongly correlated with function. Interior dimensions of rectangular rooms averaged 3.40 x 1.57 meters for a covered area of 5.33 square meters; these structures lacked interior features and are interpreted as storage rooms. Square rooms were significantly larger than their rectangular counterparts, with average interior dimensions of 3.46 x 3.36 meters for a covered surface area of 11.62 square meters. In five out of eight cases square rooms had hearths or casual fire pits supporting their use as living quarters. Both storage and living rooms were extremely consistent in interior dimensions, with little variation in range or standard deviations (Table 1).

Excavated room blocks failed to conform to strict cardinal orientations. The long axes of Room Blocks 1 and 2 were vaguely oriented on a north/south line, with respective general alignments of 20 and 39 east of north. Room Block 3 and its later remodeling were more accurately positioned along an east/west axis, with respective orientations of 100 and 97 degrees east of north.

Despite the large size of some room blocks (the surviving long axis of Room Block 1 extended 19 meters), the architecture of the excavated site areas was extremely lightweight. In each case external walls were founded on rock alignments of varying sized unshaped boulders never exceeding two courses in height. The masonry was usually laid flat, but in one instance (Room Block 3 Room 1, east wall) seven large foundation stones were tipped upright to form orthostats. Puddled adobe was poured over the masonry to establish a low wall but the scarcity of both adobe and rock in the room fill indicates that solid walls seldom if ever exceeded a few feet in height. The remaining superstructure was jacal or a similar lightweight material requiring little internal support. Concentrations of charred reeds from the floors of Room 2/Room Block 1 and Room 1/Room Block 2 are almost certainly the remains of roofs.

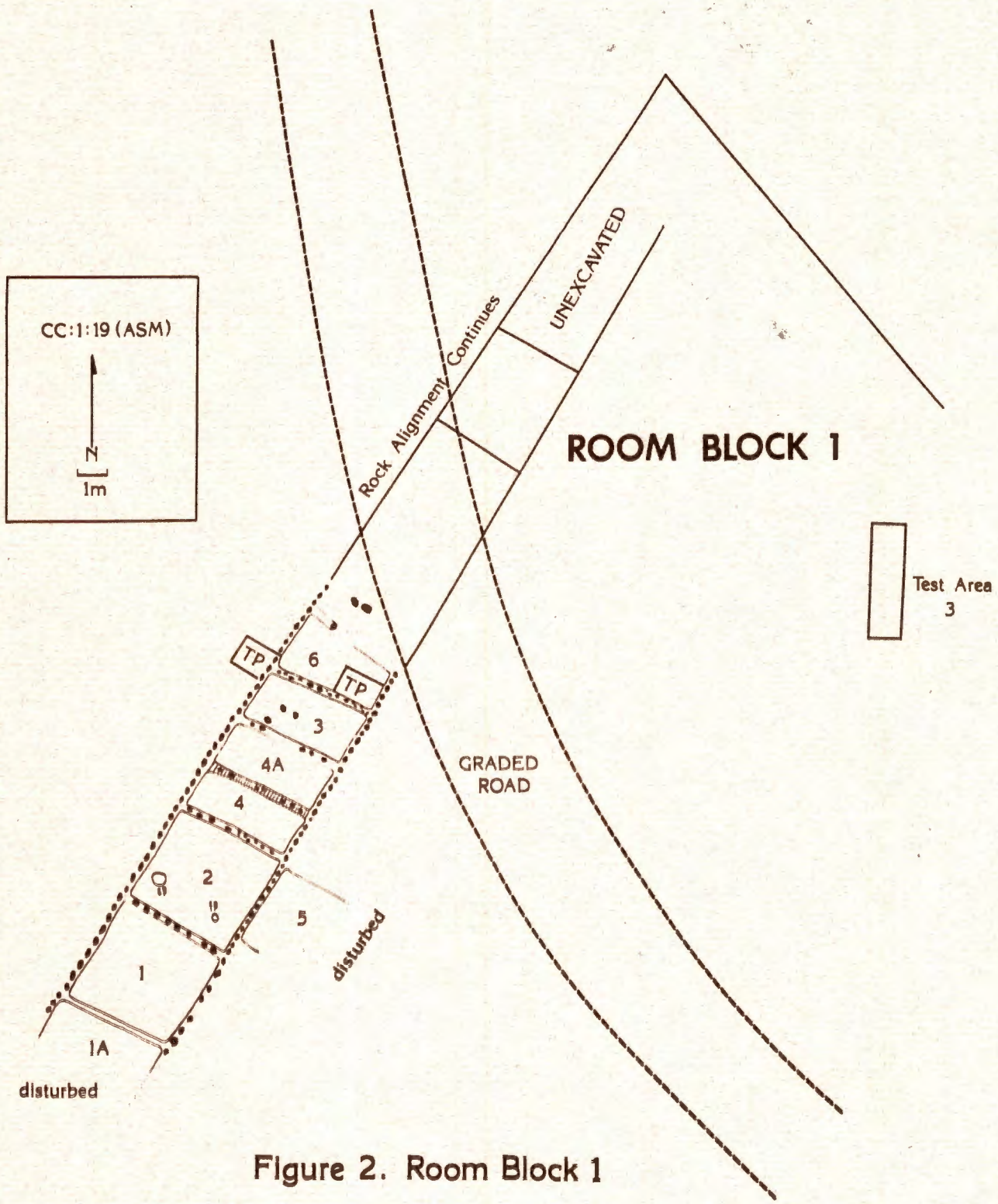


Figure 2. Room Block 1

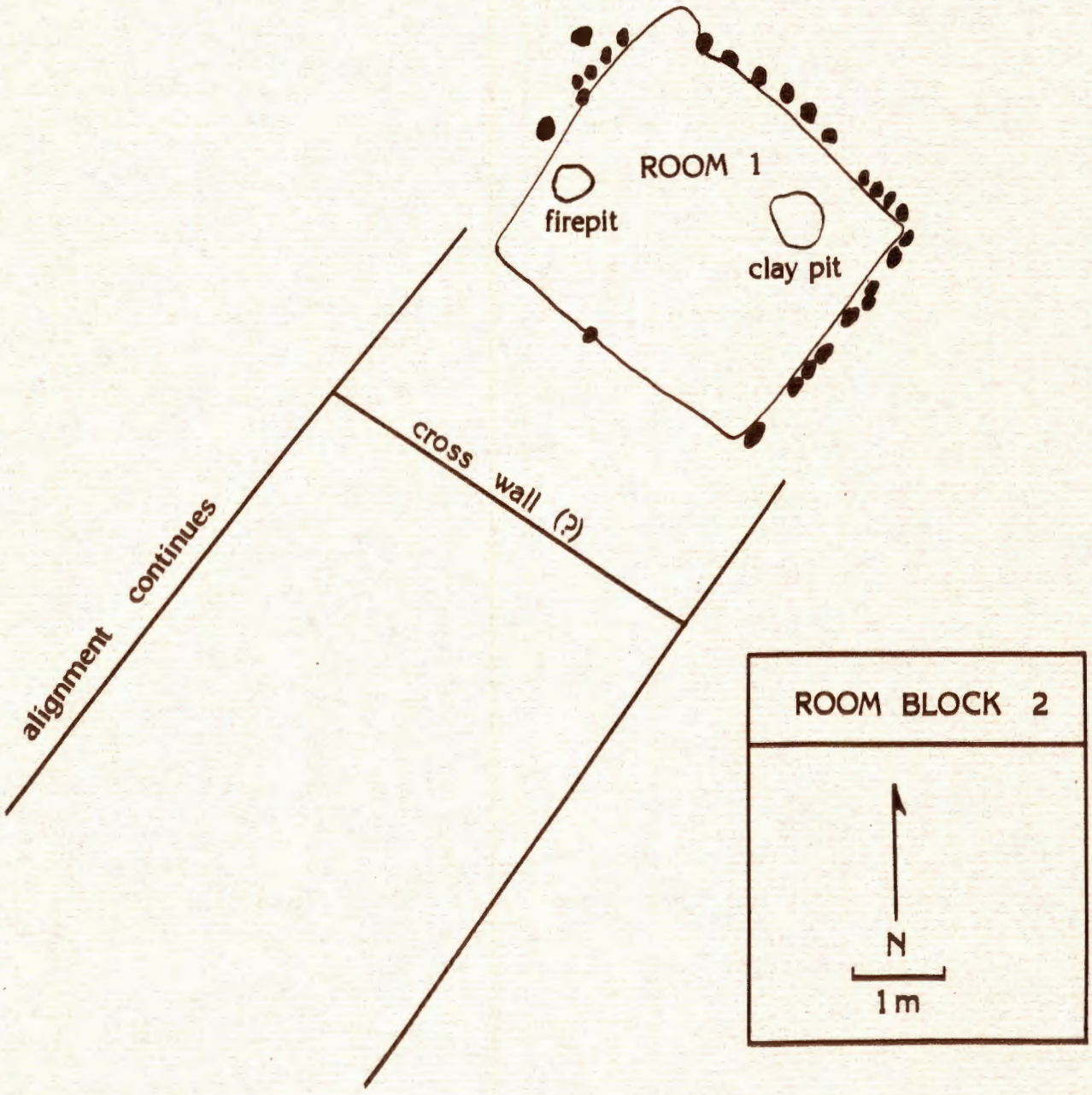


Figure 3. Room Block 2

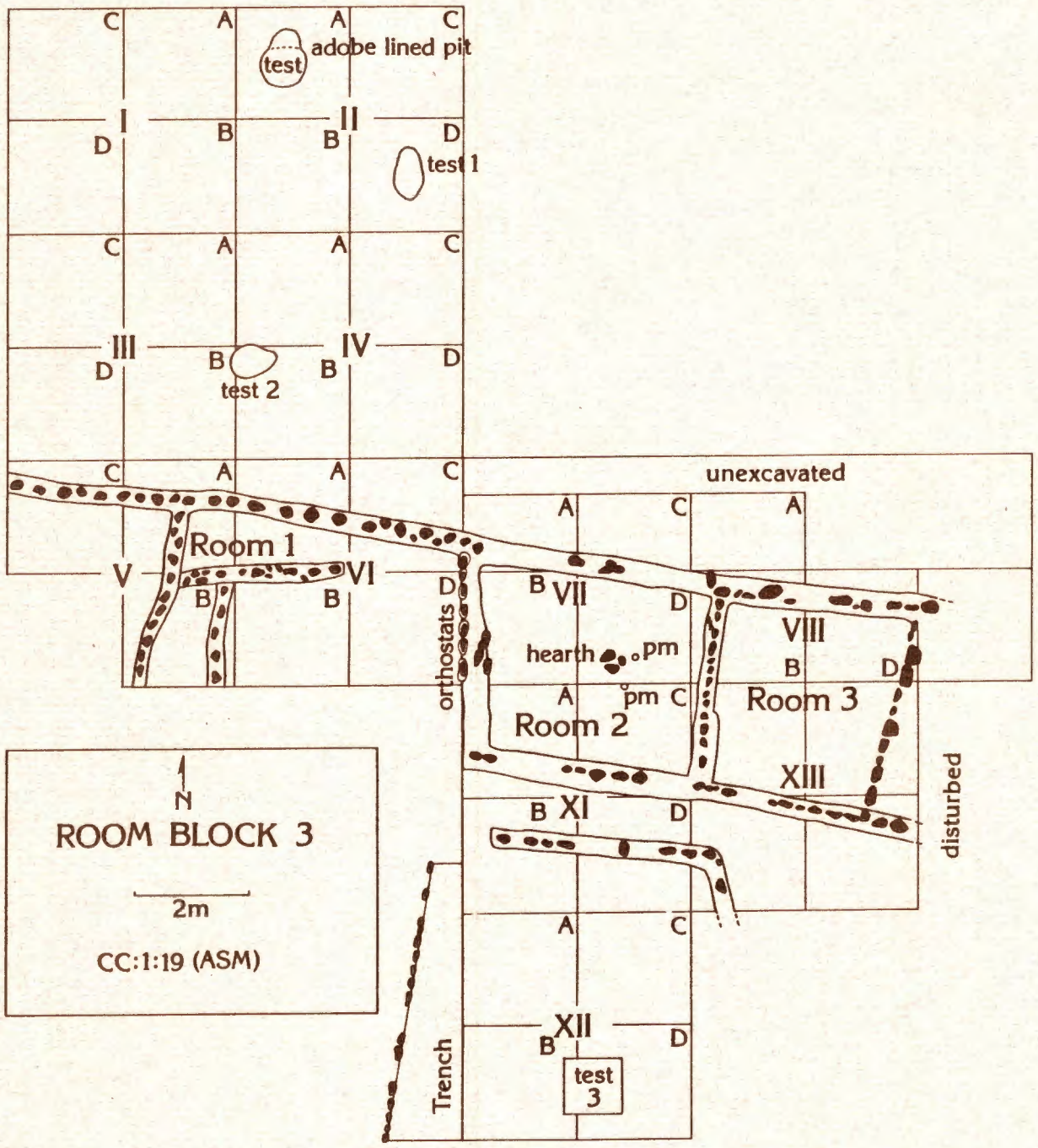


Figure 4. Room Block 3

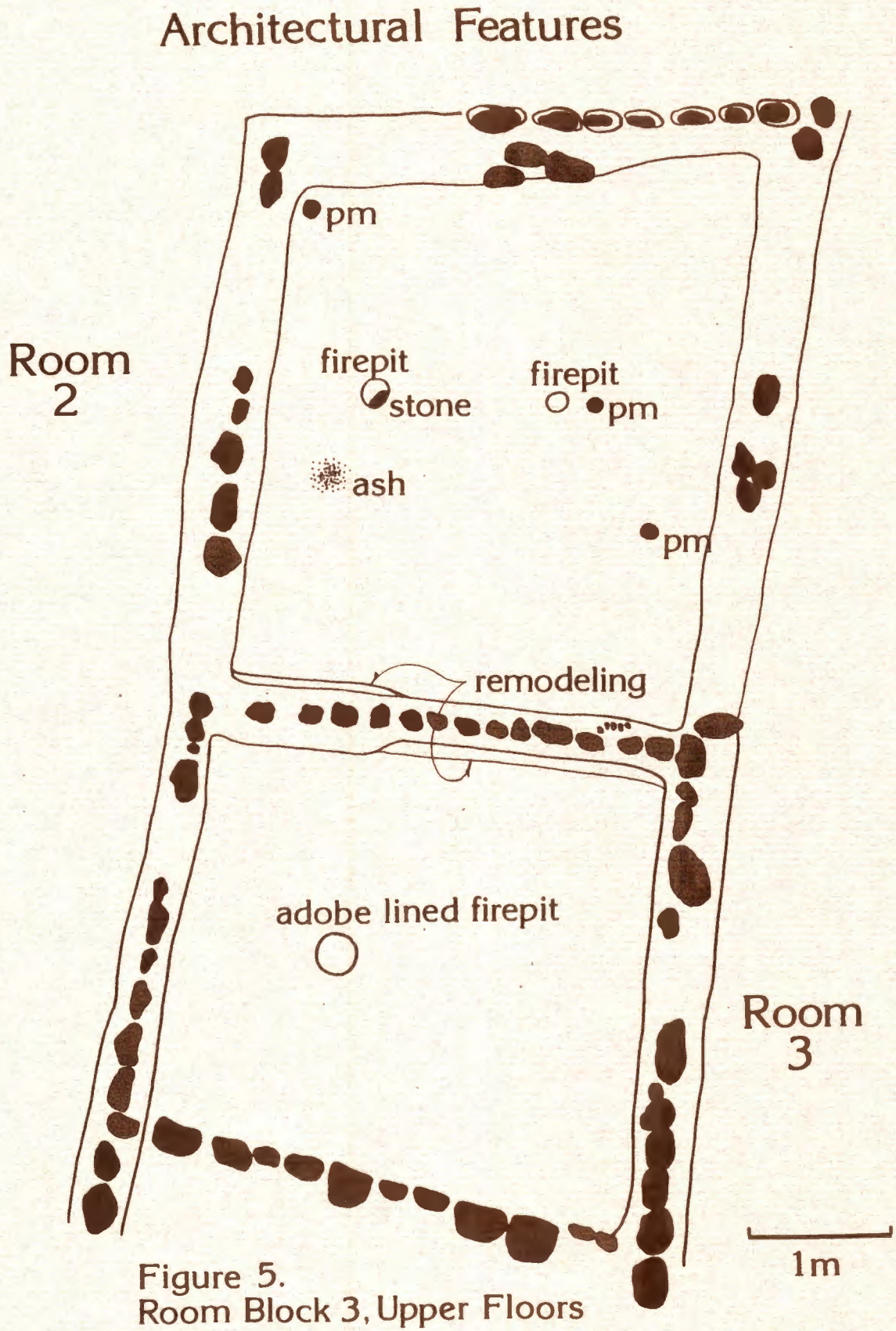


Figure 5.
Room Block 3, Upper Floors

Interior features were few and simple at CC:1:19. Hearths were identified for five of eight presumed residential units. Casual fire pits consisting of little more than scorched areas and ash concentrations were located in Room 2/Room Block1 and in the single excavated room of Room Block 2; more carefully made adobe lined hearths were encountered in Room 2/Room Block 3 (both floors) and on the lower floor of Room 3/Room Block 3.

Adobe lined pits of uncertain use were discovered in Room 2/Room Block 1, Room 1/Room Block 2 and in the Room Block 3 midden. These features averaged 50cm in diameter with depths ranging from 33-37cm, and possibly represent slaking pits for clay preparation.

Post molds were rare in the excavated units, with all five recorded specimens occuring on the two floor surfaces of Room 2/Room Block 3. Of these, two were located near the hearth on the first floor level (Figure 4) and three were identified on the second (lower) floor level (Figure 5). Two of the latter molds retained wood fragments, apparently of juniper.

Remodeling was fairly rare aside from the Room Block 3 structures. This area was frequently flooded and shows two superimposed room blocks resting on different foundations (Figure 5). Elsewhere on the site architectural modification is limited to Room 4/Room Block 1 where a normally proportioned "domestic" room was separated into two rectangular "storage" rooms (4A and 4B) by the erection of an intramural rock and adobe wall.

The overall impression of the excavated site architecture is one of fragile, easily replaced facilities intended for brief occupations. On the basis of room configuration and features Room Block 1 was primarily devoted to storage, an interpretation additionally supported by a ceramic inventory heavily weighted (79.3 percent) towards utilitarian ceramic types. Room Block 2 was too poorly sampled to evaluate its principal usage but the single excavated room was habitational. Room Block 3 was primarily domiciliary but lacked the well defined floors that are normally present if domestic structures are occupied over a long period of time.

An indication of the brevity of occupation in the excavated areas is the notable lack of ceramic stratigraphy between the upper and lower midden deposits and the superimposed floors of Room Block 3. As indicated in Figure 6 the distribution of ceramic types is essentially identical for the entire sequence; dating as it does to an era of rapid and pervasive ceramic change this pattern must reflect a very short depositional history. The site does show slight distinctions in ceramic distributions between the various room blocks and test areas, but these are subtle and do not support major temporal differences in the occupation of the surface units.

