CHAPTER 9

GROUND STONE ARTIFACTS

Jenny L. Adams
Desert Archaeology, Inc.

The City of Tucson's downtown revitalization project, known as the Rio Nuevo Archaeology project, provided a unique opportunity to recapture long-lost knowledge about life in the shadow of A-Mountain and within the historic Tucson Presidio, now located under downtown Tucson. Some of the locations near A-Mountain were occupied by unnamed groups as early as 2100 B.C., and as late as the 1820s, by Pima Indians. Between these temporal extremes is evidence from several other periods of occupation (Table 9.1). These are collectively designated as site AZ BB:13:6 (ASM), with four loci: Congress Street, Brickyard, Mission, and Mission Gardens, located west of the Santa Cruz River and south of modern-day Congress Street. The Tucson Presidio was a historic Spanish and Mexican period occupation, dating from 1775 to the 1850s, with deeply buried evidence of prehistoric occupations. This location is referred to as AZ BB:13:13 (ASM). Desert Archaeology, Inc., conducted a series of archaeological recovery projects at Clearwater and the Tucson Presidio in preparation for the Rio Nuevo project. The purpose of this chapter is to describe the analyzed ground stone assemblage from these locations in a manner that facilitates reconstruction of lifestyles during the represented time periods.

Rio Nuevo is a particularly appropriate project for Desert Archaeology, due to numerous other projects conducted by the company throughout the Santa Cruz River basin. For the current analysis of ground stone artifacts, the data most applicable are from Santa Cruz Bend, AZ AA:12:746 (ASM); Stone Pipe, AZ BB:13:425 (ASM); Square Hearth, AZ AA:12:745 (ASM) (Adams 1998a); Las Capas, AZ AA:12:111 (ASM); Los Pozos, AZ AA:12:91 (ASM) (Adams 2005); Wetlands, AZ AA:12:90 (ASM) (Adams 1998b); Valencia Vieja, AZ BB:13:15 (ASM) (Adams 2003); Julian Wash, AZ BB:13:17 (ASM) (Adams 2006); and Sunset Mesa, AZ AA:12:10 (ASM) (Adams 2000). The ground stone assemblages from these sites have all been analyzed with the same approach as that used for the Rio Nuevo project and provide a temporally deep context against which the Rio Nuevo research can be compared, assessed, and broadened (Tables 9.2 and 9.3).

ANALYSIS APPROACH

The artifact analysis approach is technological, using classification techniques and artifact types defined elsewhere (Adams 1996, 2002). Attributes that relate to artifact design, primary and secondary uses, wear amounts, and use-wear were quantified. Based on these attributes, inferences were made about the activities in which the artifacts were used. Interpretations of how artifacts were used are modeled from ethnographic, ethnoarchaeological, archaeological, and experimental sources (Adams 2002:9-16).

The stone items considered in this chapter include traditional tools such as manos, metates, and axes, as well as the raw materials selected for tool manufacture, pigments, and minerals collected for pigment production or ornament manufacture—that is, anything that has been shaped through impaction or grinding, and anything that has been used to impact or grind, essentially any stone item not considered flaked (Adams 2002:1). A total of 1,206 items thought to fit this definition were recovered in the field and were inventoried in the Desert Archaeology laboratory in Tucson (Table 9.4). Artifacts and supporting documentation are curated at the Arizona State Museum (ASM).

Time and budget constraints precluded the ability to analyze every recovered item; therefore, certain contexts were prioritized for analysis. Enough ground stone artifacts were selected from historic-era extramural pits to evaluate whether they were filled with period-appropriate artifacts. Floor artifacts, artifacts recovered from floor pits, and those within 5 cm of the floor (floor fill) were analyzed from selected prehistoric pithouses. Ground stone items found in the floor fill were usually interpreted as associated with the occupation of the structure. Artifacts on extramural occupation surfaces and from selected prehistoric extramural pits were also analyzed. These contexts provide an opportunity to assess artifacts from activities that occurred both within and outside of structures. A total of 260 (22 percent) items were chosen to examine the nature of the activities that occurred at Clearwater and the Tucson Presidio (Table 9.5; see also Tables 9.1 and 9.4).

Table 9.1. Temporal and spatial designations of features with analyzed ground stone from the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM).

Age/Stratum	AZ (ASM) Site Number	Locus	Feature	Feature Type	Number of Artifacts
Spanish/Mexican	BB:13:13	Presidio	373	Exterior pit	4
			409	Exterior pit	1
			422	Exterior pit	1
Spanish/O'odham	BB:13:6	Mission	64	Sheet trash	10
			166	Trash	14
			177	Exterior pit	2
			178	Exterior pit	1
			193	Exterior pit	1
			203	Exterior pit	2
Hohokam	BB:13:6	Mission Gardens	3005	Pithouse	7
			3019	Burial	1
			3025	Burial	1
			3058	Exterior pit	41
	BB:13:6	Congress Street	308	Pithouse	6
	BB:13:13	Presidio	417	Pithouse	1
Early Ceramic	BB:13:6	Mission Gardens	3014	Pithouse	11
			3038	Pithouse	11
Cienega	BB:13:6	Brickyard	3220	Pithouse	1
			3245	Interior pit	1
			3262	Pithouse	4
			3264	Pithouse	5
			3270	Pithouse	9
			3273	Pithouse	3
			3294	Pithouse	1
			3296	Pithouse	2
			3300	Interior pit	1
			3312	Pithouse	2
			3323	Pithouse	1
			3327	Pithouse	3
			3357	Burial	2
			9357	Pithouse	5
		Mission	7	Pithouse	5
			15	Pithouse	20
			28	Pithouse	1
			29	Pithouse	2
			32	Pithouse	1
			57	Pithouse	1
			65	Pithouse	4
			69	Exterior pit	1
			97	Pithouse	7
			100	Pithouse	2
			112	Pithouse	7
			121	Pithouse	5

Table 9.1. Continued.

Age/Stratum	AZ (ASM) Site Number	Locus	Feature	Feature Type	Number of Artifacts
			126	Pithouse	5
			128	Pithouse	1
			151	Pithouse	5
			191	Pithouse	1
Early Agricultural	BB:13:6	Congress Street	603	Burial	6
		Mission	190	Burial	1
Stratum 503	BB:13:6	–	0	Extramural pit	1
Stratum 504	BB:13:6	Congress Street	3374	Nonfeature	14
			581	Pithouse	1
			592	Exterior pit	1
			3359	Pithouse	1
			3370	Exterior pit	1
			3371	Pithouse	2
			3414	Extramural surface	2
Undated	BB:13:6	Mission	31	Exterior pit	1
			160	Burial	1
		?	0	Disturbed	4
			3344	Exterior pit	1
Total					260

Carlos Lavayen, under the direction of Elizabeth Miksa, identified the stone material of a smaller sample (n = 169, 65 percent of the analyzed sample) (Table 9.6). Stone selection was an important part of the design process, perhaps more so for some tool types than for other artifacts (Adams 2002:19-20). For example, a polisher was selected from among smooth rocks because a rough texture abrades rather than polishes. If a smooth stone was not available, a smooth surface was manufactured. Similarly, if a new mano required coarser material than what was available, manufacturing and maintenance strategies compensated for rock texture. Surfaces were pecked or scored to roughen their otherwise smooth texture. Raw material requirements might have spurred a trip to, or trade for, material from a source located at some distance from the settlement. For example, if rocks of appropriate size for metates were not available in the nearby riverbed, a trip was required to obtain larger rocks.

Material availability was classified for each artifact in terms of the relative proximity to the sites. Geologic maps of the Tucson area (Dickinson 1991; Lipman 1993) and specific field sampling helped the geologists to identify potential source locations, recognizing that streams carry rocks considerable distances from their originating outcrops (Miksa and Tompkins 1998). Local sources include river-worn cobbles and pebbles from the Santa Cruz riverbed and other smaller streams, or outcrops that occur within 1 km of the settlements. Sources in the site vicinity are outcrops and streambeds more than 1 km from the settlement but within a day's walk, or about an 18-km round trip (see Drennan 1984 and Lightfoot 1979 for discussions about transportation costs or resource trade and procurement). Distant sources are located beyond the Tucson Basin that required either trade or a trip of more than one day to procure. Some rocks may have been procured from outcrops or streambeds immediately around the settlement, or from sources that are more than 1 km away. A distinction is not possible, however, given the scale of this analysis. Other rocks may have been procured from sources more than 1 km away, either in or beyond the Tucson Basin. The overlap and ambiguity in categorizing these sources can only be reconciled by intense field research, which is beyond the scope of this analysis.

Table 9.2. Temporal comparisons of ground stone artifact types from various Santa Cruz River basin sites.

	San Pedro[a]		Cienega[b]		Agua Caliente[c]		Tortolita[d]		Snaketown-Cañada del Oro[e]		Rincon[f]		Total	
Artifact	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Abraders	10	4	18	3	–	–	2	1	–	–	3	–	33	2
Axes	–	–	–	–	–	–	3	1	1	9	4	1	8	1
Balls	–	–	–	–	–	–	1	–	–	–	1	–	2	1
Choppers	–	–	–	–	–	–	–	–	–	–	5	1	5	1
Containers	1	1	10	1	–	–	–	–	–	–	2	–	13	1
Debris	–	–	–	–	–	–	–	–	–	–	3	–	3	1
Donut stones/ Rings	–	–	5	1	1	1	5	2	–	–	5	1	16	1
Figurines	–	–	–	–	–	–	–	–	–	–	5	1	5	1
Handstones	81	33	204	28	12	–	65	24	2	18	50	8	414	22
Lapstones	21	9	144	20	7	15	19	7	–	–	34	6	225	12
Manos	43	18	140	20	9	19	77	29	4	36	76	12	349	18
Metates	4	2	6	1	2	4	17	6	–	–	14	2	43	2
Mortars	–	–	15	2	2	4	5	2	–	–	7	1	29	2
Netherstones	37	15	69	10	8	17	16	6	1	9	25	4	156	8
Ornaments	–	–	–	–	–	–	26	10	–	–	38	6	64	3
Palettes	–	–	–	–	–	–	1	–	–	–	6	1	7	1
Pecking stones	3	1	12	2	1	2	–	–	–	–	10	2	26	1
Pestles	2	1	41	6	3	6	13	5	1	9	22	4	82	4
Pigment	–	–	–	–	–	–	–	–	–	–	54	9	54	3
Pipes	7	3	1	–	–	–	–	–	–	–	–	–	8	1
Planes	–	–	–	–	–	–	–	–	–	–	1	–	1	1
Polishers	15	6	24	3	2	4	11	4	1	9	89	15	142	7
Pottery anvils	–	–	–	–	–	–	–	–	–	–	3	–	3	1
Reamers	–	–	–	–	–	–	–	–	–	–	1	–	1	1
Shaped	12	5	26	4	–	–	9	3	–	–	12	2	59	3
Spindle bases	–	–	–	–	–	–	–	–	–	–	1	–	1	1
Tablets	–	–	–	–	–	–	–	–	–	–	3	–	3	1
Tabular tools	–	–	2	–	–	–	–	–	1	9	23	4	26	1
Temper	–	–	–	–	–	–	–	–	–	–	116	19	116	6
Trays	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Whorls	6	2	–	–	–	–	–	–	–	–	–	–	6	1
Subtotal	242	100	717	101	47	72	270	100	11	99	613	99	1,900	110

Note: Unidentified fragments, and indeterminate and not applicable variables not included. Date not available: pigment at Sunset Mesa, Valencia Vieja, ornaments, temper at Sunset Mesa.

[a]Las Capas, AZ AA:12:111 (ASM).