One factor which may have contributed to short occupation of the room blocks is evidence for repeated inundation by run off from Markham Wash. In Room Block 3 a 15 cm layer of flood deposited silt separated the two lower floors of Room 1, with lesser deposits overlying the lower floors of Rooms 2 and 3. The site later flooded again, apparently prompting abandonment of the original room block. Eventually new walls were erected on a different foundation (Figure 4) but these were severly damaged by grading and vandalism and could only be partially recovered. The midden deposit also showed sporadic evidence of flooding.

On a strictly conjectural level the masonry/jacal room blocks may reflect an intermittant seasonal occupation of the village during the agricultural portion of the year. This interpretation is suggested not only by the flimsy architecture, indefinite floors, poor hearths, and absence of ceramic stratigraphy, but also by the site's location on an exposed terrace in a particularly broad stretch of the Gila flood plain. Although ideal for flood plain farming and warm weather occupation, the Owens/Colvin site would not only be cold and windy in winter but also somewhat removed from winter resources concentrated in the foothills and mountains. A year round occupation of CC:1:19 has little to recommend it in an area where

double cropping is not possible and the sites final occupation may well represent a seasonal facies of mid-twelfth century occupation.

Table 1: Internal Room Dimensions

Room Block	Room	Dimensions N/S X E/W (in meters)	No. of Floors	Depth Below Datum (in cm)
1	1	3.5m X 3.8m	1	10.3
1	1A	indeterminate	1	10.4
1	2	3.3 X 3.2	1	10.3
1	3	1.6 X 3.3	1	10.4
1	4	3.2 X 3.5	2	10.4
1	4a	1.4 X 3.4	lower	11.5
1	4b	1.5 X 3.4	lower	11.6
1	5	indeterminate	1	10.5
1	6	1.8 X 3.5	1	10.4
2	1	3.1 X 3.5	1	11.2
3	1	indet. X 5.3	2	
3	2	3.9 X 3.4	2	
3	3	3.2 X 3.4	2	

Summary Statistics
All domestic rooms (N=6) N/S 3.36m average
(range 3.1-3.9; sd=0.26
E/W 3.46m average
(range 3.2-3.8; sd=0.18)

All storage rooms (N=4) N/S 1.57
(range=1.4-1.8; sd=0.14)
E/W 3.40
(range=3.5-3.4; sd=0.07)

Chapter Two

Ceramics

The ceramic inventory at the Owens/Colvin site shows an admixture of Hohokam and Mogollon elements as well as a normal complement of intrusives. Unfortunately, the very detailed technical analyses required to disentangle the complex ceramic relationships of "this poorly studied area...most notable for its ceramic confusion (Wood 1987:18)" were beyond the resources of the present analysts and only basic counts and identifications could be made. These were adequate to show that 1) the occupation of the sampled room blocks was brief; 2) not all areas of similar architecture were simultaneously occupied; and 3) the occupation of the excavated areas probably dated to the third quarter of the twelfth century. The ceramic evidence also suggests an actual Hohokam presence at the Owens/Colvin site although its attenuated, 'hybrid' nature is inferential evidence for an extended period of cultural contact prior to the current occupation.

Like most contemporary sites in the Safford Valley CC:1:19 produced a baffling array of pottery types including plainware, a huge and varied assortment of surface textured wares, redwares, brownwares, buffwares, Red-on browns, Red-on-buffs, Black-on-whites, Black-on-reds, Polychromes, and a smattering of more unusual ceramic styles. Some thirty types were identified with adequate reliability but virtually every excavation unit produced some specimens which defied labeling. Diagnostic sherds from the EAC excavations remain in curation at the Museum of Anthropology in Thatcher, and can be made available to interested researchers. Ceramic distributions at the site are presented as Appendix 1.

Utilitarian Wares

Plain or surface textured wares were the dominant types in all room blocks, respectively accounting for 78.8 percent, 74.1 percent, and 57.0 percent of the ceramic assemblages in Room Blocks 1, 2, and 3. Surface textured specimens were slightly more common than plainware despite the fact that numerous buff and brown sherds relegated to the "plain" category probably represent unpainted areas of Red-on-buff or Red-on-brown ceramics. The extensive use of surface texturing appears to decline in subsequent archeological phases and is notably less common on local Salado sites. Both plain and textured forms were frequently smudged, a trait ranging in occurence from a low of 11.2 percent in Room Block 3 to a high of 16.2 percent in Room Block 1.

Most commonly recovered at CC:1:19 were Safford Valley Buffware, Gila Plain, Point of Pines Plain Corrugated, Reserve Indented Corrugated (smudged and unsmudged),and Alma Plain. Present in more moderate quantities were Reserve Incised Corrugated, Reserve Plain Corrugated, Reserve Red, Point of Pines Punctate, Tularosa Corrugated, and an unnamed corrugated ware with a slipped and polished red interior. This latter type is also reported in small quantities from Pine Flat Cave in the Point of Pines region (Gifford 1980:160). Most rarely occuring of the utility wares were Point of Pines Punched Corrugated, Tularosa Fillet Rim, Reserve Patterned Corrugated, Playas Incised, and Pine Neck Flat Corrugated. Elsewhere on the site a restorable vessel of Alma Knobby was recovered by the site owners (Owens and Owens, personal communication) and in all room blocks occasional finds of unusual utilitarian types were made.

Red-on-buff Ceramics

Red-on-buff and Red-on-brown ceramics constituted the dominant painted pottery at

the site, together accounting for 15.2 percent of the ceramic inventory. Buffwares outnumbered brownwares by an approximate ratio of 4:3.

The principal painted buff types were Casa Grande Red-on-buff, Sacaton Red- on-buff (Safford Variety), and traditional Sacaton Red-on-buff. These types were largely consolidated during analysis owing to the difficulty of consistently separating fragments on subjective criteria such as subtle variations in surface color or in the density of design elements. Within the constraints of the analysis Casa Grande Red-on-buff emerged as the most common type, closely followed by the Safford variety of Sacaton Red-on-buff; traditional Sacaton Red-on-buff was present in smaller quantities.

Both the volume of the Red-on-buff pottery and the recovery of a pottery anvil from the Room Block 3 midden attest the local manufacture of paddle malleated wares. Pottery anvils are also reported from the nearby Daley Site in Thatcher (Irish and Irish 1981), where they occurred in association with a ceramic inventory similar to that of the Owens/Colvin site.

Red-on-brown Ceramics

Co-occurring with the Red-on-buffs and often all but indistinguishable from them were Red-on-brown ceramics dominated by San Carlos Red-on-brown and Encinas Red-on-brown.

In many areas of southeast Arizona Encinas is a relatively early type, largely displaced around A.D. 1000 by Mimbres Black on White and the Safford Variety of Sacaton Red-on-buff (Wood 1987:78). The type persisted later in the Safford and adjacent Point of Pines regions, where the few published reports consistently cite Encinas recoveries in conjunction with significantly later pottery types. Locally the ware co-occurs with "Hohokam Red-on-buff" and San Carlos Red-on-brown at the Bylas and Daley sites (Johnson and Wasley 1966; Irish and Irish 1981) and was further associated at the Daley site with St. Johns Black-on-red.

Thirty miles northeast of CC:1:19 the Nantack Village site at Point of Pines produced Encinas Red-on-brown as the "most popular decorated type" of the post-Nantack phase (Breternitz 1959:29), a period when site architecture shifted from the traditional use of pit houses to lightly built above ground structures similar to those at the Owens/Colvin site. At Nantack Village a distinctive "late" variant of Encinas is reported, most notable for its "thin creamy slip which [is] sometimes scored" and for designs executed in "paint the color of dried blood [with] no polishing over the decoration" (Breternitz 1959:29). Similarly colored and scored sherds were the most common Encinas variety at CC:1:19, although the more typical unscored variety also occurred. Other late recoveries of Encinas are reported at Tule Tub Cave and Pine Flat Cave in the Point of Pines region (Gifford 1980).

On the basis of these data, it seems probable that Encinas Red-on-brown remained in local production until at least A.D. 1100 and more probably into the mid-twelfth century.

The most common Red-on-brown type on the site was San Carlos Red-on-brown, a generally thin, well made coiled ware with deeply smudged bowl interiors and Hohokam inspired design motifs. All or nearly all of the recovered sherds were from bowls.

San Carlos Red-on-brown was present in all room blocks and test excavations, respectively accounting for 2.3 percent, 3.3 percent and 3.6 percent of the Room Block 1, 2, and 3 ceramic assemblages. These figures should be regarded as minimal since sherds from unpainted vessel areas were relegated to plainware categories. Conservatively, therefore, a minumum of 1,124 San Carlos sherds was recovered from the current excavations, including a handful of specimens exhibiting well defined Gila shoulders. A very few specimens conformed entirely to the San Carlos type description in every attribute EXCEPT interior smudging. These may represent a rare local variant, fragments of unsmudged jars, or speci-

mens in which the smudging burned away.

McDonald Corrugated Pottery

McDonald Corrugated was a common ceramic on the Owens/Colvin site despite systematic underrepresention in the gross sherd counts, resulting from exclusion of unpainted specimens. Painted specimens numbered 713 sherds and were recovered from all excavated areas; an additional 990 specimens assigned to the catch-all "corrugated exterior/smudged interior" category probably derive substantially from unpainted areas of McDonald vessels. If so, the actual popularity of McDonald corrugated at the site was as much as twice the "established" figure.

A disparity in the temporal placement of McDonald Corrugated is apparent between the CC:1:19 sample and the type's current, but highly tentative dating of about A.D. 1200-1350+ (Wood 1987:94). At the Owens/Colvin site McDonald Corrugated occurs in secure association with mid-twelfth century wares, indicating that it was in wide local use by A.D. 1150 or only slightly later. This dating is consistent with Breternitz's (1956:84) dendrochronological evidence for a starting date of A.D. 1100, although he warns that this date is "weak".

Two of the three reported variations of McDonald Corrugated are represented in the current sample. Most commonly encountered was the 'Painted Variety' in which white paint was applied in coarsely executed patterns to the unmodified corrugated surface of the vessel exteriors. Bowls with lustrous, highly smudged interiors were the universal vessel form at CC:1:19.

The "Patterned" variety of McDonald Corrugated was present but less common than the simpler painted form. In this attractive pottery geometric designs were indented into the vessel's corrugated surface, creating depressed patterns which were then filled with white paint. At the Owens/Colvin site this variant is conspicuous for its careful execution, presenting a striking contrast to the virtual "finger paint" crudeness often typical of the Painted Variety.

A third variation of McDonald Corrugated that is not encountered at CC:1:19 is a 'Grooved' variety decorated with coarse trough-like indentations filled with white paint. In contrast to Breternitz's (1959:84) qualified estimation of a uniform starting date for all three variants, Gifford (1980:37) and Wood (1987:94) both suggest that the Grooved variant may be the last to appear, an assessment provisionally supported by the type's absence at the relatively early Owens/Colvin site.

White Mountain Redware Pottery

A total of 210 sherds of White Mountain Redware were recovered from the EAC excavations. The vast majority of specimens (85.6 percent) were assignable to St. Johns Black-on-red, with all but 12 of the remainder relegated to the virtually identical St. Johns Polychrome. These ceramics differ by the presence of broad line white designs on the exteriors of polychrome bowls, making segregation highly problematical when small sherds are involved, and resulting in a systematic skewing of the sample in favor of the Black-on-red variant.

The remaining eleven White Mountain Redware specimens consist of nine sherds of Wingate Polychrome and a rim and body from a single vessel of Pinedale Polychrome. Wingate specimens were not evenly distributed on the site, occurring only in Room Blocks 1 (N=6), 2 (N=2), and on the surface of Test Area 3 (N=1).

The type was not in evidence at Room Block 3 despite the fact that 90 percent of the ceramic sample was drawn from that unit.

The interiors of Wingate bowls (the most typical vessel form) are indistinguishable from the St. Johns types in slip, paint and design motifs; exteriors, however, are plain buff

with broad designs executed in the same red paint used to produce the type's distinctive slip. The resulting exterior design is often sloppy and contrasts strongly with the complex and typically well executed interior designs. Tularosa style interior motifs strongly dominated the present sample.

A rim and body sherd of Pinedale Polychrome were recovered from Unit III of the Room Block 3 midden. These two specimens were the sole recoveries of post twelfth century White Mountain Redwares and are best regarded as intrusive into an earlier deposit.

Black-on-white Ceramics

The most common extralocal ceramics at CC:1:19 were Black-on-white wares accounting for 2.2 percent of the total ceramic assemblage. Tularosa Black-on-white strongly predominated within the sample, distantly trailed by Reserve Black-on-white. Other types (including Mimbres and some Anasazi varieties) were present in very small quantities.

The dominance of Tularosa over Reserve style pottery is an indication that the major site occupation post dated A.D. 1150 when the simpler decorative conventions of the Reserve style were superseded by the more elaborate and generally better executed Tularosa motifs. Pitchers and jars were the principal vessel forms for both wares.

Thirteenth and Fourteenth Century Ceramics

Ceramics temporally consistent with a later "Salado" period occupation at the Owens/Colvin site were limited to six sherds, consisting of three Salado polychrome bodies from the fill of Room 1/Room Block 2; a body sherd of Maverick Mountain Black-on-red from the site surface; and a rim and body from a single vessel of Pinedale Polychrome from the Room Block 3 midden (see above). Together these anomolous recoveries account for only 0.001 percent of the analyzed assemblage and must be weighted accordingly.

The nearly total absence of Salado Polychromes is culturally significant, indicating that the site remained abandoned during the Safford Valley's most intensive period of prehistoric occupation. A similar pattern of occupational discontinuity appears to be a common phenomenon in the Valley, leading some experienced local archeologists to suggest informally a deliberate avoidance of earlier sites by Salado immigrants (Betty Graham Lee, personal communication).

Alternatively, a significant economic transition may have occurred, with the Salado populations focusing more on large, permanent villages supported by intensive flood plain farming while the earlier economy was characterized by more fluid land use and greater population dispersal. The resultant change in human-land relationships would tend to produce disparate settlement patterns. A second possibility related directly to the abandonment of the Owens/Colvin site might be the failure of a small spring located just off the western site perimeter. This spring, currently running, has failed for long periods in living memory and may have been similarly erratic in the distant past.

Miscellaneous Types

Miscellaneous types, often represented by single sherds or sherds from single vessels, account for 0.5 percent of the site ceramic assemblage. In most case these specimens could not be identified as to type. A descriptive listing of unusual specimens includes the following (proveniences are indicated in parentheses):

1) Polished red exterior/smudged interior (Room Block 1)
2) Tularosa fillet rim (Room Block 1; Room Block 3)
3) Smoothed brownware with fine linear incisions (Room Block 2; Test Area 3*)
4) Light orange slip with black painted design (Room Block 2)
5) Smudged on both interior and exterior (Room Block 2; Room Block 3; Test Area 3*)

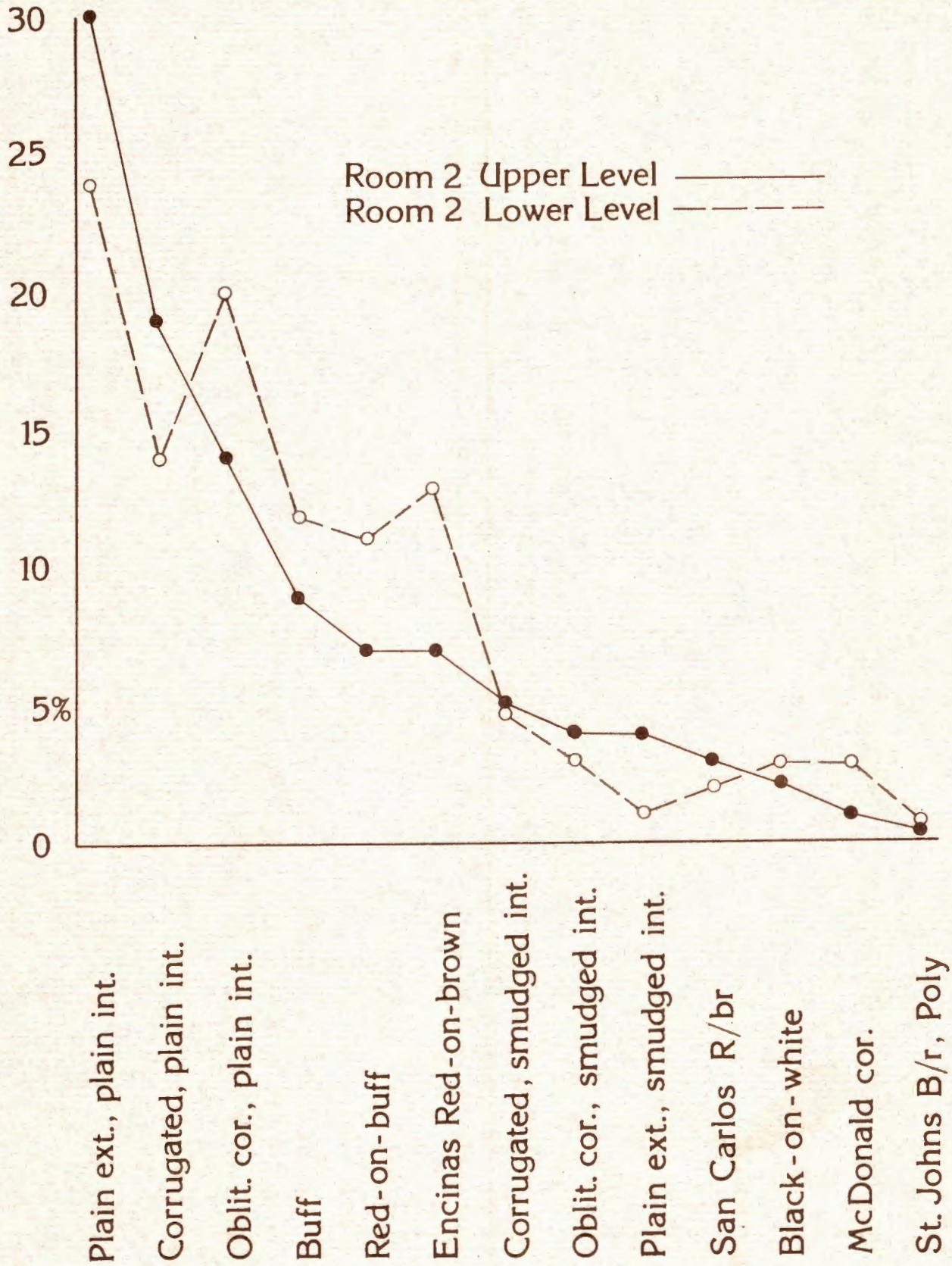


Figure 6. Room 2, Room Block 3, Ceramics

Plate 1

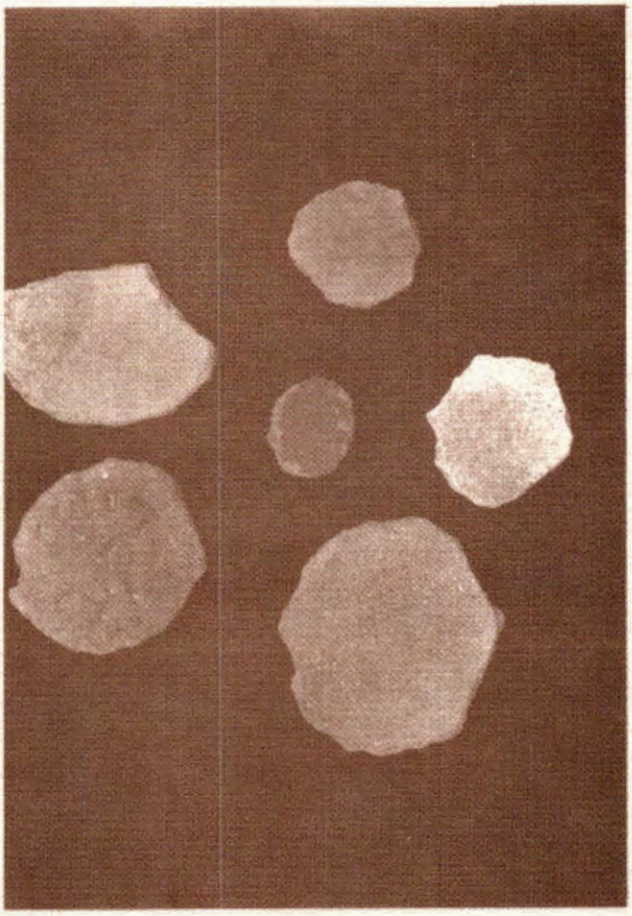


Plate 1. Concentration of Worked Sherds.