[b]Las Capas, AZ AA:12:111 (ASM); Wetlands, AZ AA:12:90 (ASM); Stone Pipe, AZ BB:13:425 (ASM); Clearwater, AZ BB:13:6 (ASM) pre-Rio Nuevo; Santa Cruz Bend, AZ AA:12:746 (ASM); Los Pozos, AZ AA:12:91 (ASM).

[c]Square Hearth, AZ AA:12:745 (ASM); Stone Pipe, AZ BB:13:425 (ASM).

[d]Valencia Vieja, AZ BB:13:15 (ASM).

[e]Julian Wash, AZ BB:13:17 (ASM).

[f]Julian Wash, AZ BB:13:17 (ASM); Sunset Mesa, AZ AA:12:10 (ASM).

Table 9.3. Temporal comparisons of ground stone variables from various Santa Cruz River basin sites.

	San Pedro[a]		Cienega[b]		Agua Caliente[c]		Tortolita[d]		Snaketown-Cañada del Oro[e]		Rincon[f]		Total	
Variable	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Design														
Expedient	60	52	381	68	24	65	115	58	6	46	230	55	816	61
Strategic	56	48	182	32	13	35	84	42	7	54	190	45	532	39
Subtotal	116	100	563	100	37	100	199	100	13	100	420	100	1,348	100
Wear														
Light	27	27	114	20	3	13	53	28	2	15	75	15	274	43
Moderate	61	60	380	66	20	87	117	63	7	54	207	42	792	70
Heavy	5	5	78	14	0	0	16	9	1	8	69	14	169	59
Unused	8	8	1	0	0	0	0	0	3	23	139	28	151	11
Subtotal	101	100	573	100	23	100	186	100	13	100	490	99	1,386	183
Use														
Single	49	22	377	60	29	71	135	63	11	73	274	47	875	51
Reused	9	4	30	5	0	0	8	4	0	0	2	0	49	3
Multiple	25	11	102	16	8	20	26	12	1	7	54	9	216	13
Redesigned	5	2	17	3	0	0	13	6	0	0	20	3	55	3
Recycled	125	56	94	15	4	10	27	13	0	0	104	18	354	21
Unused	6	3	7	1	0	0	7	3	3	20	129	22	152	9
Destroyed	5	2	1	1	0	0	0	0	0	0	2	0	8	0
Subtotal	224	100	628	101	41	101	216	101	15	100	585	99	1,709	100
Activities														
Food processing	47	20	148	21	11	23	44	34	4	31	76	15	330	20
General processing	84	35	314	45	33	70	24	19	2	15	67	13	524	32
Manufacture	28	12	106	15	3	6	12	9	4	31	88	17	241	15
Pottery manufacture	0	0	0	0	0	0	5	4	0	0	163	32	168	10
Pigment processing	67	28	98	14	0	0	33	26	2	15	63	13	263	16
Paraphernalia	14	6	27	4	0	0	10	8	1	8	46	9	98	6
Subtotal	240	101	693	99	47	99	128	100	13	100	503	99	1,624	99

Note: Unidentified fragments, and indeterminate and not applicable variables not included.
[a]Las Capas, AZ AA:12:111 (ASM).
[b]Las Capas, AZ AA:12:111 (ASM); Wetlands, AZ AA:12:90 (ASM); Stone Pipe, AZ BB:13:425 (ASM); Clearwater, AZ BB:13:6 (ASM) pre-Rio Nuevo; Santa Cruz Bend, AZ AA:12:746 (ASM); Los Pozos, AZ AA:12:91 (ASM).
[c]Square Hearth, AZ AA:12:745 (ASM); Stone Pipe, AZ BB:13:425 (ASM).
[d]Valencia Vieja, AZ BB:13:15 (ASM).
[e]Julian Wash, AZ BB:13:17 (ASM).
[f]Julian Wash, AZ BB:13:17 (ASM); Sunset Mesa, AZ AA:12:10 (ASM).

Table 9.4. Accounting of inventoried and analyzed ground stone artifacts from the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM).

Site	Feature	Inventoried	Analyzed	Percent of Analyzed
AZ BB:13:6 (ASM)				
	0	153	18	12
	1	5	0	0
	2	2	0	0
	4	16	0	0
	7	12	4	33
	10	1	0	0
	15	56	20	36
	20	10	0	0
	28	1	1	100
	29	6	2	33
	31	4	1	25
	32	3	1	33
	32.01	2	0	0
	57	1	1	100
	63	4	0	0
	64	36	10	28
	65	11	3	27
	65.01	2	1	50
	69	7	1	14
	71	1	0	0
	76	4	0	0
	78	3	0	0
	80	5	0	0
	97	11	7	64
	100	4	2	50
	112	11	7	64
	121	13	5	38
	121.03	4	0	0
	122	1	0	0
	126	4	4	100
	126.04	1	1	100
	128	4	1	25
	151	17	9	53
	160	1	1	100
	166	68	14	21
	177	2	2	100
	178	1	1	100
	190	1	1	100
	191.01	1	1	100
	193	1	1	100
AZ BB:13:6 (ASM), continued				
	203	4	2	50
	308	6	3	50
	308.02	2	2	100
	308.04	1	1	100
	506	1	0	0
	510	5	0	0
	516	3	0	0
	542	4	0	0
	544	2	0	0
	545	1	0	0
	547	1	0	0
	581	2	1	50
	592	1	1	100
	598	1	0	0
	599	4	0	0
	603	6	6	100
	3000	4	0	0
	3001	4	0	0
	3005	21	7	33
	3006	9	0	0
	3012	1	0	0
	3014	21	11	52
	3019	1	1	100
	3021	1	0	0
	3025	1	1	100
	3026	4	0	0
	3038	44	11	25
	3050	1	0	0
	3058	61	41	67
	3067	20	0	0
	3083	3	0	0
	3104	1	0	0
	3105	1	0	0
	3214	3	0	0
	3220	16	1	6
	3220.01	5	0	0
	3221	1	0	0
	3225	2	0	0
	3237	5	0	0
	3238	1	0	0

Table 9.4. Continued.

Site	Feature	Inventoried	Analyzed	Percent of Analyzed
AZ BB:13:6 (ASM), continued				
	3245.06	1	1	100
	3260	1	0	0
	3262	11	4	36
	3264	8	4	50
	3264.04	1	1	100
	3270	15	5	33
	3270.02	9	4	44
	3272	5	0	0
	3273	6	3	50
	3273.02	1	1	100
	3274	1	0	0
	3294	5	1	20
	3295	1	0	0
	3296	8	2	25
	3300.02	2	1	50
	3312	2	2	100
	3317	1	0	0
	3323	3	1	33
	3323.01	1	0	0
	3325.01	1	0	0
	3327	13	3	23
	3336	1	0	0
	3344	2	1	50
	3357	2	2	100
	3358	1	0	0
	3359	1	1	100
	3362	1	0	0
	3363	1	0	0
	3370	1	1	100
	3371	2	2	100
	3374	1	1	100
	3413	5	0	0
	3414	2	2	100
	9218	1	0	0
AZ BB:13:6 (ASM), continued				
	9357	58	5	9
	9372	2	0	0
	9376	3	0	0
Subtotal		945	257	27
AZ BB:13:13 (ASM)				
	0	152	0	0
	305	1	0	0
	314	1	0	0
	317	1	0	0
	321	1	0	0
	327	2	0	0
	350.06	3	0	0
	358	1	0	0
	359	7	0	0
	360	7	0	0
	372	1	0	0
	373	4	4	100
	376	17	0	0
	380	6	0	0
	385	3	0	0
	407	1	0	0
	408	7	0	0
	409	20	1	5
	416	2	0	0
	417	8	1	13
	422	1	1	100
	437	4	0	0
	441	7	0	0
	450	1	0	0
	452	2	0	0
	454	1	0	0
Subtotal		261	7	3
Total		1,206	260	22

NATURE OF THE ASSEMBLAGE

The 260 sampled artifacts were sorted into 25 artifact types, a category of unidentified pieces, a single fire-cracked rock, and naturally formed items such as concretions and minerals that may have been brought to the settlements for personal reasons (Table 9.7). More than half of the analyzed artifacts are whole (Table 9.8). Sixty-eight percent of the broken artifacts became that way through recycling into roasting or heating activities. These ended up in exterior pits or in structure fill as secondary trash.

A considerable percentage of the analyzed artifacts (66 percent) have moderate-to-heavy wear. The rest are either unused (8 percent) or have light wear (27 percent). Among those that could be identified by the activity in which they were used, most were either used only in the activities for which they were designed or not used at all (see Table 9.8). The rest were secondarily used. Those not recycled into the roasting or heating activities just mentioned were used in multiple activities. For example, some food grinding manos were also used for processing pigments, as an abrader, or included as mortuary offerings. Metates were secondarily used as mortuary offerings. Three lapstones were also a scraper, a chopper, and a tabular tool. Food and general processing activities, pottery manufacturing, other manufacturing, and pigment processing are represented by ground stone artifacts (see Table 9.8).

The contexts from which the assemblages were recovered are quite distinct during different time periods (see Table 9.8). For example, most artifacts (62 percent) from the unnamed phase of the Early Agricultural period (2100 B.C.-1200 B.C.) were not associated with features. Ground stone artifacts were more commonly recovered from on or near pithouse floors that date to the Cienega phase, or to the Early Ceramic period. Most Hohokam artifacts were recovered from extramural pits, as were those from the Spanish and Mexican periods (see Table 9.8). These differences in recovery context may explain most of the variation between time periods. The technological aspects of the ground stone assemblage for each time period are discussed in the following sections. See Table 9.5 for a listing of all analyzed variables for each artifact.

Early Agricultural Period

The Early Agricultural period at the Clearwater site (Congress Street locus) is represented by contexts from several superimposed strata (see Table 9.1). Stratum 503 and Stratum 504 date to the unnamed phase of the Early Agricultural period. Only one ground stone artifact was analyzed from Stratum 503, and 21 were analyzed from Stratum 504. Later Early Agricultural period contexts were uncovered in stratigraphically higher deposits dated to the Cienega phase. The Cienega phase ground stone artifacts are discussed in a separate section.

The items recovered from Stratum 504, the earliest component within the Congress Street locus at Clearwater were manos, a handstone, a hammerstone, a polisher, a cone, and several pieces of raw and processed pigment—perhaps the earliest evidence of processed pigment to date in the Tucson Basin (circa 2100 B.C.) (see Table 9.7). Most of the pigments were recovered from contexts not associated with features, as were the hammerstone, a flat/concave mano, and a piece of rhyolite that had been fashioned into a cone. The pigments are earthy hematite in shades of red and earthy limonite in shades of yellow (Figure 9.1; Table 9.9). The handstone was recovered from an extramural pit. Three pithouses (Features 581, 3359, and 3371) had ground stone artifacts on or near their floors. A polisher that was also used as a pecking stone was found near the floor of Feature 581. This tool may have been used in two different activities, or in a two-step manufacturing task that involved both pecking and burnishing the surface. Flat/concave manos were on or near the floors of Features 3359 and 3371.

Two manos were on the floor of Feature 3371; both had been used against flat/concave metates, although one was also worked in a basin metate. Similarly, two manos associated with an extramural surface, Feature 3414, adjacent to Feature 3371, were flat/concave manos with one also used in a basin metate. All except the basin mano on the floor of Feature 3371 were made from dacite. The exception was manufactured from quartzite. No metates were recovered with which these manos could have been used, but it is not uncommon to find manos with no associated metates. Metates were probably removed by either the departing inhabitants or by subsequent scavengers.