6) Highly polished Red-on-brown (Room Block 2)
7) Corrugated exterior/Red-on-buff interior (Room Block 3)
8) Red exterior/polished gray interior (Room Block 3)
9) Incised corrugated exterior/burnished red interior (Room Block 3)
10) Smudged exterior with linear punctate design (Room Block 3)
11) Red on buff interior/Red-on-buff exterior (Room Block 3)
12) Coarse redware with white linear design/smudged interior (surface*)
13) Densely red slipped int and ext, with deep oblique exterior tooling (Test Area 3*)

*=Arizona Archeology Society excavation under Gay Kinkade.

Other Ceramic Artifacts—Worked Sherds

Worked sherds were a common recovery at CC:1:19, and showed variation in both the degree of modification and in apparent purpose. The majority were of very simple format, consisting of crudely broken, unground sherds in circular, triangular or rectangular shapes. One concentration of such casual geometrics was recovered from a limited area of Unit II, Square A in the Room Block 3 midden and may have functioned as a rudimentary gaming set (Plate 1).

A total of 12 carefully shaped whole or partial discs were recovered, including six with centrally placed biconical holes appropriate to spindle whorls. Other discs were undrilled (gaming pieces?) or too fragmentary to allow a functional determination. In two additional cases sherds were carefully modified to "subrectangular" shapes with evenly rounded corners (Figure 7); these specimens probably represent pot smoothers, but use as pendants cannot be ruled out in their incomplete state.

The final modified sherd was a scoop manufactured on a large Red-on-buff rim. The original rim had been carefully ground to increase overall curvature and the edges of the break had been smoothed. One margin shows minor fire damage subsequent to modification.

Other Ceramic Artifacts—Nose Plug

Among the more interesting recoveries from Room Block 3 was a curved clay septum plug retrived from the lower floor of Room 2 (Figure 8). This specimenwas similar in shape to a well finished red argillite plug recovered elsewhereon the site by the owners (Owens and Owens, personal communication). To the best of my knowledge these are the first such specimens reported from the Safford Valley.

Clay septum plugs are rarer than their stone counterparts although the useof clay for various forms of flesh plugs is attested in southwestern contexts(Jernigan 1978:74-77). The present specimen is additionally unusual for itslight red coloration, artifically produced by kneading ground hematite into theraw clay prior to modeling; this probably represents an attempt to duplicate thered color of argillite, the most favored material for septum plugs throughoutthe Southwest. Both terminals of the present specimen are shallowly indentedand probably held inlays.

Other Ceramic Artifacts—Tesserae

Two thin ceramic rectangles of White Mountain Redware were recovered from the Room Block 3 midden and from the second floor of Room 3/Room Block 3. The specimens, evidently intended as mosaics, had been ground from larger sherds to the fairly uniform thickness of 2.9-3mm, about half of their original thickness Margins were then ground to produce rectangular to subrectangular chips preserving the bright polished slip of the original sherds as the obverse aspects.

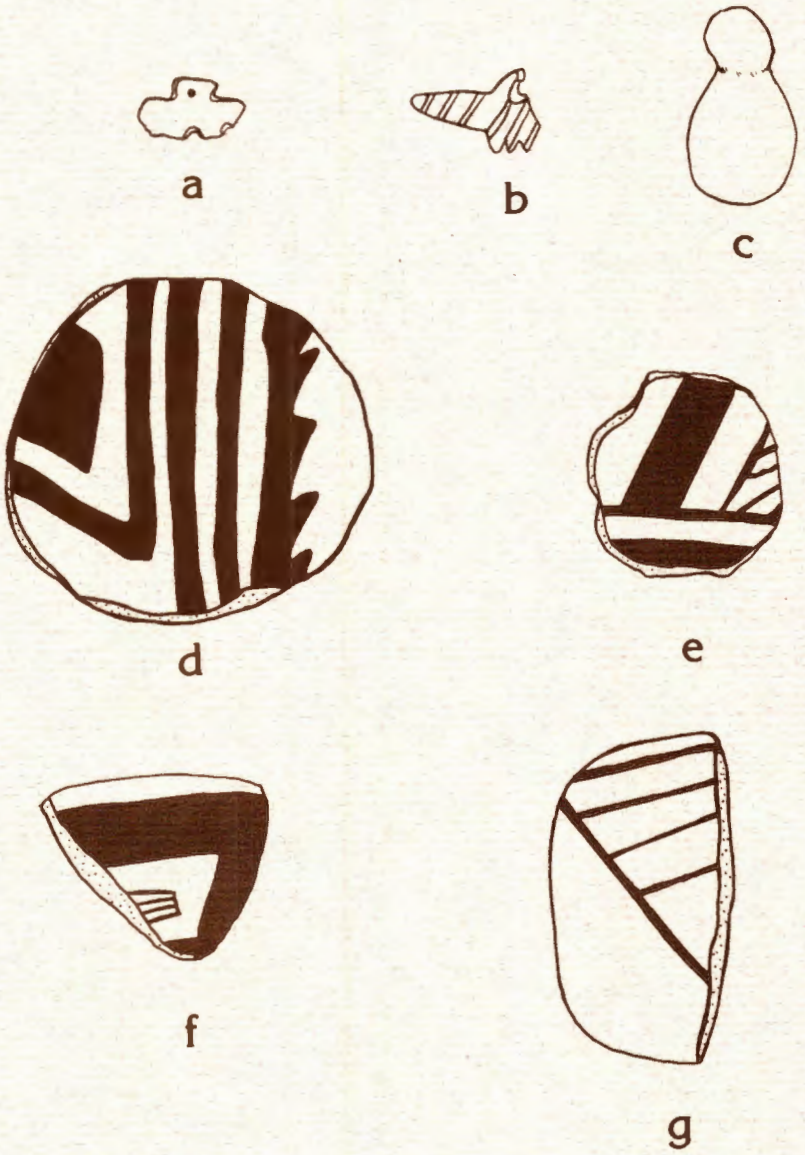


Figure 7.
Shell, Stone and Ceramic Objects

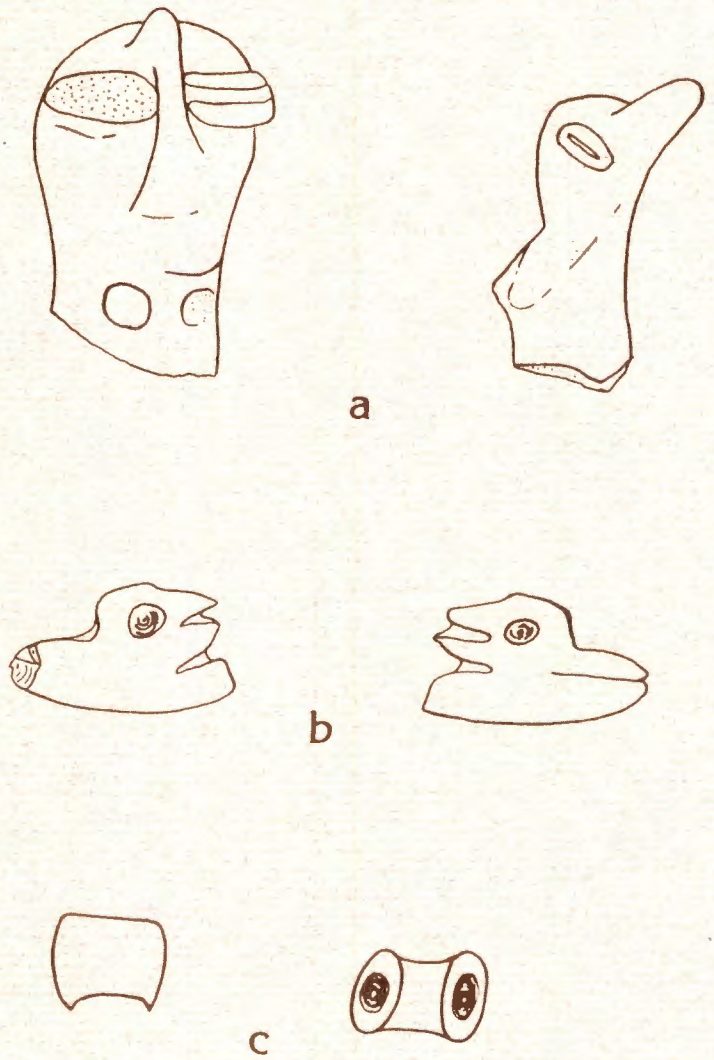


Figure 8.

Ceramic Figurines
and Nose Plugs

Plate 2

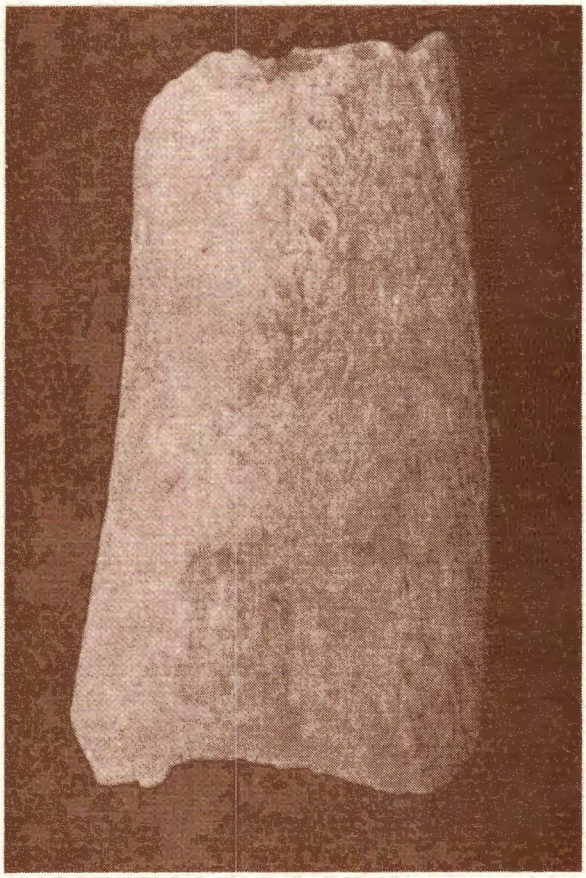


Plate 2. Clay Pipe Fragment.

Other Ceramic Artifacts—Pipe

A single fragment of a clay pipe was found on the lower floor of Room 2/Room Block3 (Plate 2). The specimen is of typical "cloud blower" morphology and was evidently smoked with a perishable bit. Manufacture was extremely casual, with smoothing but no polishing of the "pinch" constructed bowl and an irregular rim form. The paste is a friable brown clay with extensive exterior fire clouding.

Summary and Conclusions

The Owens/Colvin site produced a sample of 32,143 sherds, including 2147 from Room Block 1; 543 from the single excavated room in Room Block 2; 28,940 from Room Block 3 and its associated midden; and 523 from miscellaneous test excavations. These represent some 30 identifiable types of both Mogollon and Hohokam tradition. A recovered pottery anvil provides evidence for the indigenous manufacture of paddle malleated wares, which account for approximately 20 percent of the ceramic assemblage.

A conspicuous aspect of the assemblage is the prevalence of decorated wares, both painted (20.2 percent) and surface textured (40.8 percent). Neither trend persisted into the subsequent Salado period when the percentage of painted wares diminished on local sites and surface texturing nearly disappeared. This is one of several indications of a "clean" break between the ceramic traditions of the Salado and preceding periods.

Dating at the site is primarily contingent on the ceramic assemblage, a risky proposition in an area as poorly documented as the Safford Valley. In many cases even the origin of recovered types is questionable and present dating relies entirely on temporal associations established outside the Safford Valley. This limitation particularly affects the accurate dating of indigenously produced types, since dates generated extralocally are based on traded wares which may have a significantly different use history than ceramics made, used, and discarded in a restricted area. It is also quite possible for a ware or type to persist anachronistically in a region.

With cautions as noted, a time line plotting a variety of recovered types show that virtually ALL sherds from the present excavations derive from ceramics in use in the years immediately bracketing A.D. 1150 (Figure 9). Of twenty plotted types, only two-Encinas Red-on-brown and McDonald Corrugated-are dated as much as 30 years before or after the middle of the twelfth century and in both cases this dating is suspect. Encinas Red-on-brown remained a common ceramic in both the Safford Valley and the adjacent Point of Pines region until well after its general terminal date, while McDonald Corrugated is well represented at all levels on the site and seems locally to predate its tentative starting date of A.D. 1200 Distributional evidence would support the major site occupation falling into the decades immediately following rather than preceding A.D. 1150, with consistently higher representations of post-1150 ceramics over their slightly earlier counterparts (ie, Tularosa Black-on-white over Reserve Black-on-white and Casa Grande Red-on-buff over traditional Sacaton Red-on-buff).

There is no stratigraphic seperation of "early" and "late" types on the site and all well represented types were clearly in contemporary use. The curation of older vessels for some decades is a common archeological phenomenon, however, and ethnographic studies of historic Puebloan societies indicate an average use life of up to fifty years for painted vessels. It must also be stressed that initial and terminal dates on even well dated ceramics are approximate, and errors of a few decades are probably more the rule than the exception.

The most notable objection to a date targeting the third quarter of the twelfth century is the presence in all excavated units of St. Johns variants of White Mountain Redwares generally believed to date after about A.D. 1175. A slightly earlier date may be supportable, however, as the wares do show sporadic dendrochronological associations as early as A.D. 1137+ for the Black-on-red and A.D. 1031+ for the Polychrome (Breternitz 1959:93). The

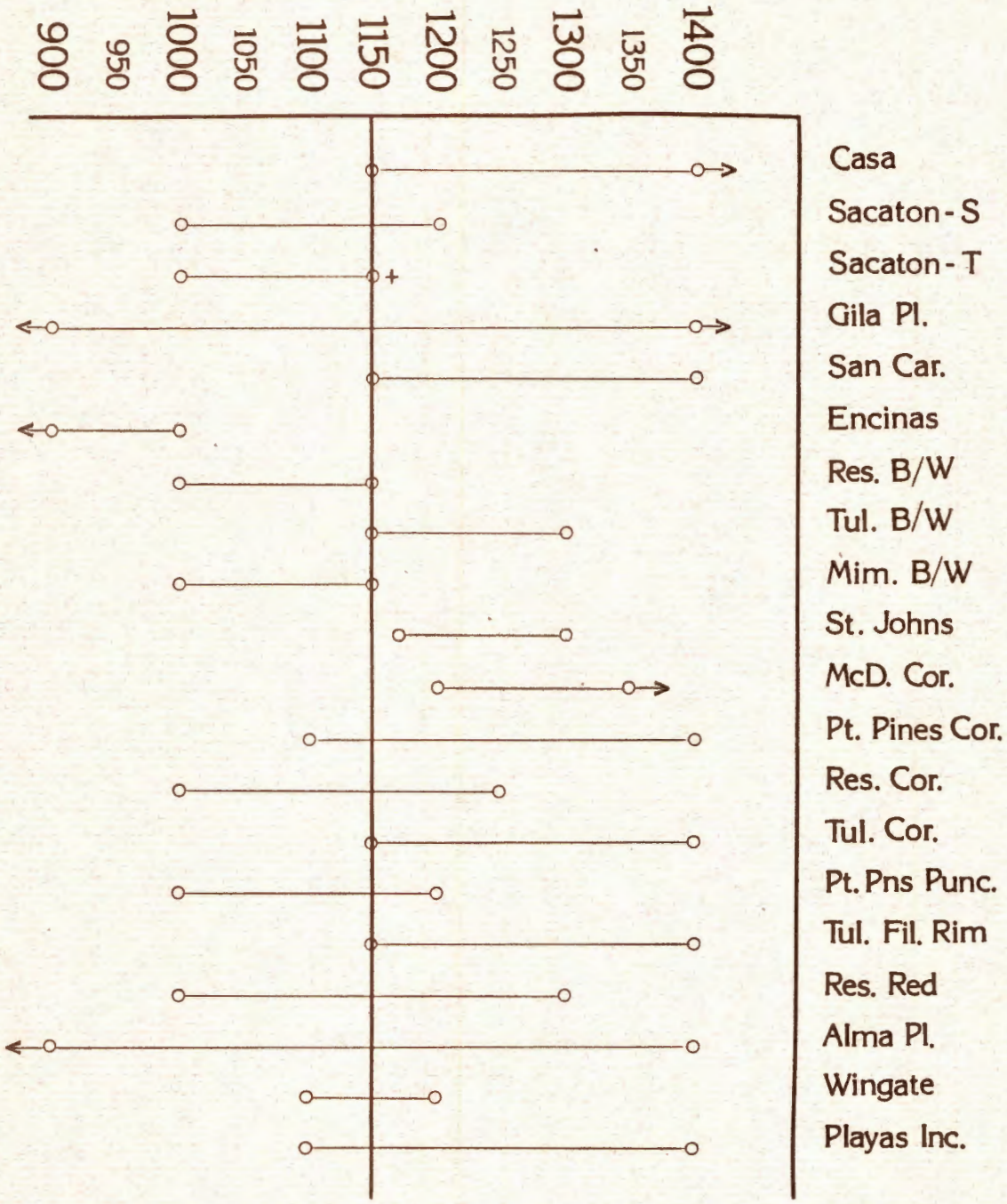


FIGURE 9. CERAMIC TIME LINE

sibility must be entertained that these types were in circulation a few years earlier than is generally accepted.