The only piece of ground stone from Stratum 503 (circa 1500 B.C.) is a lapstone recovered from an extramural pit, Feature 3374, at Clearwater (see Table 9.5). The lapstone is an ovoid piece of schistic rock that was chipped to shape. A reddish-brown (see Table 9.9) pigment was ground into powder on one surface—perhaps the earliest evidence of pigment processing recovered, to date, in the Tucson Basin.

Two burials dating to the Early Agricultural period provide unique information about early mortuary rituals. In Feature 190, a large mortar was buried across the feet of a young adult (gender unknown). The mortar has a conical basin typical of those used historically with large pestles to crush mesquite pods. It is broken, and some of the pieces are missing. Although the burial pit was uncovered by the backhoe and the mortar may have broken upon discovery, none of the missing pieces were found in the disturbed back dirt, and the mortar is assumed to have been broken when placed with the body.

The second individual, a woman, was buried with a compatible basin mano and metate, a broken basin metate, and a mortar. The compatible mano and metate were manufactured from the same granitic type of stone, and their configuration must have resonated when in use. The metate is large enough (62 cm by 32 cm by 12 cm) and heavy enough that it may have taken two people to place it upside down over her body.

Table 9.5. Variables recorded for each analyzed artifact from the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM).

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:13	Spanish	373	Exterior pit	Fill	2363.01	Mano	Flat/ Concave	Broken	Fire-cracked	Strategic	Recycled	Sequential	Moderate	Food processing	Multiple	–	–	6.1	–	FCR[a]	–	–	–	–
BB:13:13	Spanish	373	Exterior pit	Fill	2364.01	Debris	Flake	Broken	No	Strategic	Unused	–	Unknown	Ornamentation	Stone manufacture	–	–	–	0.3	–	Muscovite	Unknown	–	–
BB:13:13	Spanish	373	Exterior pit	Fill	2364.02	Debris	Flake	Broken	No	Strategic	Unknown	–	Unknown	Ornamentation	Stone manufacture	–	–	–	0.3	–	Muscovite	Unknown	–	–
BB:13:13	Spanish	373	Exterior pit	Fill	2449.01	Mineral	Natural	Broken	No	–	Unused	–	–	Specimens	Unused	–	–	–	0.1	–	Muscovite	Unknown	–	–
BB:13:13	Spanish	409	Exterior pit	Fill	4371.01	Palette	Flat border	Broken	No	Strategic	Unknown	Unknown	Unknown	Paraphernalia	Unknown	–	–	0.5	–	–	–	–	–	–
BB:13:13	Spanish	422	Exterior pit	Fill	4048.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	5911.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	5911.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	5911.03	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	6245.01	Abrader	Pebble	Whole	No	Expedient	Single	Unknown	Light	Abrading	Manufacture	4.3	4.0	2.8	63.0	–	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	6251.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	6251.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	6251.03	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	6251.04	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	6251.05	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	64	Sheet trash	Sheet trash	6639.01	Abrader	Pebble	Whole	No	Expedient	Single	–	Light	Abrading	Manufacture	2.7	2.6	1.3	13.0	–	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6642.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6643.01	Hand-stone	Flat/ Concave	Whole	Yes	Expedient	Single	–	Light	General processing	General processing	11.0	9.1	3.9	543.0	–	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6657.01	Mano	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Food processing	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6694.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6694.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6694.03	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6694.04	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6709.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6709.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6709.03	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6709.04	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6709.05	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6709.06	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	166	Trash	Fill	6709.07	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	177	Exterior pit	Fill	6556.01	Abrader	Flat	Whole	No	Expedient	Single	–	Moderate	Abrading	Manufacture	10.5	6.5	3.2	335.0	–	–	–	–	–
BB:13:6	Spanish/ O'odham	177	Exterior pit	Fill	6558.01	Polisher	Pottery	Whole	No	Expedient	Single	–	Moderate	Polishing/ Smoothing	Pottery manufacture	5.4	2.7	2.2	46.0	–	–	–	–	–
BB:13:6	Spanish/ O'odham	178	Exterior pit	Fill	6503.01	Chopper	Expedient	Whole	Fire-cracked	Expedient	Recycled	Sequential	Unknown	Percussion	Multiple	12.1	7.3	4.4	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	193	Exterior pit	Fill	6630.01	Mano	Trough	Broken	Fire-cracked	Strategic	Recycled	Sequential	Moderate	Food processing	Multiple	–	11.2	6.2	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	203	Exterior pit	Fill	6607.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Spanish/ O'odham	203	Exterior pit	Fill	6607.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Prehistoric	31	Exterior pit	Fill	5792.01	Pestle	Cylindrical	Whole	No	Strategic	Single	–	Light	Food processing	Food processing	45.4	9.4	8.8	–	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Prehistoric	160	Burial	Fill	6741.01	Mano	Flat/ Concave	Whole	No	Strategic	Recycled	Sequential	Moderate	Food processing	Multiple	7.3	11.0	4.5	–	Offering	–	–	–	–
BB:13:13	Hohokam	417	Pithouse	Fill	3996.01	Palette	Flat border	Broken	Yes	Strategic	Unknown	Unknown	Unknown	Paraphernalia	Unknown	–	–	0.6	–	–	–	–	–	–
BB:13:6	Hohokam	308	Pithouse	Fill	6891.01	Debris	Flake	Whole	No	–	Unused	–	–	Ornamentation	Manufacture	–	–	–	0.3	–	Chrysocolla	Local/ Vicinity	–	–
BB:13:6	Hohokam	308	Pithouse	Floor	7082.01	Lapstone	Flat	Broken	Yes	Strategic	Redesigned	Unknown	Heavy	Polishing/ Smoothing	Multiple	–	–	0.7	–	Tabular tool	Shale	Vicinity/ Distant	–	–
BB:13:6	Hohokam	308	Pithouse	Floor fill	7001.01	Tablet	–	Whole	No	Strategic	Single	–	Unknown	Paraphernalia	Unknown	8.3	7.5	1.4	–	–	Schist	Local/ Vicinity	–	–
BB:13:6	Hohokam	308.02	Interior pit	Fill	7067.01	Polisher	Pottery	Whole	No	Expedient	Single	–	Heavy	Polishing/ Smoothing	Pottery manufacture	8.3	4.0	2.2	108.0	–	Diabase	Vicinity/ Distant	–	–
BB:13:6	Hohokam	308.02	Interior pit	Fill	7084.01	Polisher	Pottery	Whole	No	Expedient	Single	–	Heavy	Polishing/ Smoothing	Pottery manufacture	7.1	2.6	1.5	42.0	–	Volcanic, felsic	Unknown	–	–
BB:13:6	Hohokam	308.04	Posthole/ Post	Fill	7070.01	Mano	Flat/ Concave	Broken	No	Strategic	Multiple	Sequential	Moderate	Food processing	Multiple	–	–	3.3	–	Abrader	Quartzite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3005	Pithouse	Fill	8047.01	Pecking stone	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Percussion	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Hohokam	3005	Pithouse	Fill	8057.01	Hand-stone	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	General processing	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Hohokam	3005	Pithouse	Fill	8057.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Hohokam	3005	Pithouse	Fill	8258.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Hohokam	3005	Pithouse	Fill	8258.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Hohokam	3005	Pithouse	Fill	8258.03	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Hohokam	3005	Pithouse	Fill	8258.04	Unidentified	Unknown	Broken	No	Unknown	Redesigned	Sequential	Unknown	Unknown	Multiple	–	–	–	–	Flake	–	–	–	–
BB:13:6	Hohokam	3019	Burial	Fill	7879.01	Mano	Basin	Broken	No	Expedient	Recycled	Sequential	Heavy	Food processing	Multiple	10.4	8.1	3.8	–	Pecking stone	–	–	–	–
BB:13:6	Hohokam	3025	Burial	Fill	7758.01	Mano	Flat/ Concave	Broken	No	Expedient	Recycled	Sequential	Heavy	Food processing	Multiple	–	8.4	4.8	–	–	–	–	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7792.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	13.8	17.2	2.4	1,102.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7793.01	Tabular tool	Blank	Broken	No	–	Unused	–	–	Cutting/ Scraping	Unused	16.7	12.3	2.4	726.0	–	Andesite	Local/ Vicinity	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Hohokam	3058	Exterior pit	Fill	7794.01	Tabular tool	Blank	Whole	No	Unknown	Unused	–	–	Cutting/ Scraping	Unused	26.2	12.3	2.2	916.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7795.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	15.5	10.5	2.3	597.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7796.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	11.4	11.6	2.3	368.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7797.01	Tabular tool	Blank	Whole	No	Unknown	Unused	–	–	Polishing/ Smoothing	Unused	11.8	8.3	1.1	146.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7797.02	Tabular tool	Blank	Whole	No	Unknown	Unused	–	–	Cutting/ Scraping	Unused	12.2	8.9	1.5	179.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7797.03	Tabular tool	Debris	Broken	No	–	Unused	–	–	Cutting/ Scraping	Stone manufacture	8.2	7.1	1.7	–	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7797.04	Tabular tool	Debris	Broken	No	Unknown	Unused	–	–	Cutting/ Scraping	Stone manufacture	11.5	6.5	2.1	–	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7797.05	Tabular tool	Blank	Broken	No	Unknown	Unused	–	–	Cutting/ Scraping	Stone manufacture	6.0	8.5	1.7	–	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	7798.01	Tabular tool	Blank	Whole	No	Unknown	Unused	–	Unused	Cutting/ Scraping	Incomplete	16.4	12.0	2.1	441.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9335.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	11.2	8.8	3.5	593.0	–	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9340.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Unknown	Unknown	19.6	15.8	2.9	1,181.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9341.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	14.2	11.7	2.1	416.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9342.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	18.6	19.0	4.4	2,190.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9343.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	–	–	–	723.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9344.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	14.3	9.9	2.1	467.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9345.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	21.9	13.4	3.1	861.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9346.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	16.9	13.6	1.3	508.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9347.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	18.0	1,407.0	208.0	977.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9348.01	Tabular tool	1 concave edge	Whole	No	Expedient	Single	–	Light	Cutting/ Scraping	General processing	18.9	12.1	3.7	874.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9349.01	Tabular tool	1 convex edge	Whole	No	Expedient	Single	–	Light	Cutting/ Scraping	General processing	16.8	13.4	2.3	627.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9350.01	Pestle	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	13.5	9.9	2.3	343.0	–	–	–	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9351.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	11.9	12.0	2.7	482.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9352.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	13.0	937.0	2.2	349.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9353.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	14.4	9.7	2.4	596.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9354.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	16.1	12.6	1.8	583.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9355.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	18.4	13.6	2.5	847.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9356.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	17.9	13.0	3.3	818.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9357.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	17.6	10.5	1.8	372.0	–	Andesite	Local/ Vicinity	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Hohokam	3058	Exterior pit	Fill	9358.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	20.5	10.5	2.6	960.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9359.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	21.3	11.5	2.6	630.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9360.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	15.0	10.2	2.4	393.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9361.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	17.7	9.6	1.9	490.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9362.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	17.6	8.5	1.8	410.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9363.01	Tabular tool	Straight	Whole	No	Expedient	Single	–	Light	Cutting/ Scraping	General processing	13.4	11.6	2.7	492.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9364.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	18.6	9.7	1.9	445.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9365.01	Chopper	Hand axe	Whole	No	Expedient	Single	–	Light	Percussion	General processing	29.3	11.8	2.7	1,208.0	–	–	–	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9366.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	26.2	14.8	2.3	921.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9367.01	Tabular tool	Blank	Whole	No	–	Unused	–	–	Cutting/ Scraping	Unused	20.6	14.1	3.3	1,193.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Hohokam	3058	Exterior pit	Fill	9368.01	Tabular tool	Convex	Whole	No	Expedient	Single	–	Light	Cutting/ Scraping	General processing	18.4	13.4	2.9	930.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Fill	7836.01	Nether-stone	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Floor	8245.01	Mano	Flat/ Concave	Whole	No	Strategic	Reused	Concom-itant	Moderate	Food processing	Pigment processing	10.4	7.6	6.1	654.0	Hand-stone	–	–	Pigment	10R 4/8
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8171.01	Nether-stone	Flat	Broken	No	Unknown	Unknown	Unknown	Moderate	Unknown	Unknown	–	–	–	–	–	–	–	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8173.01	Mineral	Natural	Whole	No	–	Unused	–	–	Specimens	Unused	–	–	–	0.2	–	Chalcedony	Unknown	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8174.01	Pigment	Processed	Broken	No	Strategic	Single	–	–	Ornamen-tation	Decorative	–	–	–	2.5	–	Hematite, earthy	Local/ Vicinity	Pigment	2.5YR 6/8
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8178.01	Lapstone	Flat	Whole	Fire-cracked	Expedient	Single	–	Light	Polishing/ Smoothing	Manufacture	9.4	5.0	1.7	121.0	–	–	–	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8179.01	Ornament	Geometric	Whole	No	Strategic	Single	–	Moderate	Ornamen-tation	Decorative	1.0	0.7	0.3	0.4	–	–	–	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8181.01	Debris	Flake	Broken	No	Strategic	Unused	–	–	Ornamen-tation	Stone manufacture	–	–	–	0.2	–	Muscovite	Unknown	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8186.01	Nether-stone	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Floor fill	8186.02	Uniden-tified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Early Ceramic	3014	Pithouse	Roof/ Wall fall	7847.01	Uniden-tified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Early Ceramic	3038	Pithouse	Floor	8225.01	Mano	Flat/ Concave	Whole	No	Strategic	Unused	–	Unused	Food processing	Unused	9.5	8.1	3.3	384.0	–	–	–	–	–
BB:13:6	Early Ceramic	3038	Pithouse	Floor fill	8130.01	Pigment	Processed	Broken	No	Strategic	Single	–	–	Ornamen-tation	Decorative	–	–	–	2.5	–	Limonite, earthy	Local/ Vicinity	Pigment	2.5YR 5/8
BB:13:6	Early Ceramic	3038	Pithouse	Floor fill	8191.01	Uniden-tified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Early Ceramic	3038	Pithouse	Floor fill	8191.02	Uniden-tified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Early Ceramic	3038	Pithouse	Floor fill	8191.03	Uniden-tified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Early Ceramic	3038	Pithouse	Floor fill	8191.04	Uniden-tified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Early Ceramic	3038	Pithouse	Floor fill	8195.01	Pigment	Processed	Whole	Unknown	Strategic	Single	–	Unknown	Ornamentation	Decorative	–	–	–	0.3	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 3/4
BB:13:6	Early Ceramic	3038	Pithouse	Roof/ Wall fall	8140.01	Netherstone	Flat	Broken	Yes	Expedient	Unknown	Unknown	Moderate	General processing	Pigment processing	–	–	1.9	–	–	–	–	Pigment	10R 5/6
BB:13:6	Early Ceramic	3038	Pithouse	Roof/ Wall fall	8142.01	FCR	–	Broken	Fire-cracked	Expedient	Single	–	Light	Food processing	Food processing	–	–	–	–	–	–	–	–	–
BB:13:6	Early Ceramic	3038	Pithouse	Roof/ Wall fall	8143.01	Polisher	Pebble	Whole	No	Expedient	Single	–	Moderate	Polishing/ Smoothing	Manufacture	5.4	3.5	2.6	67.0	–	–	–	–	–
BB:13:6	Early Ceramic	3038	Pithouse	Roof/ Wall fall	8144.01	Mano	Trough	Broken	Yes	Unknown	Unknown	Unknown	Unknown	Food processing	Unknown	–	–	4.4	–	–	–	–	–	–
BB:13:6	Cienega	7	Pithouse	Floor	5960.01	Mano	Flat/ Concave	Whole	No	Strategic	Reused	Concomitant	Moderate	Food processing	Multiple	10.2	9.4	4.2	586.0	Handstone	Granite	Vicinity/ Distant	Pigment	10R 4/8
BB:13:6	Cienega	7	Pithouse	Floor fill	5946.01	Polisher	Pottery	Whole	No	Expedient	Single	–	Moderate	Polishing	Pottery manufacture	4.9	3.1	1.4	32.0	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	7	Pithouse	Floor fill	5955.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Dacite	Local/ Vicinity	–	–
BB:13:6	Cienega	7	Pithouse	Floor fill	5956.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Andesite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor	6147.01	Handstone	Flat/ Concave	Whole	No	Expedient	Single	–	Light	General processing	General processing	9.2	6.7	5.4	459.0	–	Quartzite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor	6149.01	Donut stone	Blank	Whole	No	Strategic	Unused	–	Unused	Paraphernalia	Unused	9.0	9.2	4.3	638.0	–	Basaltic andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor	6153.01	Handstone	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Dacite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor	6153.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Granite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	5851.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Latite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	5851.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	5851.03	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Andesite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	5851.04	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	5851.05	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	6008.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Dacite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	6008.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Floor fill	6073.01	Polisher	Blank	Whole	No	Expedient	Unused	–	Unused	Polishing	Unused	2.6	2.3	1.1	9.0	–	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Cienega	15	Pithouse	Roof/ Wall fall	5766.01	Pigment	Processed	Whole	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	2.3	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 5/6
BB:13:6	Cienega	15	Pithouse	Roof/ Wall fall	5766.02	Pigment	Processed	Whole	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	0.7	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 5/6
BB:13:6	Cienega	15	Pithouse	Roof/ Wall fall	5766.03	Pigment	Processed	Whole	Yes	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	0.8	–	Iron oxide	–	Pigment	10R 3/6
BB:13:6	Cienega	15	Pithouse	Roof/ Wall fall	5766.04	Pigment	Processed	Whole	Yes	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	0.4	–	Iron oxide	Local/ Vicinity	Pigment	10R 4/6
BB:13:6	Cienega	15	Pithouse	Floor fill	5852.01	Polisher	Pebble-surface	Whole	No	Expedient	Single	–	Light	Polishing/ Smoothing	Manufacture	2.9	2.7	2.0	22.0	–	Quartzite	Unknown	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Cienega	15	Pithouse	Roof/ Wall fall	5984.01	Pigment	Natural	Whole	No	–	Unused	–	–	Ornamentation	Unused	–	–	–	1.5	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 3/2
BB:13:6	Cienega	15	Pithouse	Roof/ Wall fall	5984.02	Pigment	Processed	Whole	Yes	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	0.8	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 3/6
BB:13:6	Cienega	15	Pithouse	Roof/ Wall fall	5987.01	Polisher	Pebble	Whole	No	Expedient	Single	–	Moderate	Polishing	Manufacture	2.7	2.3	0.8	8.0	–	Volcanic, felsic	Unknown	–	–
BB:13:6	Cienega	28	Pithouse	Floor fill	6687.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Quartzite	Local/ Vicinity	–	–
BB:13:6	Cienega	29	Pithouse	Floor	5700.01	Lapstone	Flat	Whole	No	Expedient	Single	–	Moderate	General processing	Pigment processing	13.4	10.2	2.2	531.0	–	Andesite	Local/ Vicinity	Pigment	10R 4/6
BB:13:6	Cienega	29	Pithouse	Floor	5701.01	Lapstone	Flat	Broken	No	Expedient	Redesigned	Concomitant	Moderate	General processing	Multiple	–	12.3	1.9	–	Chopper	Andesite	Local/ Vicinity	–	–
BB:13:6	Cienega	32	Pithouse	Floor	5833.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Cienega	57	Pithouse	Fill	6042.01	Ornament	Pendant	Broken	No	Strategic	Unused	–	Unused	Ornamentation	Unused	–	1.1	0.3	–	–	Turquoise	Vicinity/ Distant	–	–
BB:13:6	Cienega	65	Pithouse	Floor	6236.01	Lapstone	Unknown	Broken	Fire-cracked	Expedient	Multiple	Both	Light	Polishing/ Smoothing	Multiple	–	–	2.2	–	Scraper	Volcanic, felsic	Local/ Vicinity	–	–
BB:13:6	Cienega	65	Pithouse	Floor fill	6112.01	Pigment	Processed	Whole	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	0.3	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 4/6
BB:13:6	Cienega	65	Pithouse	Floor fill	6231.01	Pigment	Processed	Whole	No	Strategic	Single	–	Unknown	Ornamentation	Decorative	–	–	–	1.4	Mano	Iron oxide	Local/ Vicinity	Pigment	10R 5/4
BB:13:6	Cienega	65.01	Interior pit	Fill	6265.01	Hand-stone	Flat	Whole	No	Expedient	Single	–	Light	General processing	General processing	4.0	303.0	2.4	42.0	–	Granodiorite	Unknown	–	–
BB:13:6	Cienega	69	Exterior pit	Fill	6195.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	17.0	17.3	5.8	–	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	97	Pithouse	Fill	6057.01	Donut stone	Flat	Broken	No	Strategic	Unknown	–	Unknown	Paraphernalia	Unknown	–	–	3.4	–	–	Basaltic andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	97	Pithouse	Fill	6543.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Quartzite	Local/ Vicinity	–	–
BB:13:6	Cienega	97	Pithouse	Floor fill	6284.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Basaltic andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	97	Pithouse	Floor fill	6285.01	Lapstone	Flat	Whole	No	Expedient	Single	–	Moderate	Polishing/ Smoothing	Stone manufacture	11.1	7.9	1.6	240.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Cienega	97	Pithouse	Floor fill	6286.01	Polisher	Pebble	Whole	No	Expedient	Single	–	Moderate	Polishing/ Smoothing	Manufacture	2.7	2.4	1.2	8.0	–	Sandstone	Unknown	–	–
BB:13:6	Cienega	97	Pithouse	Floor fill	6339.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Cienega	97	Pithouse	Floor fill	6345.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	100	Pithouse	Floor fill	6134.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Cienega	100	Pithouse	Floor fill	6134.02	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	Nether-stone	Granodiorite	Local/ Vicinity	–	–
BB:13:6	Cienega	112	Pithouse	Floor	6067.01	Pigment	Processed	Broken	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	0.7	–	Hematite, earthy	Local/ Vicinity	Pigment	2.5YR 4/8
BB:13:6	Cienega	112	Pithouse	Floor	6207.01	Hand-stone	Flat/ Concave	Whole	Yes	Expedient	Single	–	Light	General processing	General processing	12.0	11.5	7.4	1,462.0	–	Granite	Local/ Vicinity	Carbon	–
BB:13:6	Cienega	112	Pithouse	Floor	6208.01	Hand-stone	Flat/ Concave	Whole	Yes	Expedient	Single	–	Moderate	General processing	General processing	10.4	7.6	4.3	381.0	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	112	Pithouse	Floor	6209.01	Nether-stone	Unknown	Broken	Fire-cracked	Unknown	Unknown	Unknown	Unknown	Unknown	Multiple	–	–	–	–	–	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Cienega	112	Pithouse	Floor	6213.01	Lapstone	Flat	Whole	Yes	Expedient	Single	–	Light	Polishing/ Smoothing	Manufacture	13.8	11.0	3.9	–	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	112	Pithouse	Floor fill	6122.01	Pigment	Processed	Broken	No	Strategic	Single	–	Unknown	Ornamentation	Decorative	–	–	–	1.1	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 5/8
BB:13:6	Cienega	112	Pithouse	Floor fill	6123.01	Mineral	Natural	Whole	No	–	Unused	–	–	Specimens	Unused	–	–	–	0.4	–	Chalcedony	Unknown	–	–
BB:13:6	Cienega	121	Pithouse	Floor	6452.01	Hand-stone	Unknown	Broken	Fire-cracked	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	–	–	–	–	–	Dacite	Local/ Vicinity	–	–
BB:13:6	Cienega	121	Pithouse	Floor	6775.01	Chopper	Hand axe	Whole	No	Strategic	Single	–	Moderate	Percussion	Procurement	17.7	10.6	4.6	1,626.0	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Cienega	121	Pithouse	Floor fill	6401.01	Shaped	–	Whole	Yes	Strategic	Single	–	–	Paraphernalia	Unknown	12.3	7.2	3.2	–	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	121	Pithouse	Floor fill	6405.01	Polisher	Disk	Broken	No	Expedient	Single	–	Heavy	Polishing/ Smoothing	Manufacture	–	4.8	1.0	–	–	Andesite	Local/ Vicinity	–	–