The absence of stratification in ceramic distributions indicates that occupation of the room blocks was very brief. Room Block 3 produced superimposed floors and foundations without a discernable change in ceramic assemblage and the same absence of differentation is characteristic of ceramic distributions in the upper and lower midden deposits. Elsewhere on the site both overbuilding and renovation were rare and all three room blocks present similar ceramic inventories with only subtle differences suggesting slight temporal variation in the occupation of architecturally similar units. These distinctions hinge on the intrasite distribution of White Mountain Redwares.

A case has already been stated for the inadequate dating of some of the earlier White Mountain Redwares. With qualifications as stated, however, it appears that the distribution of several types within this ware do vary between the room blocks and may provide evidence for minor temporal variation in their occupations. Discrepencies are primarily seen in the distribution of St. Johns Polychrome (0.3 percent in both Room Block 1 and 2 but only 0.002 percent in Room Block 3), and in Wingate Polychrome (0.2 percent and 0.36 percent in Room Block 1 and 2 respectively; absent in Room Block 3). If Wood's (1987) assessment of the early popularity of St. Johns Black-on-red is correct, the type's predominance in Room Block 3 at the expense of the other types may indicate a slight temporal precedence for that unit. Sampling error is also quite possible in view of the small sample size involved (N=210).

Chapter Three

Figurines and Effigy Vessels

The Owens/Colvin site produced fragmentary remains of eight effigies representing dogs, deer, an unknown quadruped, big horn sheep, and a human (Figures 8, 10, 11). These specimens represent free standing figures (N=3), scoops (N=3), a censer (N=1), and a pitcher lug (N=1). All specimens except the lug and a crude zoomorph of indeterminate cultural affiliation are assignable to Hohokam types or influences; the lug is from a Tularosa or Reserve phase pitcher and is Mogollon in origin.

Human Effigy

The single human effigy recovered in the EAC excavations represented the upper one third of a plainware female figurine recovered from the Room Block 3 midden (Figure 8a). The type is well known from Hohokam contexts and features a rounded head form with a distinctly concave back, a well defined chin, an extremely prominent rounded nose, and appliqued "coffee bean" eyes. The eyes of the present specimen are more elongated than is typical and resemble hot dog buns. No mouth or additional facial features are represented but gender is indicated by appliqued breasts, one of which is damaged.

The specimen was too fragmentary for reliable reconstruction but the distinctive head and torso form is elsewhere associated with free standing figurines having extended, slightly parted legs and rudimentary arms. Very similar effigies have been recovered from throughout the Hohokam area, including the extreme cultural peripheries of Gila Bend in the west and Prescott in the north (Wasley and Johnson 1965:106; Gladwin et al. 1965:plate CCVII). To my knowledge the present example is the most easterly recovery of the type and would again coincide with an apparent Hohokam frontier occupation.

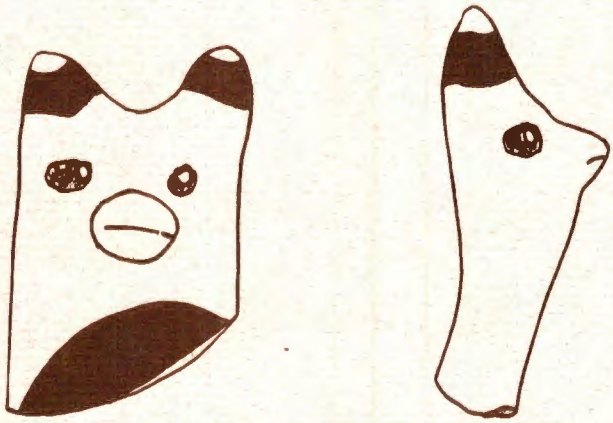
Dating the present specimen is complicated by the probability of temporal lag between core and peripheral Hohokam areas. At the type site the "coffee bean" eye is considered a diagnostic attribute of the Santa Cruz phase, while specimens morphologically similar to the Owens/Colvin figurine from Hodges Ruin near Tucson date to phases corresponding with both the Santa Cruz and Sacaton periods (Kelly et al. 1978). Similar figurines tend to be more recent at peripherally located sites and both the Gila Bend and Prescott specimens are of Sacaton date (Wasley and Johnson 1965:106; Gladwin et al. 1965:CCVII). A similar affiliation with the Sacaton period is likely for the Owens/Colvin specimen as well.

Deer Figurine

Among the most suggestive of the artifacts recovered at CC:1:19 was the head and partial neck of a free standing stylized deer (Figure 10b) of remarkable similarity to cached specimens recovered at the Hohokam sites of Snaketown and Los Guanacos (see Haury 1976:268). At each of these sites large numbers of deer (19 and 15 respectively) were ceremonially discarded by burial in association with religious peraphernalia including censers, pigments, and ritual vessels; some of the figures were deliberately broken, a common method of neutralizing "dangerous" magico-religious equipment. Haury (1976:268) suggests that the deer effigies may have been associated with "magical increase rites" of a type practiced among some ethnographic Southwestern cultures. Additional support for a ritual association may be inferred from the figures close similarity, suggestive of a single, presumably shamanic, maker (Haury 1976:177).

Although extremely similar in most regards the Owens/Colvin specimen differs from the Snaketown assemblage in its slightly smaller overall size and by the application of red paint to the eyes, mouth, ears, and chest. The Snaketown specimens were lightly slipped

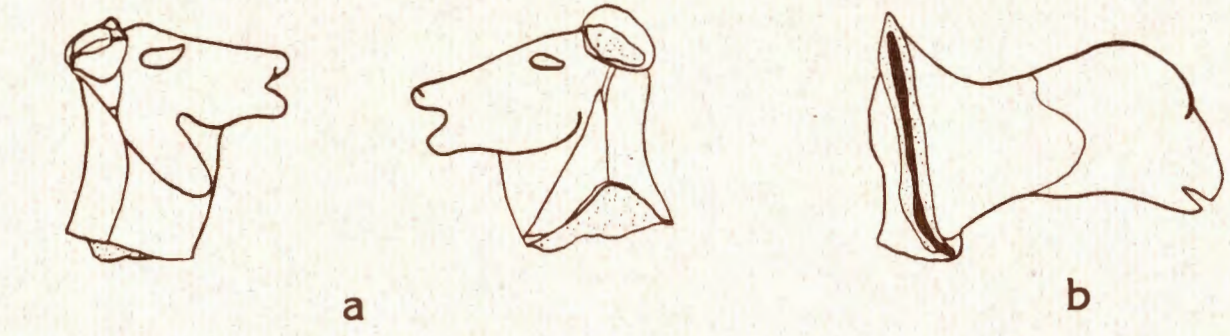
a



b

c

Figure 10.
Ceramic Figurines



a

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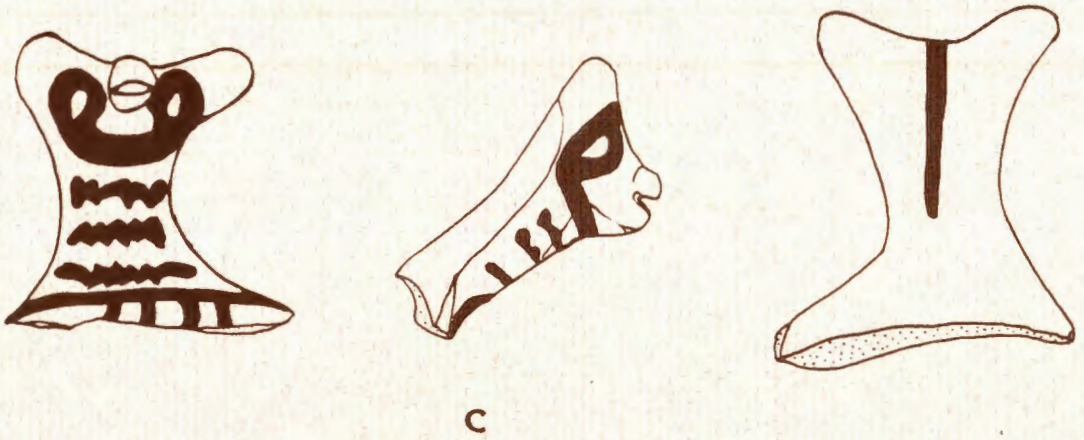

c

Figure 11.
Ceramic Figurines, Continued

with a buff wash but otherwise unpainted. Facial details of the present example mirror those of the cached figures, with a closed, slit mouth and punctate eyes. The reverse face is vaguely fire clouded but the piece is otherwise well fired.

The figurine can be confidently assigned to the Sacaton period, the single phase during which realistic zoomorphs were modeled by Hohokam craftsmen (Haury 1976:267). Both earlier and later animal figurines were coarse and rudimentary, frequently allowing for no identication more specific than "quadruped". A broken animal torso of this latter sort was recovered from Room 1/Room Block 2.

The differences in decoration and disposal between the cached specimens and the Owens/Colvin example make a secure cultural interpretation difficult. The figurine is undoubtedly Sacaton period Hohokam in inspiration, but its isolated recovery from a midden raises the question of whether its function was the same in the context of the polyglot Safford Valley as it was in the large, core area sites of "pure" Hohokam affiliation. Only controlled recovery of additional evidences will be adequate to address the question of true ritual continuity with the Hohokam heartland.

Zoomorophic Fragment

A fragment of a crude zoomorph was recovered from the fill of Room 1/Room Block 2. The figurine consisted of the hind section and partial appliqued leg of an unidentifiable quadruped. A broken second leg and tail are indicated by slight nubbins. The piece was overfired to a light orange and no slip or paint was apparent.

Similar crude effigies are typical of both the late Mogollon tradition and the Hohokam during all phases except the Sacaton. Use in both contexts seems to have been casual.

Big Horn Sheep Effigy

An effigy head representing a bellowing big horn sheep (Figure 11a) was recovered from the Room Block 3 midden. A similar pose is frequently encountered in Hohokam ceramic and stone art of Sacaton age and is very often used to adorn censers. The present specimen is badly scorched and was almost certainly detached from a censer. This identification is noteworthy since the use of incense was a strictly Hohokam convention which showed little if any tendency to diffuse to other culture groups; the recovery is therefore evidence for an actual Hohokam presence in the Safford Valley. Censers are generally rare on Valley sites but at least one unadorned heavy walled specimen was recovered from a local context and is presently on display at the EAC Museum.

The present example shows heavy, irregular burning, reddening the paste and eroding a patch of light colored slip over the left half of the face. The right side of the face shows a lighter, buff colored paste less affected by overfiring. A dot of red paint is visible on the nose but the specimen is otherwise unpainted. Nostrils are indicated by a short slit and the gracefully elongated eyes are stick impressed. The horns have been lost, but the diameter of the horn base leaves little doubt that the curl of a big horn ram is intended.

"Dog"or Deer" Headed Scoops

Three dog or deer headed effigy scoops (figures 10a, 10c, 11c) were recovered from the vicinity of Room Block 3, one in the associated midden and the remaining two east of the main room block; the latter specimens constitute the only well made effigies recovered from a non-midden context. In all cases the heads represented the handle portions of small scoops broken at or near the juncture with the scoop rim.

The most rudimentary of the three specimens (Figure 10c) shows an almost featureless face defined by a damaged muzzle and short, thick, upright ears. The entire facial area, probably representing a dog, is painted red over a buff paste, with the painting continuing to the

center of the ear then trailing down the shoulder and along the scoop rim. There is a single light spot of red paint on the reverse face. The scoop bowl was embellished with at least two repetitions of a zig-zag pattern of moderately irregular execution.

The second specimen, (Figure 10a), probably also a dog, shows gouged slit eyes, a slightly open mouth, and short, upright ears similar to those of the preceeding example. The piece is unslipped, with a fairly rough and grainy texture and a grayish brown paste. Coloring extends over the front of one ear and in a circular band nearly around the other, down the muzzle in a line between the eyes, and as a neck banding of two parallel lines which go nearly but not entirely around the figure. The scoop interior is decorated with oblique parallel lines in red.

The final specimen (Figure 11c) is the most elaborately painted of the three and may represent either a doe or a dog. The former interpretation may be preferred, as the cant of the broad ears is noticably wider than among the more clearly canine examples and the muzzle is both more projecting and more gracile. The mouth is open and the animal appears to be vocalizing. The treatment of the eyes is unique among the Owens/Colvin effigies, consisting of a painted "mask" in which two hollow circles larger than eyes are connected under the jaw by a wide red line. Below these "spectacles" the neck area is further decorated on the front by three irregularly zig-zag lines. A single finer line bisects the back of the head. Very little of the scoop bowl remains but its decoration evidently consisted of a single line running around the interior of the rim and anchoring a series of dependent lines perpendicular to the axis of the zoomorphic face. The paste is reddish buff and appears to be slightly though evenly overfired.

The literature suggests that animal headed scoops are less common then their anthropomorphic counterparts and it is interesting that zoomorphs dominate the recoveries from Room Block 3. Elsewhere similar scoops have usually been assigned to a generalized "Santa Cruz/Sacaton" affiliation with no attempt to fine tune the placement. In the present instance the general preponderence of Sacaton period materials on the site makes a Sacaton association likely.

Effigy Lug

The final effigy (Figure 11b) recovered from CC:1:19 was a stylized Black-on-White mountain sheep head which served as a lug on a Tularosa or Reserve phase pitcher. The specimen was manufactured in a gray clay with an irregularly applied white slip; a single uneven line of brown paint (intended to be black) trails over the right shoulder. Head and facial features are limited to an open mouth, a slightly filled out gullet and a raised, stylized horn curl on each side of the head.

Discussion

With the exception of a typical Black-on-white effigy lug and one unassignable crude quadruped, the effigy assemblage from CC:1:19 was dominated by Hohokam or Hohokam inspired pieces. These included both utilitarian objects such as scoops and two specimens (a censer and a free standing deer) which have strong ritual associations in the Hohokam heartland. The final piece, a female effigy, was ambivalent in its apparent usage in the core area and similar specimens have been recovered from both cremations and middens. These artifacts may have significance as fertility figures but lack the exaggerated sexual characteristics frequently associated with that class of object.

All Hohokam figurines at the site were forms common to the Santa Cruz and/or Sacaton periods; the latter strongly predominated when a specific designation could be made. In all likelihood ONLY the Sacaton phase is represented by the present assemblage.

It seems likely that direct Hohokam manufacture is responsible for the CC:1:19

"Hohokam" effigies. The Mogollon made little indigenous use of figurines or of artifacts such as ceramic scoops, apparently preferring ladles or a perishable substitute. In contrast, the scoop is a common ceramic form on pre-classic Hohokam sites, although the use of an anthropomorphic handle seems more common overall than the modeling of zoomorphs. The two ostensibly ritual pieces also suggest direct continuity with specifically Hohokam religious conventions. The censer in particular was used in conjunction with a Hohokam ritual activity (incense burning) which specifically resisted diffusion to the other mainstream cultures, including the Mogollon. The recovery of a censer fragment in the form of a big horn sheep effigy is therefore significant evidence in favor of an actual Hohokam presence in the twelfth century Safford Valley.

Chapter Four

Chipped Stone

Chipped stone artifacts at the Owens/Colvin site were classified as debitage (unutilized waste flakes and cores), "informal" unifacial tools, and "formal" bifaces. As a rule lithics were both scarce relative to other artifact types and extremely casual in manufacture; the exceptions to this generalization were the projectile points, which were often exceptionally uniform and well made. Five essentially identical points of chert and obsidian recovered from the fill of Room 1/Room Block 2 may well be the work of a single individual.

Debitage

Debitage in the form of cores and unutilized waste flakes constituted the vast bulk of the lithic assemblage, accounting for some 1806 artifacts. Raw material use concentrated on locally available rhyolite, chert, chalcedony and basalt, with other materials represented in smaller quantities (Table 2). The apparently high representation of cryptocrystallines is deceptive; had distributions been figured on a weight criterion rather than gross count coarse igneous materials would have accounted for over 90 percent of the chipped stone assemblage. Much of the recovered debitage consisted of primary and secondary decortication flakes reflecting "soundings" of raw material nodules.

A total of 119 cores was recovered from the EAC excavations. These specimens were primarily amorphous in form with little apparent attempt to predetermine flake format. More rarely (8.9 percent) a flat based conical form was employed. Obsidian "cores" were also an exception to typical debitage formats and normally represented discarded halves of Apache tears divided with a bipolar technique. Grape sized nodules were the normal obsidian form on the site although two much larger unmodified nodules were also recovered from the midden.

Unifaces

The casual nature of the unifacial assemblage is never more obvious than in the critical factor of the working edge angle as measured with a goniometer. In ethnographic studies on modern lithic using cultures, edge angle has emerged as the primary meaningful variation in unifacial assemblages and is strongly correlated with tool function. In general the following functional categories are ethnographically upheld: edge angles less than 26 occasionally employed for very fine cutting but rarely used due to the inherent brittleness of an extremely low angle edge; edge angles of 26 to 35 are used for light duty cutting; angles of 36 to 40 are used for whittling; 41 to 45 angles are rarely used; angles of 46 to 56 comprise an optimal use range suitable for skinning and hide scraping, sinew and plant fiber shredding, heavy bone or wood , cutting and tool backing; 57 to 65 angles are rarely used; angles of 66 to 75 are employed for heavy wood working and chopping and bone working and skin softening; angles above 75 are rarely used.

As indicated in Figure 12, unifacial edge angle distributions on the site only loosely correlate with typical functional angle ranges and reflect fairly lax criteria for usability. One factor contributing to this pattern is the preponderence of low grade raw materials in the assemblage; as a general rule lithics based on coarse igneous rocks such as rhyolite and basalt show a systematic skewing towards somewhat higher angle ranges than are found on sites with cryptocrystallines as the dominant raw materials. Even so, the unifacial assemblage is notably haphazard and unstandardized.