BB:13:6	Cienega	121	Pithouse	Floor fill	6405.02	Polisher	Unknown	Broken	No	Unknown	Unknown	Unknown	Unknown	Polishing/ Smoothing	Unknown	–	4.8	–	–	–	Diabase	Vicinity/ Distant	–	–
BB:13:6	Cienega	126	Pithouse	Floor	6438.01	Pestle	Shaped	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	19.1	9.4	8.7	2,371.0	–	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Cienega	126	Pithouse	Floor	6439.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Cienega	126	Pithouse	Floor	6454.01	Mortar	Knobbed	Whole	Yes	Strategic	Single	–	Moderate	General processing	General processing	18.7	15.4	5.3	–	–	Volcanic, intermediate	Local/ Vicinity	–	–
BB:13:6	Cienega	126	Pithouse	Floor	6455.01	Mortar	Knobbed	Whole	No	Strategic	Single	–	Moderate	General processing	General processing	20.2	16.4	4.3	–	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	126.04	Interior pit	Fill	6379.01	Mano	Flat/ Concave	Whole	No	Strategic	Reused	Concomitant	Moderate	Food processing	Multiple	16.0	13.1	7.0	2,380.0	Hand-stone	Quartzite	Local/ Vicinity	Pigment	10R 6/6
BB:13:6	Cienega	128	Pithouse	Fill	6587.01	Pigment	Natural	Whole	No	–	Unused	–	–	Ornamentation	Unused	1.5	1.3	0.6	–	–	Azurite	Vicinity/ Distant	Pigment	Blue
BB:13:6	Cienega	151	Pithouse	Floor fill	6475.01	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Cienega	151	Pithouse	Floor fill	6475.02	Unidentified	Unknown	Broken	Yes	Unknown	Recycled	Sequential	Unknown	Unknown	Unknown	–	–	–	–	FCR	–	–	–	–
BB:13:6	Cienega	151	Pithouse	Floor fill	6475.03	Unidentified	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	–	–	–	–
BB:13:6	Cienega	151	Pithouse	Floor fill	6475.04	Hand-stone	Unknown	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	151	Pithouse	Floor fill	6474.01	Mano	Flat/ Concave	Whole	Yes	Strategic	Single	–	Heavy	Food processing	Food processing	10.5	9.2	4.2	636.0	–	Granodiorite	Local/ Vicinity	–	–
BB:13:6	Cienega	191.01	Interior pit	Fill	6577.01	Donut stone	Flat	Broken	No	Strategic	Unknown	Unknown	Unknown	Paraphernalia	Unknown	–	–	5.6	–	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	3220	Pithouse	Floor fill	8383.01	Mineral	Natural	Whole	No	–	Unknown	–	–	Specimens	Unknown	1.2	0.9	0.3	–	–	Muscovite	Local/ Vicinity	–	–
BB:13:6	Cienega	3245.06	Interior pit	Fill	8529.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Heavy	Food process	Food process	12.2	10.7	4.1	815.0	–	Quartzite	Local/ Vicinity	–	–
BB:13:6	Cienega	3262	Pithouse	Floor	8577.01	Spindle base	–	Whole	No	Strategic	Single	–	Light	General processing	Manufacture	4.6	4.4	3.8	103.0	–	–	–	–	–
BB:13:6	Cienega	3262	Pithouse	Floor	8578.01	Whorl	Spherical	Whole	No	Strategic	Single	Unknown	Unknown	General processing	Manufacture	4.0	3.7	3.3	70.0	–	–	–	–	–
BB:13:6	Cienega	3262	Pithouse	Floor	8581.01	Pestle	Cobble	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	30.0	11.5	9.5	4,318.0	–	Granite	Local/ Vicinity	–	–
BB:13:6	Cienega	3262	Pithouse	Floor fill	8570.01	Donut stone	Flat	Broken	No	Strategic	Unknown	–	–	Paraphernalia	Unknown	–	–	2.3	–	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	3264	Pithouse	Fill	8560.01	Pigment	Processed	Broken	Unknown	Strategic	Single	–	Unknown	Ornamentation	Decorative	–	–	–	2.5	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 3/6
BB:13:6	Cienega	3264	Pithouse	Floor fill	8680.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	12.3	9.7	4.9	815.0	–	Granite	Local/ Vicinity	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Cienega	3264	Pithouse	Floor	8684.01	Pestle	Cobble	Whole	No	Strategic	Reused	Concomitant	Moderate	General processing	Multiple	7.5	5.8	5.5	354.0	Handstone	–	–	–	–
BB:13:6	Cienega	3264	Pithouse	Floor fill	8679.01	Pigment	–	Whole	No	Unknown	Unknown	–	Unknown	Ornamentation	Unknown	–	–	–	0.2	–	Rhyolite	Local/ Vicinity	Pigment	10R 4/2
BB:13:6	Cienega	3264.04	Posthole	Fill	8694.01	Chopper	Hand axe	Whole	No	Expedient	Single	–	Moderate	Percussion	Procurement	12.2	7.4	2.2	310.0	–	Slate	Unknown	–	–
BB:13:6	Cienega	3270	Pithouse	Floor	8784.01	Concretion	Round	Whole	No	–	Unknown	–	Unknown	Paraphernalia	Unknown	2.6	2.6	2.6	–	–	Granodiorite	Unknown	–	–
BB:13:6	Cienega	3270	Pithouse	Floor	8785.01	Polisher	Disk	Whole	Yes	Expedient	Single	–	Heavy	Polishing/ Smoothing	Wood/Bone manufacture	5.9	5.6	0.9	49.0	–	Diorite	Vicinity/ Distant	–	–
BB:13:6	Cienega	3270	Pithouse	Floor	8789.01	Pestle	Shaped	Whole	No	Strategic	Single	–	Moderate	General processing	General processing	5.2	5.8	6.1	209.0	–	–	–	–	–
BB:13:6	Cienega	3270	Pithouse	Floor	8790.01	Pestle	Cobble	Whole	No	Strategic	Single	–	Light	Food processing	Food processing	34.0	10.8	7.4	3,896.0	–	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	3270	Pithouse	Floor	8791.01	Nether-stone	Flat	Whole	No	Expedient	Single	–	Moderate	General processing	General processing	28.0	17.0	6.0	4,098.0	–	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	3270.02	Bell pit	Fill	8890.01	Mano	Flat/ Concave	Broken	Yes	Strategic	Unknown	Unknown	Moderate	Food processing	Unknown	–	9.2	3.0	–	–	Quartzite	Local/ Vicinity	–	–
BB:13:6	Cienega	3270.02	Interior pit	Fill	8893.01	Pigment	Natural	Whole	No	–	Unused	–	–	Ornamentation	Unused	–	–	–	0.5	–	Hematite, earthy	Unknown	Pigment	10R 4/8
BB:13:6	Cienega	3270.02	Interior pit	Fill	8901.01	Pigment	Natural	Whole	No	–	Unused	–	–	Ornamentation	Unused	–	–	–	0.3	–	Turquoise	–	Pigment	Green
BB:13:6	Cienega	3270.02	Interior pit	Fill	8902.01	Pigment	Processed	Broken	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	2.0	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 4/6
BB:13:6	Cienega	3273	Pithouse	Floor	8803.01	Nether-stone	Flat	Broken	Yes	Expedient	Reused	Concomitant	Moderate	General processing	Pigment	33.0	–	3.5	–	Nether-stone	Basalt/ Andesite, vesicular	Local/ Vicinity	Pigment	10R 5/8
BB:13:6	Cienega	3273	Pithouse	Floor	8804.01	Metate	Blank	Whole	No	Strategic	Unused	–	Unused	Food processing	Stone manufacture	40.0	39.0	17.0	–	–	Dacite	Vicinity/ Distant	–	–
BB:13:6	Cienega	3273	Pithouse	Floor fill	8815.01	Pigment	Ground	Whole	No	Expedient	Single	–	Moderate	Ornamentation	Decorative	–	–	–	11.3	–	Hematite, rock	Local/ Vicinity	Pigment	10R 3/6
BB:13:6	Cienega	3273.02	Floor groove	Fill	8869.01	Abrader	Grooved	Whole	No	Strategic	Unused	–	Unused	Abrading	Wood/Bone manufacture	6.5	3.8	3.5	132.0	–	Volcanic, intermediate	Local/ Vicinity	–	–
BB:13:6	Cienega	3294	Pithouse	Fill	8772.01	Debris	Flake	Whole	No	–	Unused	–	–	Ornamentation	Unused	–	–	–	0.4	–	Chalcedony	Unknown	–	–
BB:13:6	Cienega	3296	Pithouse	Floor	9023.01	Abrader	Flat	Whole	No	Strategic	Single	–	Moderate	Abrading	Manufacture	11.3	3.8	1.7	143.0	–	Schist	Local/ Vicinity	–	–
BB:13:6	Cienega	3296	Pithouse	Floor	9025.01	Hand-stone	Flat	Whole	No	Expedient	Single	–	Light	General processing	General processing	6.7	5.6	5.0	255.0	–	Felsic volcanic	Local/ Vicinity	–	–
BB:13:6	Cienega	3300.02	Interior pit	Fill	9036.01	Tray	Unknown	Broken	No	Strategic	Unknown	Unknown	Unknown	Paraphernalia	Unknown	–	–	–	–	–	Basalt, vesicular	Local/ Vicinity	Unknown	–
BB:13:6	Cienega	3312	Pithouse	Floor	8963.01	Ball	Spherical	Broken	No	Strategic	Unknown	Unknown	Unknown	Paraphernalia	Unknown	–	3.0	–	–	–	Tuff	Local/ Vicinity	–	–
BB:13:6	Cienega	3312	Pithouse	Floor	8964.01	Hand-stone	Unknown	Whole	No	Expedient	Single	–	Light	General processing	General processing	7.7	7.4	3.8	297.0	–	Basalt, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	3323	Pithouse	Floor	9251.01	Metate	Flat/ Concave	Whole	No	Expedient	Single	–	Moderate	Food processing	Food processing	55.0	50.0	14.0	–	–	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Cienega	3327	Pithouse	Floor	9140.01	Mano	Flat/ Concave	Whole	Yes	Strategic	Multiple	Concomitant	Moderate	Food processing	Multiple	14.0	13.1	4.7	1,382.0	Lapstone	Granite	Local/ Vicinity	Pigment	10R 6/6
BB:13:6	Cienega	3327	Pithouse	Floor	9143.01	Metate	Basin	Whole	No	Expedient	Single	–	Light	Food processing	Food processing	54.0	27.0	19.0	–	–	Dacite	Vicinity/ Distant	–	–
BB:13:6	Cienega	3327	Pithouse	Floor	9144.01	Nether-stone	Flat	Whole	No	Expedient	Single	–	Light	General processing	General processing	34.0	33.0	3.0	–	–	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Cienega	3357	Burial	Fill	9330.01	Unidentified	–	Broken	Fire-cracked	Unknown	Unknown	Unknown	Unknown	Unknown	Multiple	–	–	–	–	–	–	–	–	–
BB:13:6	Cienega	3357	Burial	Fill	9331.01	Concretion	Round	Whole	No	Expedient	Single	–	Unknown	Paraphernalia	Ritual	1.9	1.7	1.3	–	–	–	–	–	–
BB:13:6	Cienega	9357	Pithouse	Fill	8345.01	Mano	Flat/ Concave	Broken	Yes	Unknown	Recycled	Sequential	Moderate	Food processing	Multiple	–	–	3.5	–	FCR	Quartzite	Local/ Vicinity	Carbon	–
BB:13:6	Cienega	9357	Pithouse	Fill	8454.01	Hand-stone	Flat	Whole	No	Expedient	Single	–	Moderate	General processing	General processing	8.0	7.2	2.1	196.0	–	Quartzite	Local/ Vicinity	–	–
BB:13:6	Cienega	9357	Pithouse	Fill	8479.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	10.2	10.4	4.0	692.0	–	Granite	Local/ Vicinity	–	–
BB:13:6	Cienega	9357	Pithouse	Floor fill	8472.01	Lapstone	Flat	Whole	Yes	Expedient	Multiple	Concomitant	Moderate	General processing	Pigment processing	16.2	11.6	3.7	1,031.0	Lap-stone	Volcanic, felsic	Local/ Vicinity	Pigment	10R 5/8
BB:13:6	Cienega	9357	Pithouse	Roof/ Wall fall	8458.01	Mano	Flat/ Concave	Whole	Yes	Strategic	Reused	Concomitant	Moderate	Food processing	Multiple	14.1	7.6	4.4	775.0	Hand-stone	Latite	Local/ Vicinity	Pigment	10R 4/8
BB:13:6	Early Agricultural	190	Burial	Fill	6745.01	Mortar	Rock	Broken	No	Expedient	Recycled	Sequential	Heavy	Food processing	Multiple	25.5	–	24.3	–	Offering	–	–	–	–
BB:13:6	Early Agricultural	603	Burial	Fill	7570.01	Metate	Basin	Whole	Yes	Strategic	Recycled	Sequential	Heavy	Food processing	Multiple	62.0	32.0	12.4	–	Offering	–	–	–	–
BB:13:6	Early Agricultural	603	Burial	Fill	7571.01	Mano	Basin	Whole	No	Strategic	Recycled	Sequential	Heavy	Food processing	Multiple	12.7	12.0	6.5	–	Offering	–	–	–	–
BB:13:6	Early Agricultural	603	Burial	Fill	7572.01	Metate	Basin	Broken	No	Strategic	Recycled	Sequential	Heavy	Food processing	Multiple	–	22.0	5.9	–	Offering	–	–	Carbon	–
BB:13:6	Early Agricultural	603	Burial	Fill	7573.01	Hand-stone	Other	Whole	No	Strategic	Recycled	Sequential	Heavy	Unknown	Multiple	9.4	5.6	5.1	–	Offering	–	–	–	–
BB:13:6	Early Agricultural	603	Burial	Fill	7586.01	Tray	Plain	Whole	No	Strategic	Recycled	Sequential	Light	General processing	Multiple	14.8	11.0	5.2	–	Offering	–	–	Pigment	Multiple
BB:13:6	Early Agricultural	603	Burial	Fill	7593.01	Unidentified	–	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	Offering	–	–	–	–
BB:13:6	Stratum 503	3374	Exterior pit	Fill	9290.01	Lapstone	Flat	Whole	No	Strategic	Multiple	Concomitant	Heavy	General processing	Multiple	21.2	15.0	2.9	1,311.0	Lap-stone	–	–	Pigment	2.5YR 4/4
BB:13:6	Stratum 504	0		Stratum	7180.01	Pigment	Processed	Whole	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	0.9	–	Limonite, earthy	Local/ Vicinity	Pigment	10YR 7/8
BB:13:6	Stratum 504	0		Stratum	7210.01	Mineral	Natural	Whole	No	–	Unused	–	–	Specimens	Unused	–	–	–	0.1	–	Copper minerals	Local/ Vicinity	–	–
BB:13:6	Stratum 504	0		Stratum	7211.01	Unidentified	–	Broken	Fire-cracked	Unknown	Recycled	Sequential	Unknown	Unknown	Multiple	–	–	–	–	FCR	Andesite	Local/ Vicinity	–	–
BB:13:6	Stratum 504	0		Stratum	7218.01	Hammer-stone	Natural	Whole	Yes	Expedient	Single	–	Light	Percussion	Stone manufacture	9.6	4.4	2.6	151.0	–	Basalt/ Andesite, vesicular	Local/ Vicinity	–	–
BB:13:6	Stratum 504	0		Stratum	7225.01	Shaped	–	Whole	No	Strategic	Unknown	Unknown	Unknown	Paraphernalia	Unknown	5.1	4.9	3.3	92.0	–	Rhyolite	Local/ Vicinity	–	–
BB:13:6	Stratum 504	0		Stratum	7236.01	Pigment	Natural	Broken	No	–	Unused	–	–	Ornamentation	Unused	–	–	–	–	–	Hematite, earthy	Local/ Vicinity	Pigment	Too minute
BB:13:6	Stratum 504	0		Stratum	7327.01	Pigment	Processed	Whole	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	9.3	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 6/8
BB:13:6	Stratum 504	0		Stratum	7327.02	Pigment	Processed	Broken	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	11.0	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 6/6
BB:13:6	Stratum 504	0		Stratum	7354.01	Pigment	Processed	Broken	No	Strategic	Single	–	–	Ornamentation	Decorative	–	–	–	1.3	–	Limonite, earthy	Local/ Vicinity	Pigment	10YR 7/8
BB:13:6	Stratum 504	0		Stratum	7414.01	Pigment	Natural	Whole	No	–	Unused	–	–	Ornamentation	Unused	–	–	–	2.8	–	Hematite, earthy	Local/ Vicinity	Pigment	10R 4/8
BB:13:6	Stratum 504	0		Stratum	7455.01	Pigment	Ground	Whole	No	Expedient	Single	–	Heavy	Ornamentation	Decorative	3.3	3.1	2.6	32.0	–	Rhyolite	Local/ Vicinity	Pigment	10YR 6/6
BB:13:6	Stratum 504	0		Stratum	7457.01	Mano	Flat/ Concave	Whole	No	Expedient	Single	–	Moderate	Food processing	Food processing	9.6	8.5	5.7	648.0	–	–	–	–	–

Table 9.5. Continued.

AZ (ASM) Site No.	Age/ Stratum	Feature	Feature Type	Context	FN	Artifact	Subtype	Condition	Burned	Design	Use	Sequence	Wear	Designed Activity	Actual Activity	Length (cm)	Width (cm)	Thickness (cm)	Weight (gm)	Second Type	Rock Type	Availability	Residue	Color
BB:13:6	Stratum 504	0		Stratum	7492.01	Pigment	Processed	Broken	No	Strategic	Single	–	Unknown	Ornamentation	Decorative	–	–	–	0.6	–	Limonite, earthy	Local/ Vicinity	Pigment	10YR 7/8
BB:13:6	Stratum 504	581	Pithouse	Floor fill	7474.01	Polisher	Multiple	Whole	Yes	Expedient	Multiple	Concomitant	Light	Polishing/ Smoothing	Multiple	5.3	5.3	3.9	131.0	Pecking stone	Volcanic, felsic	Vicinity/ Distant	–	–
BB:13:6	Stratum 504	592	Exterior pit	Fill	7545.01	Hand-stone	Flat	Whole	Yes	Expedient	Recycled	Sequential	Light	Food processing	Multiple	12.1	9.7	6.6	1,033.0	FCR	Granite	Local/ Vicinity	Carbon	–
BB:13:6	Stratum 504	3359	Pithouse	Floor fill	9206.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	13.7	11.5	6.1	1,499.0	–	–	–	–	–
BB:13:6	Stratum 504	3370	Exterior pit	Fill	9275.01	Mano	Basin	Whole	No	Strategic	Reused	Concomitant	Moderate	Food processing	Multiple	11.6	10.2	7.5	1,192.0	Hand-stone	Volcanic, felsic	Local/ Vicinity	–	–
BB:13:6	Stratum 504	3371	Pithouse	Floor	9298.01	Mano	Basin	Whole	No	Strategic	Reused	Concomitant	Heavy	Food processing	Food processing	8.8	7.9	5.2	534.0	Mano	Quartzite	Unknown	–	–
BB:13:6	Stratum 504	3371	Pithouse	Floor	9301.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	12.2	8.5	6.7	984.0	–	Dacite	Local/ Vicinity	–	–
BB:13:6	Stratum 504	3414	Extra-mural	Surface	9294.01	Mano	Flat/ Concave	Whole	No	Strategic	Redesigned	–	Moderate	Food processing	Food processing	10.2	8.7	7.0	913.0	Mano	Dacite	Local/ Vicinity	–	–
BB:13:6	Stratum 504	3414	Surface	Occupation	9295.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	11.0	11.5	5.9	1,215.0	–	Dacite	Local/ Vicinity	–	–
BB:13:6	Undated	0		Unknown	6880.01	Mano	Basin	Whole	No	Expedient	Single	–	Heavy	Food processing	Food processing	10.1	9.8	7.3	1,126.0	–	–	–	–	–
BB:13:6	Undated	0		Sheet trash	8734.01	Tray	Knobbed	Broken	No	Strategic	Unknown	Unknown	Unknown	Paraphernalia	Unknown	–	12.8	5.7	–	–	–	–	–	–
BB:13:6	Undated	0		Sheet trash	8954.01	Axe	3/4-wedge	Whole	No	Strategic	Unused	–	Unused	Percussion	Unused	13.0	6.2	7.4	730.0	–	–	–	–	–
BB:13:6	Undated	0		Unknown	7784.01	Metate	3/4-trough	Whole	No	Strategic	Single	–	Light	Food processing	Food processing	54.3	26.4	14.7	–	–	–	–	–	–
BB:13:6	Undated	0		Unknown	8122.01	Mano	Flat/ Concave	Whole	No	Strategic	Single	–	Moderate	Food processing	Food processing	14.7	12.0	7.4	1,615.0	–	–	–	–	–
BB:13:6	Undated	3344	Exterior pit	Fill	9147.01	Lapstone	Flat	Whole	No	Strategic	Single	–	Moderate	General processing	General processing	14.2	6.7	1.7	373.0	–	–	–	–	–

[a]FCR = Fire-cracked rock.

Table 9.6. Rock type and source availability during specific time periods from the Clearwater site, AZ B:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM).