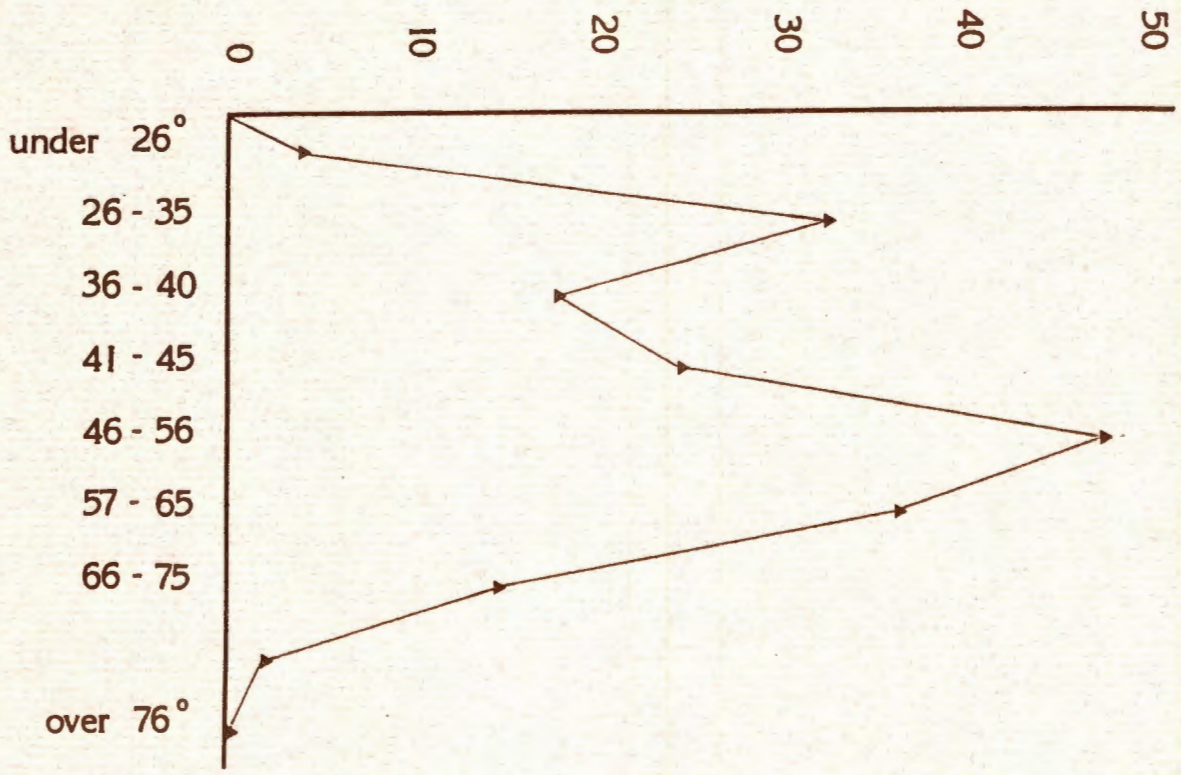

FIGURE 12.

Working Edge Angles Of Unifaces

(N = 182)

Table 2: Lithic Raw Material Use By Unit

Material	RB 1 #/%	RB 2 #/%	RB 3 #/%	Midden #/%	Overall %
rhyolite	151 / 52.0	26 / 52.0	25 / 21.9	779 / 51.0	48.4
chert	46 /15.8	9 /18.0	32 /28.0	330 /21.6	20.5
chalcedony	24 /8.2	6 /12.0	17 /14.9	175 /11.4	10.9
basalt	35 /12.0	7 /14.0	15 /13.1	139 /9.1	9.6
obsidian	9 /3.1	---	9 /7.8	46 /3.0	3.1
'mudstone'	4 /1.3	---	---	27 /1.7	1.5
quartzite	5 /1.7	---	9 /7.8	8 /0.5	1.0
diorite	5 /1.7	1 /2.0	1 /0.8	10 /0.6	0.8
quartz	2 /0.6	---	6 /5.2	5 /0.3	0.6
jasper	9 /3.1	---	---	3 /0.1	0.5
unknown	---	---	---	3 /0.1	0.1
tufa	---	---	---	1 /0.06	
rock	---	1 /2.0	---	----	
crystal slate	---	---	---	1 / 0.06	

Bifaces

Bifaces were limited to projectile points and drills, with all specimens based on chert, chalcedony or obsidian.

Projectile Points

The EAC excavations produced a total of 51 whole and fragmentary points, all but six fragments of which could be relegated to one of a small number of stylistic groupings (Figure 13). These morphological types may be summarized as follows:

Type A (N = 5): Narrow triangular blade (averaging twice as long as wide), with straight or slightly incurvate lateral margins. The blade is shallowly notched at or just below the midsection, and the base is an inverted "V".

Type A1 (N = 5) Closely resembles Type A except that the base is concave.

Type A2 (N = 5) Identical to Type A except that a precise notch is executed at the apex of the inverted "V" base. The entire A2 sample was recovered from a single room in Room Block 2 and may well be the work of a single individual.

Dimensions of Type A Variants:

LENGTH: 24.7 mm (average) WIDTH: 12.3 mm THICKNESS: 2.1 mm

RANGE: 19.0-28.6 mm 9.0-15.9 mm 1.6-3.2 mm

STANDARD DEVIATION: 2.76 mm 2.06 mm 0.47 mm

Type B (N = 1): Narrow triangular blade with marked serrations on both lateral margins. The irregular base is straight to slightly convex.

Type C (N = 2): Relatively broad triangular blade with straight lateral margins and no notches. The base is slightly convex.

Type D (N = 7): Very narrow triangular blade (length normally twice greater

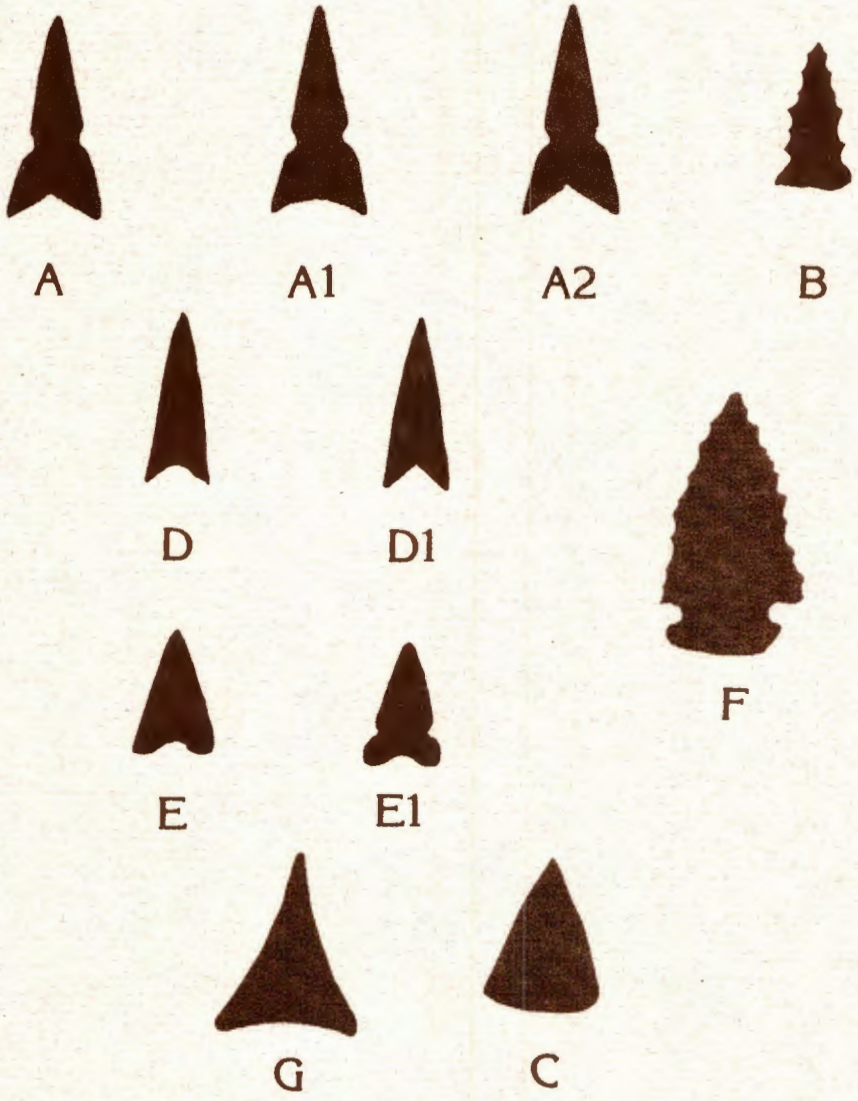

Figure 13. Point Styles

than width), with straight to slightly concave lateral margins and no notching. The base is concave and frequently deep.

Type D1 (N = 4): Identical to Type D except that the base is an inverted "V".

Dimensions of Type D Variants:

LENGTH: 18.6 mm (average) WIDTH: 8.6 mm THICKNESS: 1.9 mm

RANGE: 15.5-22.7 mm 6.8-11.1 mm 1.5-2.4 mm

STANDARD DEVIATION: 2.31 mm 1.23 mm 0.27 mm

Type E (N = 4): Medium width triangular blade (width = two thirds of the length or greater) with straight lateral margins and no notches. Base is concave.

Type E1 (N = 4): Identical to Type E except that shallow side notches have been added. These are variously positioned from as low as one quarter of the blade length from the base to as high as two thirds of the blade length from the base.

Dimensions of Type E Variants:

LENGTH: 17.3 mm (average) WIDTH: 12.0 mm THICKNESS: 2.4 mm

RANGE: 16.1-18.7 mm 10.3-14.4 mm 1.7-3.7 mm

STANDARD DEVIATION: 2.22 mm 1.43 mm 0.51 mm

Type F (N = 2): Broad, deeply serrated triangular blade on an expanding stemmed base isolated from the blade by deep side notches. The stem is broad, averaging 75 percent of the maximum blade width. The base is slightly convex and the overall morphology is the heaviest in the point assemblage.

Type G (N = 3): Extremely narrow bladed point with notably incurvate lateral margins and a broad, shallowly concave base.

With the exception of a concentration of six complete projectile points (including five identical A2 specimens in Room 1/Room Block 2), point recoveries did not concentrate on the site. The lightness and thinness of almost all specimens indicate use with a bow; points in Class F were larger and heavier and may have been intended for use on darts. This latter type may also represent point reuse over time. Metrical and descriptive data on the point assemblage appear in Appendix 2.

Drills

Bifacial drills were rare on the site (N = 4) with recoveries limited to the Room Block 3 midden. All specimens were of chert and were incomplete; however the single nearly intact example and the morphology of the more fragmentary remains all suggest standard twist drills with rounded butts and elongated bits with a diamond shaped crossection.

A single lighter weight drill or punch with a short (3.2 mm) bit was manufactured on the tip of a reworked obsidian point from the second floor of Room 2/Room Block 3. Both lateral margins were extensively trimmed to isolate the working element and use is apparent in the form of rounding.

Agave Knives

Three fragmentary agave knives of rhyolite (2) and slate were recovered from the Room Block 3 midden and from fill immediately south of Room 2/Room Block 3. The specimens were too fragmentary for detailed analysis but in each instance the working edge was bifacially flaked to produce a functional edge angle of between 55 and 65 . All examples show heavy wear on both planar aspects, extending back a considerable distance from the

cutting edge. A polish has formed adjacent to the edge on two of the specimens, while the third (on softer stone) shows striations parallel to the working axis. Farther back from the edge all specimens show use in the form of smoothing.

Quartz Crystals

Four quartz crystals were recovered during the EAC excavations, including one clear crystal from Room 1/Room Block 1; a larger clear crystal from the upper floor of Room 1,/Room Block 3; a poor quality crystal from the lower fill of the Room Block 3 midden; and a large, brilliantly refractive crystal fragment from Unit II, Square D of the midden's upper fill level. Elsewhere in the prehistoric Southwest, crystals are known to have served purposes ranging from utilitarian to ritual use, the former evident from wear and the latter by the frequent inclusion of quartz crystals with shamanic equipment and burials of shamans and other high status individuals. At least one local cremation was associated with a large number of crystals of various sizes and quality (Owens and Owens, personal communication).

With the possible exception of the small battered crystal from the midden, the present specimens show no damages indicative of utilitarian use. The two elongate specimens retain their natural faceted terminations and are of true "crystal clarity"; the amorphous chunk is fractured along many planes but remains brilliantly refractive and shows no sign of intentional damage. The pristine nature of these specimens suggests that their function was non-utilitarian, but whether they served a specific magico-religious purpose or were simple curiosities is indeterminable. Sumptuary use as status objects is unlikely given the apparently egalitarian orientation of contemporary Valley society.

Quartz Nodule

Similar uncertainty surrounds the interpretation of a small white quartz nodule from the Room Block 2 midden. The specimen is evenly rounded over most of its circumference but is abraded to a smooth double facet at the bottom surface (the dual nature of the facet was produced by a natural anomaly in the stone).

Although the facets of the present specimen may be natural, the nodule's overall morphology resembles that of small white quartz "lightning stones" associated with shamanic rain making ceremonies in some parts of the Southwest. In such ceremonies pairs of lightning stones were vigorously rubbed to produce a static generated "glow" serving as artificial "lightning" in a ritual based on sympathetic magic (Dittert, personal communication). In the process the nether surfaces of the pebbles were worn to flat planes. Other accoutrements of the ceremony were "cloud blower" pipes for the creation of surrogate thunderheads and crystals for scrying.

Turquoise

Turquoise recoveries at the Owens/Colvin site were limited to a flying bird pendant (Figure 7a) from the floor of Room 2/Room Block 3 and a small (5.7 x 3.6 x 1.0 mm) tessara discovered in the Room Block 3 backdirt after it had fallen through a screen. The latter speciman is subrectangular and ground on all surfaces. The obverse face is distinguishable by its more even finishing but both faces show remnants of a chalk-like matrix. Presumably the piece was intended as a mosaic inlay.

The turquoise pendant is in the classic "Thunderbird" pattern with direct facing and broad, spread wings. It is 8.2 mm long, 13.6 mm wide and 2.2 mm thick. The reverse, which preserves a few patches of matrix, has been ground flat; the obverse is clear turquoise and is slightly arched so that the piece projects gracefully when laid against a flat surface. The suspension hole is conically drilled from the reverse and has a maximum diameter of

1.0 mm. The piece's distal margin and part of the right wing are slightly damaged. A broken secondary drill hole was located below the primary suspension hole.

Turquoise for the recovered objects probably derived from the Morenci area, where a pale blue variety visually similar the the present specimens has been commercially mined.

Chapter Five

Groundstone

Formal ground stone artifacts at the Owens/Colvin site consisted of metates, manos, pestles, a fragmentary mortar, crude bowls, weights, a ring, axes, pigment manos, a pottery anvil, and a palette fragment. Unmodified or incidentally altered artifacts included hammerstones, polishing stones, smoothing stones, a shaft smoother, abraders and pecking stones. Tabulated data on ground stone recoveries appear as Appendix 3.

Metates

Three highly fragmentary metates were recovered from the floor of Room 2/Room Block 1, and from the Room Block 3 midden (N = 2). All specimens were made of coarse volcanic stones, tufa in the former case and vesicular basalt in the remainder. Despite the restricted sample three separate metate forms were represented, including a slab (Room Block 1), a basin (Unit I lower fill), and a trough (Unit VI). Elsewhere on the site a number of finely shaped trough metates and matching manos have been recovered by the site owners (Owens and Owens, personal communication).

Manos

As befits the variety of metate forms in use at CC:1:19, manos were also highly variable in shape and degree of use. One hand circular manos for use in basin metates were a common recovery and often showed secondary use as hammerstones, pigment grinders, and anvils. The majority of these specimens were essentially natural cobbles with function indicated solely by wear and incidental evidence such as pigment stains.

The most common mano form on the site was a bifacially shaped, rectangular form intended for unifacial use in a trough metate. These specimens dichotomized into two size categories with discrete distributions within tolerances of a single standard deviation around the mean. In the smaller format, mean length of complete specimens was 86.8 mm (N = 9), with a SD of 12.0 mm. and a range of 77-103 mm. These specimens are interpreted as one hand manos. The remaining complete examples (N = 6) are considerably larger with a mean longitudinal axis of 131.8 mm, a range of 115-185 mm, and a standard deviation of 24.3 mm. The latter category was evidently intended for two handed use.

A wide variety of raw materials was employed in the sample, including vesicular basalt (N = 16), gray basalt (3), fine grained red basalt (1), black basalt (7), diorite (2), sandstone (2), tufa (5), shale (1), and rhyolite (3). Coarseness varied significantly within the asemblage and probably reflects the use of graduated abrading stones in food preparation. Metrical and descriptive data on manos appears as Appendix 3.

In the majority of cases both single and double handed rectangular manos show rounded margins and definite but not extreme wear. Exceptions were a very well finished specimen with strongly squared corners and a handful of severely worn manos accounting for 15 percent of the artifact type. Secondary use as hammerstones was more common than heavy usage as grinding tools and some 20 percent of the mano assemblage shows battering to the ends (rectangular forms) or circumferance (round and oval forms).

Pestles

Pestle fragments on scoria and vesicular basalt were recovered from the Room Block 3 midden and the interfloor fill of Room Block 1/Room 4B respectively. In each case length was indeterminate; width was 75.5-83 mm and thickness was 75.5-76 mm.

Mortar

A single fragment of a well finished vesicular basalt mortar was recovered from the upper floor of Room 2/Room Block 3. The artifact was lightly built for its type, with a vertical measurement of 98 mm and a wall thickness of only 33 mm. Functional depth of the mortar was indeterminable from the recovered fragment.

Stone Bowls

Six whole and fragmentary stone bowls were recovered from the Room Block 3 midden. Tufa with rhyolitic inclusions was the most common raw material, accounting for four specimens. Shaping was rudimentary on all tufaceous specimens, with the bowl depression formed by casual pecking and the other vessel contours simply roughed out. Tufaceous bowls were too soft for rigorous usage and may have been used primarily for pigment preparation. In one instance, use as a pigment grinder is confirmed by hematite stains on the vessel's working surface.

The remaining two stone bowls were made of harder raw materials. The more elaborate of the two was an elongated "boat" shaped basalt bowl with a sharply tapering plan and more careful workmanship than is common in the sample. The other specimen was a very small granite bowl with no formal modification except for artificial deepening of a centrally placed natural depression forming the basin. Opportunistic usage of natural raw material anomalies is typical at the site and there is little similarity between recovered gound stone bowls and the finely crafted stone vessels of traditional Hohokam manufacture.

Weights

One plum bob (Figure 7c) and one apparent weight were recovered from the fill levels of Room 1/Room Block 2, and Room 5/Room Block 1 respectively. In each case an appropriately shaped natural stone was used, the plum bob resembling a "snowman" of white quartz and the probable weight a tufa hourglass. Both specimens show slight cord abrasion at their constrictions.

Stone Ring

A single stone ring fragment representing a third of the object's original circumference was recovered from Unit IV, SQ C of the Room Block 3 midden. The specimen was made of light weight reddish-gray scoria with pecking on all surfaces; the central perforation was biconical with an estimated diameter of 24.2 mm.

Both the light weight and small size (estimated maximum diameter is 57 mm) discount the object's use as either a dibble stick weight or a chunkee stone, the two usual interpretations for stone rings in the Southwest. Faced with similar finds of small stone rings, Haury (1976:292) suggests an alternative use as a corn sheller and reports an archaeological association at near by Point of Pines between "a burned 13th century storeroom [producing] many bushels of shelled and unshelled carbonized corn and [the recovery of] a well-worn lava ring, the only artifact of any consequence in the room." In the absence of more substantial evidence a similar usage for the present specimen is conceivable.

Axes

Three axes were recovered from the Room Block 3 excavations, including two incomplete specimens from Unit II, SQ. D and a complete example from the fill separating Room 3 and the superimposed wall south of the original Room Block 3 alignment. The two midden recoveries consisted of the bit of a full grooved diorite axe broken at the groove and reused as a hammerstone and a three quarter grooved granite axe with severe damage to

the bit edge and one face. Pecking over the broken edge of the latter specimen indicates some attempt to reshape the badly fractured element but the effort was quickly abandoned. The single intact specimen was a full grooved diorite axe with a well polished bit and a polished and carefully rounded butt. This fine object shows evidence of use but no siqnificant wear damage.

Pigment Manos

Two incomplete pigment manos were recovered from the Room Block 3 excavations, consisting of a diorite specimen from the midden (Unit IV, SQ C) and a rhyolitic example from the upper floor of Room 3. The former was initially a typical rectangular mano with rounded corners, while the latter was essentially unmodified. Both specimens preserved hematite stains on one surface.

Pottery Anvil

A pottery anvil made of highly vesicular basalt was recovered from the lower fill of Unit IV, SQ C in the Room Block 3 midden. The working head was 73.4 x 69.2 mm and the artifact height was 47.1 mm. The artifact is of the familiar "mushroom stone" morphology although the unusually broad handle element of the present example gives it an uncanny resemblance to a cupcake. Similarly shaped objects are occasionally identified as rasps (Haury 1976:285), an unlikely alternative for the present specimen given its smooth, even wear and the complete absence of scoring or abraded areas on the working surface. Elsewhere in the Safford Valley pottery anvils are reported from the Daley site (Irish and Irish 1981).

The presence of pottery anvils on local sites lends support to the hypothesis of a Hohokam occupation in the Safford Valley. From the beginnings of southwestern pottery making both the paddle and anvil and the coil and scrape manufacturing techniques were used, respectively practiced by the Hohokam and the Mogollon; the latter technique later passed to the Anasazi by diffusion from the Mogollon area. Initially the Hohokam made use of both techniques but this coexistence ceased by the end of the Sweetwater phase (Haury 1976:194), long before the major expansion that led to the Hohokam settlement of the areas peripheral beyond the Phoenix and Tucson Basins.

By the time of the Owens/Colvin site occupation, the Mogollon ceramic tradition had been strongly influenced by Anasazi styles, resulting in the production of a series of Black-on-white wares made in imitation of the native gray wares of the Anasazi. In the Safford Valley the contemporary Mogollon pottery was also heavily influenced by Hohokam ceramics, leading to the local manufacture of wares employing Hohokam designs and color schemes (as nearly as possible) but retaining the traditional coil and scrape method of Mogollon potters.

A similar pattern of incomplete imitation is typical whenever cultural elements diffuse between groups, a process normally involving three basic steps. First, the prospective recipient culture evaluates an alien trait against the backdrop of their own cultural traditions and conventions. In a stable system (characterized by a negative feedback flow), any trait fundamentally incompatible with the traditions of the receiving group will be rejected out of hand and will fail to diffuse. Alternatively, a new trait passing initial screening will undergo modification by the receiving group to bring it fully into harmony with the recipient cultural system. Finally, the attenuated trait is incorporated by the receiving culture, becoming functionally "native." The bottom line of this entire process is that a new trait will seldom if ever become incorporated into a culture system without undergoing significant modification of its form, use, or significance.

There is previous evidence in the form of the "copied" black-on-white wares of a Mogollon willingness to adopt "foreign" designs and colors and to make them their own;

locally they did the same in creating Hohokam imitations such as San Carlos Red-on-brown. In contrast there is no concrete evidence for a willingness to alter significantly basic manufacturing techniques which had been part of the Mogollon repertoire for centuries. Imitation Hohokam wares could be and were made using traditional Mogollon techniques and there is little to suggest that the use of paddle malleation also diffused. Consequently, the best explanation for pottery anvils and large representations of paddle malleated wares in a Mogollon area is co-occupation by a true Hohokam population.

Palette

A small corner fragment from a light tan tufaceous palette was recovered from the lower fill of Room 4/Room Block1. The specimen had a low raised border along one edge (presumably the proximal/distal); the lateral margin was flush with the working surface but demarcated from it by incised lines. The piece was well finished despite the limitations of a soft raw material. Overall length and width were indeterminable; thickness at the working surface was16.9 mm; thickness at the raised margin was 18.7 mm.

Palettes of both simple and more complex styles are more common in the Safford Valley than might be expected from the scant literature. several private collectors possess one or more specimens with geometrically decorated, raised border examples predominating among those I have seen. The Owens/Colvin specimen was unusual in both its raw material and thickness, with a thinner format in slate or schist being more common locally.

Hammerstones

Unifunctional hammerstones were fairly rare at CC:1:19 (N = 3), where manos and cobbular grinders were commonly used as expedient hammers. Hammerstones were consistently made of tenacious volcanics (basalt, rhyolite, and diorite) and were fairly consistent in size (length = 70-80 mm; width = 54-56 mm; thickness = 34-51 mm). In all cases battering was restricted to a single end.

Polishing Stones

Small polishing stones were found in the lower fill of Room 2/Room Block 1, in the Room Block 3 midden and on the lower floor of Room 3/Room Block 3. In each case an unmodified pebble of diorite (N = 3) or fine grained sandstone (N = 1) was employed, with each specimen showing facets and use striations consistent with wear patterns on modern pottery polishers. Ethnographic evidence indicates a very long use life for many polishing stones, whose owners frequently pass them down as heirlooms. In personal observations at First Mesa, elderly Hopi potters were able to recite the history of their individual stones and the specific use of each.

Smoothing Stones

"Smoothing stone" was a somewhat catch-all category for naturally shaped stones and pebbles with defined grinding facets. In all but one instance grinding was confined to a single face; in the remaining case a triangular specimen showed wear on all three flat surfaces. Five of the six examples of smoothing stones were recovered from the Room Block 3 midden; the remaining specimen was from Room 2/Room Block 1. Format varied from round to triangular, tabular, or regular. Raw materials included rhyolite (N = 1), gray vesicular basalt (N = 1), tufa (N = 2), black basalt (N = 1), slate (N = 1) and quartzite (N = 1). Specific use was usually indeterminable but the slate specimen may have been a specialized pottery shaping tool (L. Krider, personal communication).

Shaft Smoother

An elongated shaft smoother of fine grained basalt was recovered from Unit IV SQ A in the Room Block 3 midden. This unusual specimen, created by exploiting a naturally occurring shallow groove on an elongated pebble, shows evidence of heavy use as an abrader. Its length could not be determined because the artifact was broken, but it was 24 mm wide, 21 mm thick and had a groove depth of 8 mm and a groove width of 22 mm.

Abraders

Coarse abraders made of sandstone (N = 1) and scoria (N = 2) were found respectively in the Room Block 3 midden and in the upper fill of Room 2/Room Block 3. Unmodified stones of a fortuitously appropriate shape (rectangular or sub-rectangular) were employed and all use was unifacial.

Pecking Stones

A total of four pecking stones were recovered from the fill of Room 1/Room Block1, the Room Block 3 midden, and two specimens from the lower floor of Room 3/Room Block 3. In each case natural elongated pebbles were exploited, with use indicated by battering to both ends; in two instances the sides showed shallow striations from secondary use as rubbing tools. Raw material included rhyolite, red basalt, diorite and fine grained sandstone.

Chapter Six

Shell

Shell preservation is very good on sites throughout the Safford region and samples can be considered representative. In the present excavation 47 whole or partial shell artifacts were recovered, the majority based on Gulf of California species. Included among these were *Glycymeris maculata* (N = 7), *Glycymeris gigantea* (N = 17), *Olivella dama* (N = 2), *Conus regularis* (N = 4), *Strombus galeatus* (N = 1), and *Laevicardium elatum* (N = 2). Two solid spinous processes and two partial finger rings were unidentifiable as to species. Pacific coast contacts were represented by *Haliotis* sp. (N = 10).

Trumpet Fragment

The posterior end of a *Strombus galeatus* shell was recovered from Unit III, SQ B of the Room Block 3 midden. The specimen is too incomplete for definitive identification but almost certainly represents a trumpet fragment.

Shell trumpets are not previously reported for the Safford Valley but occur in small numbers at sites throughout the Southwest. In southern Arizona strombus trumpets were present as early as the Sacaton phase at the Hohokam type site, but reached their highest representation during late Sacaton and Classic times (Haury 1976:261). Outside the Hohokam area trumpets have been recovered in Mogollon and Anasazi contexts at Chevlon and Tusayan respectively and with Sinagua remains at Wupatki (Di Peso et al 1974:515). In rare instances they occur in sumptuary contexts such as the recently excavated high status "warrior burial" at the San Xavier Bridge site near Tucson (Ravesloot et al. 1986).

Ethnographic use of shell trumpets is reported for both the Hopi and the Zuni, the probable modern descendents of the Anasazi and Mogollon. Among both groups the trumpet is associated with the twin war gods and is primarily used in military contexts (Di Peso 1974:515; Ravesloot 1986).

Whole Shell Beads

Nine whole shell beads were recovered from Room Block 3 and its midden, including seven specimens of *Glycymeris maculata* and two of *Olivella dama* (Table 3). *Glycymeris* specimens varied from 10.5-14.7 mm in diameter and all complete specimens (N = 6) were perforated through or just below the umbo, which was usually ground. Three specimens were so highly polished that the natural dorsal striations of the shell were obliterated; in the remainder of the sample the polishing only partially obscured the low dorsal ridges.

Olivella shells were proximally and basally ground leaving the shell's reamed out midsection as a bead. One specimen was heavily mineralized and may be fossiliferous. The use of fossil shells is attested by Haury (1976:307) for the Hohokam, particularly during the Sacaton phase when the production of shell jewelry may have outstripped the availability of fresh shell.

Tinklers

Fragments of four *Conus* shell tinklers were recovered from the Room Block 3 midden. All specimens were modified by removal of the spire and columela, then perforated by incising a groove near the posterior end. Three of the tinklers showed slight surfacial erosion (unusual at this site), while the remaining example was highly polished.

Bracelets

The most common shell artifacts at the Owens/Colvin site are *glycymeris* bracelets, represented by seventeen fragmentary specimens (Table 4). Bracelet fragments were found in each of the three room blocks and are common finds on ceramic period sites throughout the Safford Valley.

Reconstructions of internal diameters indicate a size range from 39.5-67 mm for the CC:1:19 assemblage, with a representative average value of 52.8 mm. Eleven of the specimens were well polished, but the remainder have a slightly chalky and eroded surface suggestive of fossil shell. In one case a breccia-like residue adhered to the outer surface of the artifact.

Bracelets on the site were rarely decorated. In a single instance an eroded surface displays two shallow lines running parallel to each other in an oblique line extending 2.1 mm. These incisions appear to be intentional, but an accidental or post depositional origin cannot be discounted. Elsewhere in the Valley, carved specimens are also rare.

Pendants

Three shell pendants, one circular and two in the form of birds, were recovered from the EAC excavations. All were slightly damaged.

The most stylized piece was a spread winged, "flying bird" effigy recovered from the fill of Room 1/Room Block 2 (Figure 7b). The specimen is of a well known and widely distributed type displaying rudimentary wings, a notched tail, and a suspension hole where the face would normally be. The reconstructed piece would be 11.2 mm high, 29.6 mm wide and 2.5 mm thick. The reverse face is ground to lay flat against the wearer while the visible, obverse face is gently rounded. The raw material appears to be *Laevicardium elatum*.

The second pendant is a crude but realistic bird effigy recovered from the second floor of Room 3/Room Block 3 (Figure 8b). The piece shows spread wings, and open beak, an apparently enlarged gullet and deeply drilled eyes. The latter are bifacial, and probably meant to accomodate inlays. The piece shows no provision for suspension and may be unfinished. The specimen's representation of an asymmetrical bill, hunched neck and enlarged gullet are suggestive of a pelican; water birds in general and pelicans in particular were popular subjects among Hohokam shell workers and also appear on contemporary Mogollon sites. The piece was manufactured on the shell of a bivalve, possibly glycymeris. It was 17.5 mm high, 30.8 mm wide and 9.5 mm thick.

The third pendant is a simple circle of exfoliating *Haliotis* shell, drilled near one margin for suspension. *Haliotis* is the single Pacific Coast shell represented in the sample, which is otherwise dominated by Gulf of California species. It was recovered from Unit XI, SQ A in the Room Block 3 midden and measured 18 mm in diameter and 3 mm thick.

Shell Finger Rings

Two fragmentary shell rings were recovered from Room Block 3. The largest, representing a half ring, was found on the second floor of Room 3/Room Block 3 in close association with a shell bird pendant (see above). The specimen was highly polished and had a reconstructed internal diameter of 16.5 mm. The second ring was a one quarter fragment from the Room Block 3 midden with a reconstructed internal diameter of 13.5 mm. Shell species was indeterminate in both cases.

Tessarae

A single, well made shell mosaic tesserae was recovered from the lower fill of Room 3/Room Block 1. Faint natural striations visible through the grinding suggest that the artifact was made of *Laevicardium elatum*. The present specimen is square (9.4 x 9.4 mm) and

is ground to a uniform thickness of 1.4 mm. All surfaces are well and evenly smoothed and the sole manufacturing "anomaly" is a slight cant to the lateral margins caused by holding the cutting tool at an angle during initial scoring of the shell. This feature indicates that a knife rather than a graving tool was employed.

Table 3: Whole Shell Beads

Provenience	Condition	Maximum Dimension (in mm)	Remarks
RB3; court contact	complete except for drill hole	14.7	*Glycymeris;* well polished, drilled
RB3; Rm3; 2nd	complete	10.7	*Glycymeris;* highly polished, drilled & ground umbo
RB3; Rm3; 2nd floor contact	complete	12.0	*Glycymeris;* well polished, drilled and ground umbo
RB3; Rm3; 2nd floor contact	complete	12.7	*Glycymeris;* well polished; drilled and ground umbo
RB3; VI,SQ D, fill	complete	11.7	*Glycymeris;* highly polished, drilled & ground umbo
RB3; court, sub-contact	partial	10.5	*Glycymeris;* highly polished, umbo missing
RB3; II, SQ D&IV, SQ C, contact	complete	12.2	*Glycymeris;* well polished,umbo drilled but not ground
RB3; VI, SQ C, contact	complete	8.0	*Olivella;* basally & proximally ground

Table 4: Glycymeris Bracelets

Provenience	Condition	Internal Diameter (in mm)	Comments
RB3, court contact	partial	67.0	well polished
RB3, I,SQ A, contact	partial	58.2	well polished
RB3, I,SQ A, contact	partial	47.7	well polished, flange retained
RB3, XI, SQ B, contact	partial	57.0	well polished, thin walled, pierced umbo
RB3, IV, SQ C, room interior	partial	53.4	polished int., chalky ext.
RB3, V, SQ C, lower floor	partial	55.2	well polished
RB3, I, SQ B, surface	partial	61.7	eroded, thin walled
RB3, VI, SQ B, contact	partial	60.2	highly polished
RB3, VI, SQ B, contact	3/4	39.5	slightly chalky
RB3, VI, SQ B, contact	partial	40.0	2 parallel notches partially eroded
RB3, X, SQ A&C, fill	partial	indet	well polished
RB3, III, SQ C, midden	partial	42.3	slightly chalky surface accretions
RB1, Rm2	partial	indet	burned
RB2, Rm1	partial	52,0	well polished
RB1.Rm1, fill	1/2	53.9	drilled umbo, well smoothed and polished
RB3, Rm2, 2nd floor	1/4	65.0	Very well finished, heavy squared sur face umbo
RB1, Rm1, fill	fragment	indet	burned,polished drilled umbo
RB3, II, SQ D contact	complete	6.1	Olivella, basally and proximally ground; heavily mineralized

Highly polished = striations obliterated
Well polished = partial obliteration

Chapter Seven

Summary and Conclusions

The virtual absence of controlled excavations in the Safford Valley renders interpretation a precarious pastime. However, within the confines of the scant data base several conclusions are indicated. These will be briefly discussed below.

Ceramic Chronology and Associations

The ceramic chronology of the Safford Valley is not adequately established by studies concentrating on other areas of the Southwest and several major pottery types appear earlier or persist later on local sites than elsewhere. As a general rule the published ceramic complexes most similar to that of CC:1:19 are from the Reserve and Tularosa phases in the Point of Pines region (Gifford 1980); these correspondences approach 80 percent but omit some important types.

Occupation at the Owens/Colvin site definitely ceased prior to the widespread introduction of polychromes and probably before A.D. 1200. This places the site's final prehistoric occupation at or very near the date of an apparently wholesale abandonment of the Valley by its inhabitants. The subsequent cultural hiatus lasted for some decades prior to intensive reoccupation by the Salado, the Valley's final sedentary prehistoric peoples.

The ceramic implications of the proposed dating are several:

1). Encinas Red-on-brown continued in local production and use until the middle 1100's or later, despite its disappearance as early as A.D. 1000 in some areas. This pattern is consistent with the type's later survival in the Point of Pines region.

2). McDonald Corrugated in the Painted and Patterned varieties was in local use by about A.D. 1150, about fifty years prior to Wood's (1987) estimated initial date. The absence of the Grooved style supports both Gifford's (1980) and Wood's (1987) suggestion of a later origin for that variant. The large quantity of McDonald Corrugated at the site is inferential evidence for local manufacture.

3). St. Johns Black-on-Red and St. Johns Polychrome were probably being imported in small quantities prior to their estimated starting date of about A.D. 1175. Wingate Polychrome was also in early circulation but was locally less popular than the St. Johns variants.

4). The early and prolific occurrence of San Carlos Red-on-brown indicates indigenous manufacture in the Safford Valley. Large amounts of the type were not typical of the Reserve or Tularosa phases in the Point of Pines region, where San Carlos Red-on-brown may have a significantly different history.

5). Mexican wares were virtually absent from the ceramic assemblage, a notable contrast to evidence for extensive Chihuahuan contacts in Salado times. This suggests that the Safford area was not in close contact with Casas Grandes in the early years of the Paquime florescence, now redated as early as A.D. 1150.

6). Painted or surface textured ceramics together account for 61 percent of recovered sherds. This pattern was reversed in the subsequent Salado phase, emphasizing a clean break in the local ceramic tradition.

Architecture

Architecture in the excavated portion of the site was notably ephemeral, contrasting strongly with both the substantial pithouses of the immediatly preceding period and the well made adobe structures of the later Salado phase. In the present instance, walls no high-

er than a few feet were constructed by the simple expedient of puddling adobe over low rock alignments to a height of one or two courses. On these foundations a light superstructure of wattle and daub was erected to complete the walls and roof. Floors were usually ephemeral and poorly compacted, suggesting only light use.

Roofed space dichotomized into two discrete categories differentiated by shape, floor area, and the presence of internal features. Rectangular rooms averaged 5.3 square meters in area and consistently lacked floor features; presumably these structures served as store rooms. Square rooms provided slightly more than twice the area of their rectangular counterparts, averaging 11.62 square meters of covered space. Floor features in the form of hearths, casual fire pits, ash pits, post molds or adobe lined pits were identified for 75 percent of these presumably residential structures. In one instance (Room 4/Room Block 1) an initially square room was subdivided into two rectangular rooms (4A and 4B) by the addition of an intramural cobble and adobe wall.