Availability	Age/Stratum	Rock Type	Artifact	Total
Local/Vicinity	Hohokam	Andesite	Tabular tool	38
		Chrysocolla	Debris	1
		Quartzite	Mano	1
		Rhyolite	Mano	1
		Schist	Tablet	1
	Early Ceramic	Hematite, earthy	Pigment	2
		Limonite, earthy	Pigment	1
	Cienega	Andesite	Lapstone (2)	7
		Basalt/Andesite, vesicular	Donut stone (4), handstone (3), lapstone, mano, metate, mortar, netherstone (4), pestle, polisher, shaped, ray, unidentified (5)	24
		Dacite	Handstone (2), unidentified (2)	4
		Granite	Mano (3), pestle, handstone, unidentified	6
		Granodiorite	Mano, unidentified	2
		Hematite, earthy	Pigment	9
		Hematite, rock	Pigment	1
		Iron oxide	Pigment	2
		Latite	Mano	2
		Muscovite	Mineral	1
		Quartzite	Handstone (2), mano (4), unidentified (2)	8
		Rhyolite	Pestle, pigment, polisher, unidentified (4)	7
		Schist	Abrader	1
		Tuff	Ball	1
		Volcanic	Abrader, handstone, lapstone (2), mortar	5
	Stratum 504	Andesite	Unidentified	1
		Basalt/Andesite, vesicular	Hammerstone	1
		Copper miner	Mineral	1
		Dacite	Mano (3), pestle	3
		Granite	Handstone	1
		Hematite, earthy	Pigment	4
		Limonite, earthy	Pigment	3
		Rhyolite	Pigment, shaped	2
		Volcanic	Mano	1
	Undated	Basalt, vesicular	Pestle	1
Vicinity/Distant	Hohokam	Diabase	Polisher	1
		Shale	Lapstone	1
	Cienega	Azurite	Pigment	1
		Dacite	Metate	2
		Diabase	Polisher	1
		Diorite	Polisher	1
		Granite	Mano	1
		Turquoise	Ornament	1
	Stratum 504	Volcanic	Polisher	1

Table 9.6. Continued.

Availability	Age/Stratum	Rock Type	Artifact	Total
Unknown	Spanish/ Mexican	Muscovite	Debris (2), mineral	3
	Hohokam	Volcanic	Polisher	1
	Early Ceramic	Chalcedony	Mineral	1
		Muscovite	Debris	1
	Cienega	Chalcedony	Debris, mineral	2
		Granodiorite	Concretion, handstone	2
		Hematite, earthy	Pigment	1
		Quartzite	Polisher	1
		Sandstone	Polisher	1
		Slate	Chopper	1
		Volcanic	Polisher	1
	Stratum 504	Quartzite	Mano	1
Total				169

The basin metate fragment was probably never used with the mano and was never as big as the whole metate. It was found to the left of the woman's head. Next to her right heel was a vesicular basalt mortar. It is rectangular, with a shallow basin that has use-wear from a stone pestle. Two shades of red pigment (see Table 9.9) cover parts of the mortar's bottom and sides, which were probably used to abrade processed pigment into powder. Pigment stains were found around and on her feet, legs, and torso. Chunks of red hematite were under her right hand and next to her right ear.

These early burials are described in more detail in Chapter 18 (this volume). The condition of the items associated with these two individuals is evidence of specific mortuary behaviors. It is obvious with at least one of these burials that the intentional breaking of mortuary accoutrements may have begun by the Early Agricultural period, if not earlier (Mabry 1998, 2005). There is evidence that this practice continued with later mortuary contexts in the Tucson Basin. For example, palettes recovered from Early Rincon phase cremations at Julian Wash were intentionally broken. The color red has been associated with death and other rituals throughout time in both New World and Old World cultures (see, for example, Wreschner 1980). Pigment-stained items and a pigment processing tool were recovered from Cienega phase burials at Wetlands (Adams 1998b:170; Thiel and Mabry 1998:Table 6.1).

Collectively, the artifacts from Stratum 503, Stratum 504, and those from the two Early Agricultural burials could easily be lost among the San Pedro phase assemblage from Las Capas, a site located 15 km down stream from the Clearwater site (Adams 2005). Evidence for pigment processing was abundant at Las Capas, and the food grinding technology is identical. Even the postoccupational absence of metates is the same. Further similarities are probably obfuscated due to the differences in sample size. The much larger Las Capas assemblage has more complexity representative of a much wider variety of activities. At the current level of analysis, it is not possible to determine if the differences between the Las Capas assemblage and the Clearwater assemblage are related to differences in occupation strategy or to archaeological sampling.

Cienega Phase

Slightly more than 100 ground stone items were analyzed from Cienega phase contexts at Clearwater (see Table 9.7). Those from 14 features were associated with the Brickyard locus, and those from 16 features were associated with the Mission locus (see Table 9.1). Most of the 115 items were found on or near pithouse floors (see Table 9.8). The activities associated with Cienega phase contexts are almost equally represented and include tools for food processing, general processing, and manufacturing, with a few used in pigment processing and for items of ornamentation (see Table 9.8). The largest percentage (40 percent) of items, however, was used in multiple activities.

Food-processing activities were represented by 11 manos, 3 metates, and 3 pestles. All of the manos were used against flat/concave metates. The only flat/concave metate was recovered from the floor of Feature 3323 where there were no flat/concave manos.

Table 9.7. Temporal comparisons of ground stone artifact types from the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM).

	Stratum 504		Stratum 503		Cienega		Early Ceramic		Hohokam		Spanish Period O'odham		Spanish and Mexican Periods, AZ BB:13:13 (ASM)		Undated		Total	
Artifact	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Abraders	–	–	–	–	2	2	–	–	–	–	3	38	–	–	–	–	5	3
Axes	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	13	1	1
Balls	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	1	1
Choppers	–	–	–	–	2	2	–	–	1	2	1	13	–	–	–	–	4	2
Debris	–	–	–	–	1	1	1	7	1	2	–	–	2	50	–	–	5	3
Donut stones	–	–	–	–	4	5	–	–	–	–	–	–	–	–	–	–	4	2
Hammerstones	1	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Handstones	1	5	–	–	11	13	–	–	1	2	1	13	–	–	–	–	14	7
Lapstones	–	–	1	100	6	7	1	7	1	2	–	–	–	–	1	13	10	5
Manos	7	37	–	–	12	14	3	21	4	8	2	25	1	25	3	38	32	17
Metates	–	–	–	–	5	6	–	–	–	–	–	–	–	–	1	13	6	3
Mortars	–	–	–	–	3	3	–	–	–	–	–	–	–	–	–	–	3	2
Netherstones	–	–	–	–	4	5	4	29	–	–	–	–	–	–	–	–	8	4
Ornaments	–	–	–	–	1	1	1	7	–	–	–	–	–	–	–	–	2	1
Palettes	–	–	–	–	–	–	–	–	1	2	–	–	1	25	–	–	2	1
Pecking stones	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	–	1	1
Pestles	–	–	–	–	5	6	–	–	1	2	–	–	–	–	1	13	7	4
Pigment	8	42	–	–	17	20	3	21	–	–	–	–	–	–	–	–	28	15
Polishers	1	5	–	–	8	9	1	7	2	4	1	13	–	–	–	–	13	7
Shaped	1	5	–	–	1	1	–	–	–	–	–	–	–	–	–	–	2	1
Spindle bases	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	1	1
Tablets	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	–	1	1
Tabular tools	–	–	–	–	–	–	–	–	38	73	–	–	–	–	–	–	38	20
Trays	–	–	–	–	2	2	–	–	–	–	–	–	–	–	1	13	3	2
Whorls	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	1	1
Subtotal	19	99	1	100	87	100	14	99	52	101	8	102	4	100	8	103	193	106
Unidentified[a]	1	5	–	–	24	22	6	29	5	9	22	73	1	20	–	–	59	23
Fire-cracked rocks	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–
Total artifacts	20		1		111		21		57		30		5		8		253	
Ecofact																		
Concretions	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	2	–
Minerals	1	–	–	–	2	–	1	–	–	–	–	–	1	–	–	–	5	–
Subtotal	1	–	–	–	4	–	1	–	–	–	–	–	1	–	–	–	7	–
Grand total	21		1		115		22		57		30		6		8		260	

Note: Unidentified not included in percentage calculations.
[a]Percentage of assemblage including unidentified

A flat/concave mano from the floor of Features 3327, and another from an interior pit in Feature 3245, were most compatible with this metate, although almost any flat/concave mano could have been used (Figure 9.2). The secondary use of the mano from Feature 3327 to grind red pigment (see Table 9.9) was

Table 9.8. Temporal comparisons of ground stone variables from the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM).

	Stratum 504		Stratum 503		Cienega		Early Ceramic		Hohokam		Spanish Period O'odham		Spanish and Mexican Periods, AZ BB:13:13 (ASM)		Undated		Total	
Variable	No.	%[a]	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Context																		
Extramural pit	2	10	1	100	2	2	–	–	41	72	6	20	6	100	2	25	60	23
Extramural surface	2	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	1
Fill	–	–	–	–	8	7	1	5	9	16	–	–	–	–	–	–	18	7
Roof/Wall fall	–	–	–	–	8	7	5	23	–	–	–	–	–	–	–	–	13	5
Floor fill	2	10	–	–	39	34	14	64	1	2	–	–	–	–	–	–	56	22
Floor	2	10	–	–	39	34	2	9	1	2	–	–	–	–	–	–	44	17
Interior pit	–	–	–	–	8	7	–	–	2	4	–	–	–	–	–	–	10	4
Other interior[a]	–	–	–	–	2	2	–	–	1	2	–	–	–	–	–	–	3	1
Nonfeature	13	62	–	–	–	–	–	–	–	–	–	–	–	–	–	–	13	5
Burial	–	–	–	–	9	8	–	–	2	4	–	–	–	–	1	13	12	5
Trash	–	–	–	–	–	–	–	–	–	–	14	47	–	–	–	–	14	5
Sheet trash	–	–	–	–	–	–	–	–	–	–	10	33	–	–	2	25	12	5
Unknown	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	38	3	1
Subtotal	21	102	1	100	115	101	22	101	57	102	30	100	6	100	8	101	260	101
Condition																		
Broken	5	24	1	100	47	41	15	68	16	28	24	80	6	100	1	13	115	44
Whole	16	76	–	–	68	59	7	32	41	72	6	20	–	–	7	88	145	56
Subtotal	21	100	1	100	115	100	22	100	57	100	30	100	6	100	8	101	260	100
Burned																		
Heat-cracked	1	5	–	–	28	25	10	50	6	11	25	83	2	33	–	–	72	28
No	17	81	1	100	68	60	9	45	49	86	4	13	4	67	8	100	160	62
Yes	3	14	–	–	18	16	1	5	2	4	1	3	–	–	–	–	25	10
Subtotal	21	100	1	100	114	101	20	100	57	101	30	99	6	100	8	100	257	100
Design																		
Expedient	5	29	–	–	29	38	4	36	9	64	6	86	–	–	1	13	54	39
Strategic	12	71	1	100	47	62	7	64	5	36	1	14	4	100	7	88	84	61
Subtotal	17	100	1	100	76	100	11	100	14	100	7	100	4	100	8	101	138	100
Wear																		
Light	3	27	–	–	13	22	2	25	5	38	3	50	–	–	2	29	28	27
Moderate	6	55	–	–	31	53	5	63	2	15	3	50	1	100	3	43	51	49
Heavy	2	18	1	100	9	16	–	–	5	38	–	–	–	–	1	14	18	17
Unused	–	–	–	–	5	9	1	13	1	8	–	–	–	–	1	14	8	8
Subtotal	11	100	1	100	58	100	8	101	13	99	6	100	1	100	7	100	105	101

Table 9.8. Continued.