The overall impression of the excavated architecture is consistent with casual construction and short, possibly seasonal occupation. The impression of a short occupational sequence for individual room blocks is supported by an absence of vertical stratigraphy in the sites' ceramic distributions.

Hohokam and Mogollon In The Safford Valley

Evidence from the Owens/Colvin site supports an actual Hohokam presence in the Safford Valley as well as continued occupation by an "indigenous" Mogollon population. At CC:1:19 these two cultures have apparently intermixed to a significant degree and no separation of the discrete traditions is possible. It is conceivable that the area was separately occupied by the two groups whose artifacts subsequently became mixed in one of the sites periodic floodings. Disturbed stratigraphy is not indicated by apparently sealed floor contact deposits, however, and these strata show a consistent admixture of Hokoham, Mogollon and "hybridized" traits.

Diagnostic artifacts indicating a Hohokam occupation consist of distinctive human and animal figurines (some of which have specific ritual associations in the Hohokam heartland), a palette, a pottery anvil, a censer fragment and an assemblage of paddle malleated ceramics accounting for some 20 percent of the site's extensive pottery inventory. Recovered artifacts primarily date to the Sacaton period when the Safford Valley evidently represented the eastern boundary of Hohokam expansion. The majority of these artifacts reflect ritual or technological conventions of a type unlikely to diffuse unaltered across traditional cultural lines.

Additional Hohokam influence is apparent in the adoption of Hohokam design motifs and color schemes by local Mogollon potters, although traditional Mogollon manufacturing strategies are retained. Influence of this latter type can result from simple stimulus diffusion but would develop more quickly and dramatically in the event of direct contact. On the site, the major "mimicked" type was San Carlos Red-on-brown, which occurred in all units and levels.

Native Mogollon elements are most apparent in a continuation of many ceramic styles (particularly plain and surface texture types) and within the lithic assemblage. Notably absent are the carefully sculpted stone bowls of the "mainstream" Sacaton tradition; specimens from the present site are simple even by Mogollon standards. Chipped stone artifacts are of casual manufacture and use with the exception of a number of finely made points. These avoid the serration and elongated format of contemporary Hohokam styles and evidently represent a continuation of indigenous types.

Trade Contacts

Trade contacts in evidence at CC:1:19 are fairly typical for the time and place. Luxury recoveries were limited to a variety of shells from the Gulf of California, Pacific Coast abalone, and a very small amount of turquoise. The turquoise almost certainly originated in the nearby Morenci area, where it has been commercially mined. With the possible exception of a single pendant, all shell and turquoise items were in a finished form with no evidence for on-site manufacture. Quartz crystals, obsidian, and crypocrystalline raw materials were also manuported to the site in small quantities, probably without benefit of a formal trade network.

In the absence of sophistocated paste studies it is difficult to segregate imported from indigenous ceramics and some ostensible imports were probably made locally. Major imported types such as Black-and-White wares and White Mountain Redwares tend to hover respectively at around 2 percent of the assemblage; ceramics represented in significantly higher proportions are likely to be local in origin. Under this criterion, the candidates for indigenous manufacture would minimally include Sacaton Red-on-buff (Safford Variety), Casa Grande Red-on-Buff, San Carlos Red-on-brown, Encinas Red-on-brown, and McDonald Corrugated among painted wares. Minor imports such as Playas Incised were usually present in such small concentrations that single vessels are probable. It is noteworthy that Mexican imports were quite rare on the site, a significant fact in light of new evidence suggesting that Paquime Phase Casa Grandes may have floresced as early as A.D. 1150, a half century before its previously estimated initial date of A.D. 1206. This suggests that there was little early contact between Casas Grandes and the Safford Valley, despite the fact that the later Salado occupation provides extensive evidence for southern interaction. At the nearby Curtis Ranch site, Salado period evidence for contact with Paquime includes recoveries of copper bells, Mexican ceramics, and an Ehecatl effigy jar in Ramos Polychrome. This latter specimen is currently on exhibit at the EAC Museum.

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Appendices

Appendix	1	Ceramic Distributions
Appendix	2	Projectile Point Data
Appendix	3	Ground Stone Data

APPENDIX 1: CERAMIC DISTRIBUTIONS

KEY:
RIM BODY GILA SHOULDER
9 / 99 / 9

SHERD TYPES	UNITS																	
	SURFACE	ROOM 1 FILL	ROOM 1 FLOOR	ROOM 1 TEST PIT	ROOM 1A	ROOM 2 FILL	ROOM 2 FLOOR	ROOM 3 FILL	ROOM 3 FLOOR	ROOM 4 FILL	ROOM 4 FLOOR	ROOM 4A FLOOR	ROOM 4B FLOOR	ROOM 5 FILL	ROOM 6	ROOM 6 TEST PIT	TEST PIT W. OF RMS. 3-6	AREA EAST OF ROOM 5
PLAIN EXT. & INT.	0/3	7/115	0/92	0/2	0/33	0/13	0/11	0/5	0/33	1/19	0/25	0/28	2/20	1/26	0/15	1/61	6/2	1/29
PLAIN EXT., SM. INT.		1/7	0/2		0/3				0/1			0/1	0/2			0/2		0/6
COR. EXT., PL. INT.	0/1	5/75	0/28	0/1		0/4	0/9	0/4	0/1	0/8	0/12	1/8	0/2	1/8	0/2	0/8		2/14
COR. EXT., SM. INT.	0/1	2/11	0/8	0/3	1/1		1/1	0/1		0/1	0/2	0/6	0/1	0/6		0/4		0/4
OBL. COR., PL. INT.	0/1	2/111	0/67		0/16	0/2	0/7		0/4	0/3	1/3	0/3	0/3	0/5	0/3	0/17	1/5	0/9
OBL. COR., SM. INT.	0/1	0/17	0/11		0/5	0/1		0/1		0/1	0/1	0/2	0/2	0/1	1/0	0/1	1/0	0/4
McDONALD COR.		10/13	1/6	0/6	0/9		0/1	0/1			0/1			0/2		0/4	3/0	1/3
INCISED		0/1				0/1	0/1								1/1			
REDWARE	0/1	1/5	0/4										0/1		0/3	0/3		0/8
ENCINAS		2/10		0/6	0/1	1/0	1/1	0/1	0/1					2/8	0/1	0/2	0/1	
SAN CARLOS		2/21	2/5/3		1/1	1/0	0/1		0/3	0/3	1/4					0/3	1/0	0/3
BUFF	0/1	1/29	0/7/1	0/0/1	0/1	0/2	0/1/1	0/1		0/3		0/9	0/1	0/3	0/1	0/1		0/6
BROWN		0/6	0/18	0/5	0/4	0/3	0/2	0/1			0/10			0/5		0/4		1/4
RED-ON-BUFF		5/28	0/12/2		1/1	2/5	0/3	0/4	0/1	0/2		2/8	0/3	0/2/1		0/7/1		0/5
BLACK-ON-WHITE	1/0	0/7	0/11			0/1	1/7			0/1	0/2	0/2	0/1	0/4	0/1	0/5		0/5
ST. JOHNS B/R		0/2				0/1	0/2											
ST. JOHNS POLY		0/1	0/1				0/4									0/1		
WINGATE POLY									0/2	0/1			0/2	0/1				
COR. EXT., RED INT.		0/2																
MISC.		0/2	0/2		0/3		1/0			0/1			2/0	0/2				0/1

ROOM BLOCK 1.

APPENDIX 1: CERAMIC DISTRIBUTIONS

KEY:
RIM BODY GILA SHOULDER
9 / 99 / 9

SHERD TYPES	UNITS			
	SURFACE	FILL	FLOOR	
PLAIN EXT. & INT.	0/8	3/68	0/25	
PLAIN EXT., SM. INT.	0/4	3/2	0/2	
COR. EXT., PL. INT.	0/11	2/50	1/28	
COR. EXT., SM. INT.	0/1	2/6	1/4	
OBL. COR., PL. INT.	0/15	1/50	0/40	
OBL. COR., SM. INT.	0/4	0/19	0/8	
McDONALD COR.	2/4	5/2	0/2	
INCISED				
REDWARE		1/7	0/2	
ENCINAS	0/2	2/12	0/2	
SAN CARLOS	0/1	1/9/2	0/3	
BUFF		0/10	1/4	
BROWN	0/3	0/13	1/3	
RED-ON-BUFF	0/2	1/11/2	0/5	
BLACK-ON-WHITE	0/1	6/26	1/8	
ST. JOHNS B/R		1/7		
ST. JOHNS POLY		0/2		
WINGATE POLY		0/2		
COR. EXT., RED INT.		0/1		
MISC.				

ROOM BLOCK 2.

APPENDIX 1: CERAMIC DISTRIBUTIONS

KEY:
RIM BODY GILA SHOULDER
9 / 99 / 9

SHERD TYPES	UNITS											
	MIDDEN SURFACE	UNIT I UPPER LEVEL	UNIT II UPPER LEVEL	ADOBE LINED PIT	UNIT III UPPER LEVEL	UNIT IV UPPER LEVEL	TEST PIT 1	TEST PIT 2	COURTYARD CONTACT	COURTYARD SUB-CONTACT	UNIT V UPPER LEVEL	UNIT VI UPPER LEVEL
PLAIN EXT. & INT.	1/60	12/397	150/1081	0/8	38/865	21/552	0/31	1/9	68/1883	6/239	3/147	3/141
PLAIN EXT., SM. INT.		0/4	1/0		6/17	3/52	2/6	0/3	6/170	4/16		1/3
COR. EXT., PL. INT.	0/20	5/354	49/913	4/28	26/490	13/280			41/1147	7/202	2/92	0/29
COR. EXT., SM. INT.	0/2	6/23	21/86	1/2	13/86	13/41			27/216	0/55	1/4	3/25
OBL. COR., PL. INT.	2/18	17/311	43/900	0/2	40/671	24/580	0/6	0/2	24/1126	1/107	3/80	11/219
OBL. COR., SM. INT.	1/0	2/38	21/134		9/89	8/75			22/223	4/13	1/5	2/23
McDONALD COR.	0/2	4/24	33/97		16/49	7/28			40/90	5/16	5/7	2/4
INCISED		0/3	8/11		0/5	0/2			1/17	0/3	0/1	
REDWARE	0/1	0/2	0/12		3/6	1/13	2/2	0/1	4/84	1/5	0/2	
ENCINAS		4/26	46/125		44/117	33/126			44/195	6/15	2/8	3/13
SAN CARLOS	1/4	85/167/8	70/503/27	4/15/3	54/572/13	18/149/6			51/353/19	7/140/3	9/31	2/15
BUFF	0/4	12/210	115/279/1	3/18	2/57	8/168/1			27/722/6	4/121	1/38	3/22
BROWN												
RED-ON-BUFF		2/35	2/18/1		5/85	2/18		0/1	31/245/15	2/10		1/1/1
BLACK-ON-WHITE		3/40	9/139	1/1		9/59	0/1	0/1	14/131	0/11	2/9	1/5
ST. JOHNS B/R	0/1	0/9	0/22		0/28	0/10			3/39	0/2	0/3	0/2
ST. JOHNS POLY		0/1			0/1				1/1			
WINGATE POLY												
COR. EXT., RED INT.	0/1	0/2	0/2		0/6	0/3			3/16	0/1		0/1
MISC.		0/2	0/12		0/8	0/11			4/16	1/4		

ROOM BLOCK 3

APPENDIX 1: CERAMIC DISTRIBUTIONS

KEY:
RIM BODY GILA SHOULDER
9 / 99 / 9

SHERD TYPES	UNITS											
	UNIT VII FILL	UNIT VIII FILL	UNIT VIII FILL	UNIT IX FILL	UNIT XI FILL	UNIT XII FILL	UNIT XIII DISTURBED	ROOM 2 UPPER FLR.	ROOM 2 LOWER FLR.	ROOM 3 UPPER FLR.	ROOM 3 LOWER FLR.	UNIT X DISTURBED
PLAIN EXT. & INT.	18/438	8/208	4/53	1/43	9/166	1/105	2/91	3/146	10/110	5/92	10/245	2/60
PLAIN EXT., SM. INT.	0/2	3/17	0/4	1/3	1/9	0/9	0/7	1/18	0/4	0/16	3/26	0/7
COR. EXT., PL. INT.	4/218	7/250	0/49	1/57	3/66	2/40	0/47	1/92	3/65	7/68	7/68	4/41
COR. EXT., SM. INT.	8/27	5/42	0/8	1/13	0/8	0/16	1/12	5/22	0/25	0/7	2/32	0/42
OBL. COR., PL. INT.	10/201	2/141	0/38	0/29	5/66	0/48	2/44	1/70	4/97	2/103	6/176	0/2
OBL. COR., SM. INT.	6/45	2/42	1/2	0/10	0/7	0/21	3/18	2/20	1/12	0/24	2/20	0/20
McDONALD COR.	2/21	1/5	0/3	2/1	1/3	4/3	0/4	1/3	7/7	3/12	15/48	1/3
INCISED	1/2	0/5	0/3									0/1
REDWARE	0/3	2/6		0/4		0/17	0/14	0/2	0/6	0/2	0/4	0/6
ENCINAS	9/43	1/12	1/8	2/1	0/11	5/4	0/7	0/16	3/9	3/19	12/42	2/6
SAN CARLOS	5/66/2	8/32	1/4	0/1	5/32	1/22	2/18/1	1/32/2	6/55/3			0/5
BUFF	5/104	4/126	1/27	0/31	2/31	3/46	1/31	1/44	0/61	1/40/1	1/103/1	2/28/1
BROWN												
RED-ON-BUFF	5/26	7/98/3	2/33	7/18	0/8	2/19/1	0/2			6/52/2	7/67/2	4/17
BLACK-ON-WHITE	2/17	2/21	1/5	1/1	5/2	3/7	2/3	0/9	0/4	0/6	1/4	2/3
ST. JOHNS B/R	0/10	1/1	0/1			0/2	0/2	0/1	0/1	1/3	1/9	0/2
ST. JOHNS POLY		0/1			0/1							
WINGATE POLY												
COR. EXT., RED INT.		0/2		0/1		0/1				0/1	2/4	0/1
MISC.		4/12	2/1	0/1		1/11		0/1	1/1	0/1	3/6	

ROOM BLOCK 3. CONT.

APPENDIX 1: CERAMIC DISTRIBUTIONS

KEY:
RIM BODY GILA SHOULDER
9 / 99 / 9

SHERD TYPES	UNITS: SURFACE, GENERAL	ARIZONA ARCH. SOC. EXCAVAT.	ROOM BLOCK 1	ROOM BLOCK 2	ROOM BLOCK 3	ROOM BLOCK 1 PERCENTAGES	ROOM BLOCK 2 PERCENTAGES	ROOM BLOCK 3 PERCENTAGES	TOTAL PERCENTAGES
PLAIN EXT. & INT.	0/100	0/59	28/725	3/101	378/7242	35.4	19.3	26.3	26.9
PLAIN EXT., SM. INT.	0/8	1/4	2/41	3/8	32/408	2.0	2.0	1.5	1.5
COR. EXT., PL. INT.	1/31	2/27	12/132	3/89	187/4671	6.8	17.1	16.8	16.0
COR. EXT., SM. INT.	1/11	2/14	4/64	3/11	106/774	3.2	2.6	3.8	3.0
OBL. COR., PL. INT.	0/65	2/29	4/327	1/105	200/5141	15.6	19.7	18.5	18.2
OBL. COR., SM. INT.	3/8	1/2	3/130	0/31	87/850	6.3	5.8	3.2	3.4
McDONALD COR.	1/4	4/6	28/64	7/4	162/433	4.3	2.0	2.1	2.2
INCISED		0/2	1/5		10/55	0.3		0.2	0.2
REDWARE	0/5		2/35	1/9	13/195	1.7	1.9	0.7	0.8
ENCINAS	2/10	2/23	0/41	2/16	222/806	2.0	3.3	3.6	3.4
SAN CARLOS	0/5/1	8/44/2	10/67/3	1/13/2	332/2226/96	3.8	3.0	9.2	8.5
BUFF	0/6	1/11	1/88/3	1/14	199/2348/11	4.3	2.8	8.8	8.4
BROWN	0/6	0/13	3/86	1/19	2/17	4.5	3.7	0.7	0.5
RED-ON-BUFF	0/9	4/36	13/100/4	1/18/2	87/774/36	5.5	3.9	3.2	3.2
BLACK-ON-WHITE	0/22	1/44	3/56	7/35	55/490	2.8	7.8	1.9	2.2
ST. JOHNS B/R	0/2	1/7	0/6	1/7	6/151	0.3	1.5	0.5	0.5
ST. JOHNS POLY	0/3	0/1	0/7	0/2	1/5	0.3	0.4	0.02	0.05
WINGATE POLY	0/1	1/11	0/6	0/2		0.3	0.4		0.02
COR. EXT., RED INT.				0/1			0.2		
MISC.	1/15	1/11	5/18	5/11	18/109	0.8	3.0	0.4	0.5

CERAMIC TOTALS

APPENDIX 2: Projectile Point Data

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Colvin; RB 1 Room 2 fill	Max: 18.7 Min: 11.0 Thick: 3.7	obsidian	Complete	Type E no notches, concave base
Colvin; RB 1 Room 4 lower fill	Max: 26.0 Min: 11.9 Thick: 1.6	mottled chert	Complete	Type A
Colvin, RB 1 test area 3	Max: 37.7 Min: 13.6 Thick: 7.2	white chert	In process	Biface in progress
Colvin; RB 1 Room 4 lower fill	Max: indet. Min: indet. Thick: indet.	tawny chert	Incomplete	Highly fragmentary
Colvin; RB 1 Room 2	Max: 19.7 Min: 10.0 Thick: 3.0	obsidian	Complete	Type B
Colvin; RB 1 Room 2	Max: 19.7 Min: 10.6 Thick: 2.2	chert	Complete	Type A-1
Colvin; RB 1 Room 4	Max: 36.0 Min: 20.9 Thick: 9.9	chert	Complete	Type F
Colvin; RB 2 Room 1	Max: 28.6 Min: 13.7 Thick: 1.8	chert	Complete	Type A-3
Colvin; RB 2 Room 1	Max: 23.0 Min: 14.6 Thick: 1.9	obsidian	Complete	Type A-3
Colvin; RB 2 Room 1	Max: 26.9 Min: 15.9 Thick: 2.1	obsidian	Complete	Type A-3

APPENDIX 2 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Colvin; RB 2 Room 1	Max: 24.7 Min: 12.1 Thick: 1.7	obsidian	Complete	Type A-3
Colvin; RB 2 Room 1	Max: 19.0 Min: 11.4 Thick: 1.8	chert	Complete	Type A-3
Colvin; RB 2 Room 1	Max: 17.1 Min: 13.6 Thick: 2.6	chert	Complete	Type G
Owens; RB 3 Room 3 lower floor	Max: indet. Min: 8.3 Thick: 1.5	chert	Tip missing	Type B
Owens; Unit IV SQ C midden	Max: 16.5 Min: 10.5 Thick: 2.8	obsidian	Complete	Type E
Owens; Unit IV SQ B midden	Max: indet. Min: 16.0 Thick: 2.6	chert	Tip missing	Type G
Owens; court contact	Max: 20.2 Min: 14.8 Thick: 3.6	chert	Complete	Type C
Owens; court contact	Max: indet. Min: 8.1 Thick: 1.5	chert	Tip missing	Type D-1
Owens; court contact	Max: indet. Min: indet. Thick: 2.0	chert	Base missing	Type D or D-1
Owens; RB 3 Room 3 second floor	Max: 22.5 Min: 9.4 Thick: 1.7	chert	Complete	Type A-1

APPENDIX 2 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Owen; Unit II SQ D fill	Max: indet. Min: 13.2 Thick: 2.1	chert	Tip missing	Type E
Owens; court contact	Max: 22.7 Min: 9.0 Thick: 2.9	obsidian	Complete	Type A-1
Owens; court contact	Max: indet. Min: 6.8 Thick: 2.1	chert	Tip missing	Type D
Owens; Unit VI SQ D lower fill	Max: indet. Min: 11.7 Thick: 2.4	obsidian	Tip missing	Type A-1
Owens; Unit VI SQ D lower fill	Max: indet. Min: 12.3 Thick: 2.3	chert	Tip missing	Type A-1
Owens; Unit VI SQ D lower fill	Max: indet. Min: 10.9 Thick: 2.1	chert	Tip missing	Type A-1
Owens; Room 3 second floor	Max: indet. Min: 12.3 Thick: 2.1	chert	Tip and one ear missing	Type E
Owens; court contact	Max: indet. Min: 14.3 Thick: 1.9	chert	Tip and one ear missing	Type E
Owens; court contact	Max: indet. Min: indet. Thick: 2.2	obsidian	Fragmentary	Indeterminate
Owens; court contact	Max: 18.1 Min: 8.0 Thick: 2.0	chert	Complete	Type D-1

APPENDIX 2 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Owens; Room 2 second floor	Max: 27.5 Min: 15.7 Thick: 2.8	chert	Complete	Type A
Owens; Court lower fill	Max: indet. Min: 11.0 Thick: 1.7	obsidian	Tip missing	Type E-1
Owens; Unit XIII SQ A fill	Max: 22.7 Min: indet. Thick: 2.0	chert	Base part missing	Type D or D-1
Owens; Unit VI SQ D fill	Max: 22.6* Min: 13.3 Thick: 2.1	chert	Tip missing	Type E-1
Owens; Unit VI SQ D fill	Max: 17.2 Min: 10.3 Thick: 2.8	chert	Complete	Type E
Owens; Unit XIII SQ A floor	Max: 17.8 Min: 14.4 Thick: 2.7	chert	Complete	Type E
Owens; Unit II SQ A fill	Max: 11.9 Min: 10.0 Thick: 2.2	obsidian	Complete	Type C
Owens; Room 2 second floor	Max: indet. Min: 16.0 Thick: 3.4	obsidian	Reworked	Fragment stemmed point
Owens; court contact	Max: 26.4 Min: 10.5* Thick: 3.2	obsidian	Base part missing	Type A
Owens; court contact	Max: 15.5 Min: 7.2 Thick: 1.7	chert	Complete	Type D

APPENDIX 2 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Owens; Unit XI SQ C upper floor	Max: 18.0 Min: 11.1 Thick: 2.6	chert	Tip missing	Type E-1
Owens; Unit III SQ C midden	Max: indet. Min: 9.2 Thick: 2.0	obsidian	Tip missing	Type D-1
Owens; Unit VI SQ A second floor	Max: indet. Min: 13.7 Thick: 2.0	chert	Tip missing	Type A
Owens; Unit I SQ B surface	Max: 31.1 Min: indet. Thick: 5.9	chert	corner missing	Type F
Owens; Unit III SQ A midden	Max: 16.1 Min: indet. Thick: 2.2	obsidian	Ear missing	Type E-1
Owens; court midden	Max: indet. Min: 9.4 Thick: 2.0	chert	Tip missing	Type D
Owens; Unit I SQ A surface	Max: 18.2 Min: 11.1 Thick: 2.4	chert	Complete	Type D
Owens; court contact	Max: indet. Min: indet. Thick: 2.2	chert	Fragment	Type G
Owens; court contact	Max: indet. Min: indet. Thick: 2.4	chert	Fragment	Midsection only
Owens; Unit III SQ A fill	Max: 14.5* Min: 11.4* Thick: 2.5	chert	Tip and one ear missing	Type E

APPENDIX 2 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Owens; Unit VI SQ B second floor	Max: 18.9 Min: 9.4 Thick: 2.3	chert	Complete	Type D

APPENDIX 3

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Unit II SQ C 0-6"	Max: indet.* Min: indet.* Thick: 3.3	diorite	Broken	Mano-bifacial, edge shows some use as a pounding edge
Unit II SQ C 0-6"	Max: 8.7 Min: 3.2 Thick: 2.2	red basalt	Complete	Pecking stone-ends show pecking use one side some rubbing
Unit XII SQ C floor contact	Max: indet. Min: indet.* Thick: 5.7	vesicular basalt	Broken	Mano Fragment
Unit XI SQ A floor contact	Max: 9.8 Min: 4.7 Thick: 3.3	vesicular basalt	Broken	Stone Bowl or Mortar fragment-depth is indeterminate
Colvin; RB I Room 1 Quad 4 fill	Max: 9.3 Min: 8.1 Thick: 3.2	basalt	Good	Mano-bifacial, edges show battering
Colvin; RB I Room 1A second level fill	Max: 9.1 Min: 9.0 Thick: 4.0	basalt	Broken	Mano-bifacial, edges chipped
Colvin; RB I Room 5 fill	Max: 4.1 Min: 3.8 Thick: 1.9	tufa	Good	Loom weight?-hour glass shaped weight
Colvin; 8/21/86 0-20"	Max: 6.3 Min: 6.2 Thick: 3.7	vesicular basalt	Broken	Mano Fragment-bifacial, shows edge wear
Colvin; RB I Room 1	Max: 18.5 Min: 6.6 Thick: 5.1	basalt	Good	Mano-unifacial, ends battered and chipped
Colvin; RB I Room 4 fill	Max: 7.1 Min: 4.0 Thick: 2.6	rhyolite	Broken	Pecking Stone-shows use on end sides, smoothed from use as rubbing tool

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Unit I SQ A 0-6"	Max: 9.8* Min: 8.0* Thick: 3.8	tufa	Broken	Stone Bowl-well rounded outside, shallow depression 1.0 deep, 4.5 diameter
Unit courtyard Feature I contact	Max: 21.0 Min: 13.0* Thick: 6.0	tufa	Broken one edge	Stone Bowl-oval depression; 9.0 X 7.5 X 1.5 deep, tufa/rhyolite inclusions (small)
Unit XIII SQ A & C disturbed	Max: 12.2* Min: 8.7 Thick: 3.8	vesicular basalt	Broken	Mano-unifacial, sides and ends modified and shaped
Unit XIII SQ A & C disturbed	Max: 10.3 Min: 9.2 Thick: 6.7	tufa	Complete	Mano-unifacial no modification except working face smooth from use
Unit XIII SQ D lowest	Max: 8.3* Min: 5.4* Thick: 4.2	sandstone	Broken	Mano-bifacial well shaped and work on end and side; fire blackened one side, other side shows haematite stain, aprox 1/4 of mano
Unit XIII F! SQ B floor	Max: 8.0* Min: 6.6 Thick: 2.5	rhyolite	Broken	Mano-bifacial, one side heavily used
Unit V SQ C lower contact	Max: 9.2* Min: 7.6 Thick: 2.9	fine grained red basalt	Broken	Mano-bifacial
Unit IV SQ A midden	Max: 11.5* Min: 2.4 Thick: 2.1	basalt	Broken	Shaft abrader, or smoother-groove depth .6, groove width 2.2
Room 3 below second floor	Max: 5.7 Min: 3.7 Thick: 2.5	fine grained sandstone	Complete	Polishing stone-one side and end show most use
Unit XII SQ C fill	Max: 8.3* Min: 6.1* Thick: 3.0	basalt	Broken	Mano-bifacial, well used one side

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Room 3 2nd floor contact	Max: 84.7 Min: 34.6 Thick: 34.6	diorite	Complete	Elongated Pecker-battered on both ends
Room 3 2nd floor contact	Max: 80.3 Min: 21.5 Thick: 13.8	fine grained sandstone	Complete	Elongated Pecker-battered on both ends
Unit III SQ B fill	Max: 104.8* Min: 102.6 Thick: 44.5	rhyolite	Incomlete	Circular one hand mano-unifacial
Unit I SQ B	Max: 103.0* Min: 84.7 Thick: 52.1	vesicular basalt	Incomplete	Well shaped ovoid one hand mano-unifacial
Unit VI SQ C	Max: 165.0* Min: 94.0 Thick: 33.5	vesicular basalt	Incomplete	Well shaped ovoid one hand mano-unifacial
Unit V SQ C lower fill	Max: 116.0 Min: 93.0 Thick: 34.0	tufa	Complete	Irregularly circular one hand smoother-unifacial poorly consolidated tufa
Unit XIII SQ A & C Disturbed	Max: 131.0 Min: 108.3 Thick: 23.9	vesicular basalt	Complete	Irregularly circular one hand mano-unifacial, very lightly used
Unit I & II court clean-up	Max: 111.2* Min: 108.0 Thick: 38.0	vesicular basalt	Incomplete	Well shaped ovoid two hand mano-with fairly square corners, unifacial, heavily used
Unit I SQ B surface	Max: indet. Min: indet. Thick: 24.1	gray basalt	Incomplete	Ovoid Mano-unifacial, highly fragmented heavily worn, one hand
Court Contact	Max: 59.3 Min: 49.6 Thick: 29.5	granite	Complete	Small stone bowl-exploiting a natural depression as a base; depth of bowl 16.0 mm

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Unit IV ; SQ C fill in circular feature	Max: 101.0 Min: 94.3 Thick; 39.0	gray vesicular basalt	Complete	Mano-unifacial, one hand circular
Unit II SQ C fill	Max: 11.6 Min: 10.7 Thick 4.3	tufa	Broken	Mano- bifacial well rounded with smoothed end and sides
Unit II SQ C fill	Max: 9.3 Min: 7.3 Thick: 1.4	shale	Good	Mano-unifacial, edges smooth and rounded possibly used on pottery, small chip off one end
Unit II SQ C fill	Max: 6.0 Min: 4.4 Thick: 1.8	quartzite	Good	Smoothing stone-unifacial, tabular
F!; 194 N, 4 E mounded area	Max: 12.3 Min: 10.2 Thick: 3.0	vesicular basalt	Good	Mano-bifacial
Unit: courtyard Level: contact	Max: 9.0 Min: 8.3 Thick: 3.0	sandstone	Broken	Abrader-unifacial possible light use opposite face
Unit VII S-88 SQ D	Max: 7.5 Min: 5.2 Thick: 5.0	diorite	Badly broken	Axe-fragment chips removed after initial breaking
Unit VII S-88 SQ D	Max: 6.2 Min: 5.3 Thick: 3.0	scoria	Good	Abrader-principal use, one face
Unit VII S-88 SQ D	Max: 4.2 Min: 4.1 Thick: 3.5	scoria	Good	Abrader-principal use, one face
Unit I SQ B 0-6"	Max: 9.5* Min: 6.2 Thick: 3.5	fine grained rhyolite	Broken	Mano-unifacial, enlongated, some battering on one end

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Unit XIII SQ B floor	Max: 17.0 Min: 11.5 Thick: 3.0	rhyolite	Broken	Paint grinding stone-hematic stain on grinding surface
Unit 3 SQ C midden	Max: 5.2 Min: 4.2 Thick: 3.0	diorite	Complete	Polishing stone-striation marks show very well on surface most used
Unit VI SQ B floor contact	Max: 10.2* Min: 8.0 Thick: 4.0	basalt	Broken	Elongated Stone bowl-with a handle-like end
Unit II SQ D midden level	Max: 11.0* Min: 7.8 Thick: 5.0	diorite	Broken	Axe 3/4 groove-bit end broken and large flake off one side of bit end, same pecking on bit end indicates reshapeing was comenced
Unit II SQ D court cont.	Max: 9.5* Min: 7.5 Thick: 5.2	granite	Broken	Axe 3/4 groove-bit end and hammer end each broken off, reused as a hammer stone, both ends
Unit I & II Courtyard clean-up	Max: 16.5 Min: 7.5* Thick: 3.7	vesicular basalt	Broken	Metate-shallow circular or oval shape, basin type, flattened to edge
Wedge between RM 3 & super-imposed wall	Max: 11.1 Min: 6.2 Thick: 5.1	diorite	Complete	Axe fully grooved-well smoothed and polished on bit end
Unit I & II Courtyard clean-up	Max: 11.5* Min: 8.7 Thick: 3.2	vesicular basalt	Broken	Mano-unifacial, elongated
Unit Courtyard Feature I Level: contact	Max: indet. Min: indet. Thick: 2.0	tufa	Broken	Stone Bowl-well smoothed inside and out, approx. depth inside, 6.0; outside shows evidence of haematite paint (see cont. sheet)
Unit XIII SQ A&C floor contact Level: upper	Max: 15.0* Min: 12.0 Thick: 6.0	vesicular basalt	Broken	Mano-bifacial does not show great wear, some shaping on both sides

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Unit IV SQ C midden	Max: 10.7 Min: 8.3 Thick: 7.6	scoria	Broken	Pestle-end fragment
Unit IV SQ C midden	Max: 8.1 Min: 4.9 Thick: 1.7	diorite	Broken	Pigment mano-bifacial, well rounded edges Haematite pigment one face only
Unit IV SQ C midden	Max: 7.7 Min: 6.7 Thick: 2.2	basalt	Good	Mano-bifacial, well rounded edges
Unit XIII SQ A & C disturbed bed	Max: 8.2 Min: 5.3 Thick: 2.6	tufa	Good	Mano-unifacial
F1 Courtyard Sub-contact	Max: 4.6 Min: 5.8 Thick: 4.3	vesicular basalt	Broken	Mano-fragment
F1 Courtyard Sub-contact	Max: 3.6 Min: 2.4 Thick: 1.2	diorite	Good	Polishing stone
Unit II SQ D contact	Max: 11.5 Min: 7.5* Thick: 29.6	basalt	Incomplete	Mano fragment-unifacial, oval, one hand
Court Contact	Max: 102.2 Min: 87.0 Thick: 52.8	rhyolite	Complete	Smoothing stone-oval, unifacial
Unit II TP I	Max: 10.5* Min: 6.0* Thick: 36.7	vesicular basalt	Incomplete	Mano-fragment, unifacial, oval, one hand
Court Contact	Max: 120.9 Min: 58.4 Thick: 20.2	grey vesicular basalt	Complete	Smoothing stone-thin elongated, unifacial

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Unit IV SQ C below circular feature	Max: 76.8 Min: 55.9 Thick: 33.6	rhyolite	Complete	Hammerstone-elongated format, heavily battered on one end
Unit IV SQ C below circular feature	Max: 88.0* Min: 70.0* Thick: 26.0	micaceous tufa	Incomplete	Mano fragment- heavily utilized, oval, bifacial has become wedge shaped in cross section from use
Unit IV SQ C below circular feature	Max: 91.1 Min: 80.0 Thick: 30..3	rhyolite	Complete	Grinding Stone-hammer cobbular, unifacial with battering around the circumference
Unit IV SQ C below circular feature	Max: 69.3* Min: 99.5 Thick: 41.0	sandstone	Incomplete	Mano fragment-oval, lightly used, one hand on poorly consolidated sandstone
Unit II SQ D contact	Max: 90.6 Min: 85.9 Thick 49.5	tufa	Complete	Smoothing stone-unifacial, on irreglular cobble
Unit IV SQ A midden	Max: 80.9* Min: 69.4* Thick: 27.9	micaceous tufa	Incomplete	Mano fragment-oval, unifacial, one hand, heavily worn
Court contact	Max: 114.0* Min: 79.4 Thick: 41.3	gray basalt	Incomplete	Mano fragment-well shaped ovoid, one hand, unifacial
RB 1 Rm 2 second level fill	Max: 62.2 Min: 33.1 Thick: 29.1	diorite	Complete	Polishing stone-used for ceramics (well used)
Unit 4 SQ A midden	Max: 5.9 Min: 4.2 Thick: 2.1	tufa	Broken	Bowl-badly broken fragment impossible to determine size and shape
Unit 4 SQ A midden	Max: 15.6 Min: 5.4 Thick: 0.1	slate	Broken	Possible Sickle or agave knife-Badly broken fragment no working edge present

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Unit Rm block 1 Room 2 fill	Max: 12.1 Min: 9.0 Thick: 3.6	basalt	Good	Mano hammer stone-slight use as uniface mano, one end shows use as pecking or hammer stone
Unit Rm block 1 Room 2 second level fill	Max: 9.9 Min: 3.2 Thick: 2.8	basalt	Good	Smoothing stone-triangular in section, shows wear on all surfaces
Unit XI F1 SQ D fill	Max: 7.9 Min: 4.8 Thick: 2.2	diorite	Broken	Mano unifacial-some chips removed one end
Unit IV F1 SQ C contact A	Max: 5.7 Min: 3.8 Thick: 1.0	slate	Broken	Pottery shaping tool-wear on edge only
Unit II F1 SQ A fill	Max: 7.6 Min: 5.6 Thick: 5.1	basalt	Good	Hammer Stone
Unit XI SQ C floor contact	Max: 7.0 Min: 5.4 Thick: 5.1	diorite	Good	Hammer Stone-principal wear one end only
Colvin; RB 1 Room 4 floor contact	Max: 159.0 Min: 93.9 Thick: 35.7	vesicular basalt	Complete	Mano unifacial-very well made with squared corners, one hand
Colvin; RB1 Room 2 fill	Max: 111.1* Min: 96.5 Thick: 43.6	vesicular basalt	Incomplete	Mano unifacial-well finished one hand rectangular
Colvin; RB1 Room 4B interfloor fill	Max: 102.0* Min: 75.5 Thick: 75.5	vesicular basalt	Incomplete	Pestle-working end of a well made pestle, probably one handed
Colvin; RB 1 Room 2 floor contact	Max: indet. Min: indet. Thick: 83.3	tufa	Very Incomplete	Metate-very incomplete fragment from the working surface

APPENDIX 3 (cont.)

PROVENIENCE	DIMENSIONS	MATERIAL	CONDITION	COMMENTS
Colvin; RB 1 Room 3 second level fill	Max: 82.3* Min: 86.5 Thick: 41.6	vesicular basalt	Incomplete	Mano unifacial-typical rounded end rectangular; one hand
Colvin; RB 1 Room 1B second level fill	Max: 75.3* Min: 94.4 Thick: 39.8	vesicular basalt	Incomplete	Mano unifacial-poorly shaped rectangular; one hand