	Stratum 504		Stratum 503		Cienega		Early Ceramic		Hohokam		Spanish Period O'odham		Spanish Period, AZ BB:13:13 (ASM)		Undated		Total	
Variable	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Use																		
Single	11	55	–	–	50	49	7	37	9	16	5	17	–	–	5	71	87	36
Reused	2	10	–	–	5	5	1	5	–	–	–	–	–	–	–	–	8	3
Multiple	1	5	1	100	3	3	–	–	1	2	–	–	–	–	–	–	6	3
Redesigned	1	5	–	–	1	1	–	–	2	4	–	–	–	–	–	–	4	2
Recycled	2	10	–	–	32	31	8	42	8	14	25	83	2	50	1	14	78	33
Unused	3	15	–	–	11	11	3	16	36	64	–	–	2	50	1	14	56	23
Subtotal	20	100	1	100	102	100	19	100	56	100	30	100	4	100	7	99	239	100
Sequence																		
Concomitant	3	60	1	100	8	20	1	11	–	–	–	–	–	–	–	–	13	14
Sequential	2	40	–	–	32	78	8	89	10	100	25	100	2	100	1	100	80	85
Both	–	–	–	–	1	2	–	–	–	–	–	–	–	–	–	–	1	1
Subtotal	5	100	1	100	41	100	9	100	10	100	25	100	2	100	1	100	94	100
Activities																		
Food processing	6	30	–	–	10	10	1	5	1	2	–	–	–	–	4	50	22	9
General processing	–	–	–	–	14	14	–	–	5	9	1	3	–	–	1	13	21	9
Decorative	6	30	–	–	12	12	4	20	–	–	–	–	–	–	–	–	22	9
Manufacture	1	5	–	–	13	13	3	15	38	66	3	10	2	40	1	13	61	25
Pottery manufacture	–	–	–	–	–	–	–	–	–	–	1	3	–	–	–	–	1	–
Pigment processing	–	–	–	–	3	3	2	10	2	3	–	–	–	–	–	–	7	3
Multiple	4	20	1	100	40	40	8	40	11	19	25	83	2	40	1	13	92	38
Unused	3	15	–	–	9	9	2	10	1	2	–	–	1	20	1	13	17	7
Subtotal	20	100	1	100	101	101	20	100	58	101	30	99	5	100	8	102	243	100

Note: Unidentified fragments, and indeterminate and not applicable variables not included.
[a]Other interior includes postholes and floor groove.

concomitant, so that it was usable in a metate on one surface and used to process pigment on the other. It may have been used interchangeably for food-processing chores in Feature 3323 and for processing pigment in Feature 3327. The only basin metate was recovered from the floor of Feature 3327 where there were no manos other than the flat/concave mano just described. Another metate was found on the floor of pithouse Feature 3273 where there were no compatible manos; however, this one was still in the early stages of manufacture. This metate is evidence that food-processing tools were manufactured at Clearwater.

In addition to the mano from Feature 3327, manos from Features 7 (floor), Feature 126 (interior pit), and Feature 9357 (roof/wall fall) were secondarily used to process red pigment (see Table 9.9). A flat/concave mano recovered from the fill of extramural pit Feature 69 was manufactured to a perfect disk and is unusually large (17 cm in diameter) (Figure 9.3). The use-wear is compatible with having been worked with a rocking stroke in a flat/concave metate. This mano and four others (Features 151, 3245, 3264, and 9357) were only used for food processing. One mano (Feature 3270) is too broken to recognize anything more than its artifact type.

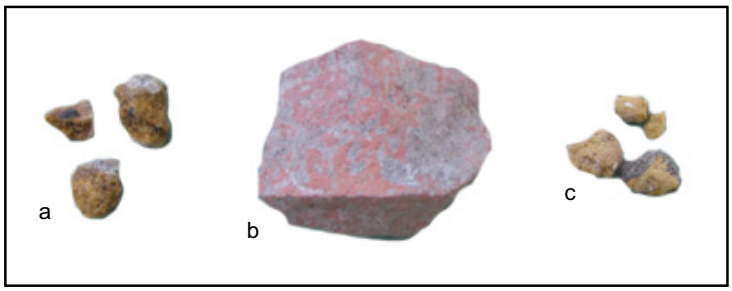

Figure 9.1. Hematite and limonite chunks collected for use as colorants: (a) unmodified limonite (FN 7180); (b) ground hematite, 3.3 cm long, 2.6 cm wide, 2 cm thick (FN 7327); (c) processed limonite (FN 7492). All were recovered from Stratum 504 of the Clearwater site, AZ BB:13:6 (ASM), dating to the unnamed phase of the Early Agricultural period.

Three pestles were classified as food-processing tools, primarily based on their size and because their use-wear is consistent with having been worked in deep stone mortars. They were found on pithouse floors (Features 126, 3262, and 3270) where there were no compatible mortars.

General processing tools include the usual lapstones, netherstones, handstones, and pestles, as well as two unusual mortars. The pestle on the floor of Feature 126 was used in larger, deeper mortars than the two mortars found on the same floor. The mortars are similar to containers referred to in the literature as knobbed trays (Adams 2002:221; Ferg 1998). Those with use-wear in the bottom are classified as mortars—a use confirmed by pestle-generated use-wear and occasionally by the presence of a compatible pestle (Ferg 1998:Figure 14.11). The mortars on the floor of Feature 126 were carefully manufactured and have use-wear in the basins from pestle use, although they differ in configuration. One has extended corners reminiscent of knobs and was manufactured from vesicular basalt (Figure 9.4a). It is plain with more of a rim than the second mortar.

The second mortar was manufactured from a volcanic rock. The exterior is decorated with a pecked design consisting of three broad grooves that run lengthwise along the bottom and a set of four perpendicular lines on either side of the rim that extends to the broad grooves along the bottom. The bottom area between the broad lines is filled with zigzag lines (Figure 9.4b). It has two knobs on one end and a depression on the other end that was probably a manufactured feature used to pour off the processed contents. A notch near one of the knobs may also have been for pouring off the contents. Use-wear on the knob farthest away from the notch indicates it was handheld.

Table 9.9. Pigments and pigment processing tools from the Clearwater site, AZ BB:13:6 (ASM), and the Tucson Presidio, AZ BB:13:13 (ASM).

Period/Stratum	Feature	Artifact	Color
Early Ceramic	3014	Mano	10R 4/8
	3014	Pigment	2.5YR 6/8
	3038	Netherstone	10R 5/6
	3038	Pigment	10R 3/4, 2.5YR 5/8
Cienega	7	Mano	10R 4/8
	15	Pigment	10R 3/2, 10R 3/6, 10R 4/6, 10R 5/6
	29	Lapstone	10R 4/6
	65	Pigment	10R 4/6, 10R 5/4
	112	Pigment	10R 5/8, 2.5YR 4/8
	126.04	Mano	10R 6/6
	128	Pigment	Blue
	3264	Pigment	10R 3/6, 10R 4/2
	3270.02	Pigment	10R 4/6, 10R 4/8, green
	3273	Netherstone	10R 5/8
	3273	Pigment	10R 3/6
	3327	Mano	10R 6/6
	9357	Lapstone	10R 5/8
	9357	Mano	10R 4/8
Early Agricultural	603	Tray	Multiple
Stratum 503	3374	Lapstone	2.5YR 4/4
Stratum 504	0	Pigment	10R 4/8, 10R 6/6, 10YR 6/6, 10YR 7/8

Figure 9.2. Flat/concave mano and metate recovered from Cienega phase pithouses at the Clearwater site, AZ BB:13:6 (ASM): (a) metate (FN 9251) recovered from the floor of Feature 3323; 55 cm long, 50 cm wide, and 14 cm thick; (b) mano (FN 9140) recovered from the floor of Feature 3327; 14.0 cm long, 13.1 cm wide, and 4.7 cm thick. The mano and metate are compatible in size and shape, but it is uncertain if they were used together.

A broken corner and part of the rim are all that remain of what may have been a third knobbed mortar. It was found in a pit inside Feature 3300, a pithouse, and it may have been intentionally broken.

The two whole knobbed trays may be the earliest examples of unbroken knobbed trays in the Tucson Basin (see Ferg 1998:573-582). Broken corners of knobbed trays were found in Cienega phase contexts at Stone Pipe (Adams 1998a:405, Figure 10.21) and at the Donaldson site, AZ EE:2:30 (ASM) (east of the Tucson Basin); a whole tray (not knobbed) was found at Donaldson (Huckell 1995:65-66, Figures 4.8, 4.9). Huckell (1995:65) contends that stone trays were made as early as the Chiricahua phase; knobbed corners may have been a distinctive Early Agricultural design.

Evidence for processing pigment among Cienega phase contexts is abundant, with many tools secondarily used, such as a lapstone (Figure 9.5) and a netherstone from the floors of Features 29 and 3273, respectively. Also on the floor of Feature 3273 was a piece of ground hematite. The hematite is dark red (see Table 9.9) and the pigment stain on the netherstone is red (see Table 9.9). The manos found in Features 7 and 126 that were secondarily used to process pigment have already been mentioned.

Figure 9.3. Flat/concave mano (FN 6195) recovered from a Cienega phase exterior pit, Feature 69, at the Clearwater site, AZ BB:13:6 (ASM); 17.0 cm in diameter and 5.8 cm thick.

Processed chunks of red pigment (see Table 9.9) were found on the floor of Feature 112 and near the floor of Feature 65, and unworked minerals were recovered from near the floor of Feature 112. The fill of Feature 15 had both processed pigments and unworked minerals. Processed pigment was recovered from one interior pit in Feature 3270, and unprocessed earthy hematite was recovered from another. A soft, unworked chunk of turquoise recovered from a third interior pit in Feature 3270 may have been intended for making blue pigment. It was not durable enough for ornament manufacture. However, no pigment processing tools were recovered from this pithouse. One processed chunk of earthy hematite (see Table 9.9) was recovered from the fill of Feature 3262, and a crumbly piece of rhyolite found near the floor of this feature may have been gathered for eventual pigment processing.

The use of red colorants first noted in earlier contexts obviously continued into the Cienega phase. Tools used for processing pigment appear to have been more abundant in Cienega phase contexts, possibly because more features from this later time period were excavated. The few ceramics produced during the Cienega phase were not decorated; therefore, it seems safe to conclude that these colors were used for decorating baskets, hides, and human bodies. The only Cienega phase burial containing ground stone items did not have pigment-stained artifacts, nor were there pigment stains on the bones to suggest color was used in the associated mortuary ritual

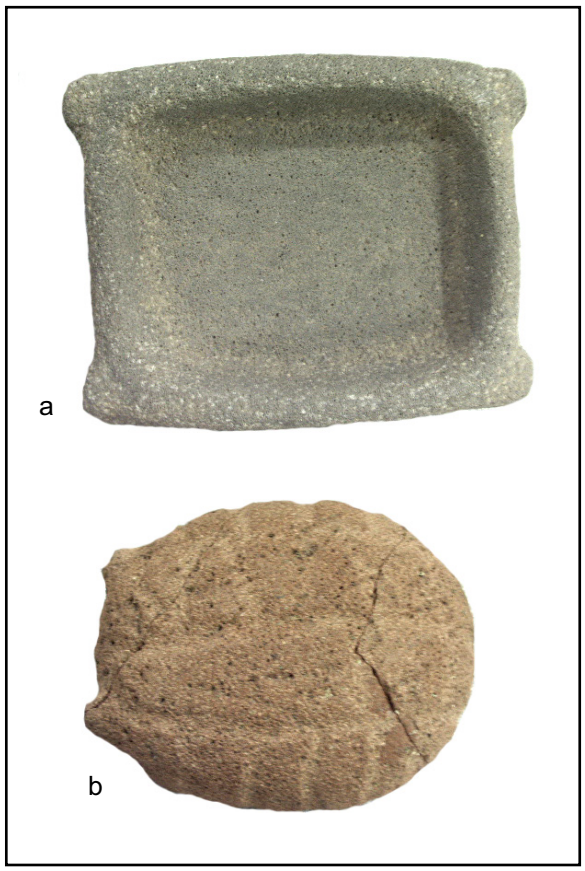

Figure 9.4. Mortars, sometimes called knobbed trays, recovered from the floor of Feature 126, a Cienega phase pithouse at the Clearwater site, AZ BB:13:6 (ASM): (a) use-wear visible on the bottom of the mortar (FN 6455); mortar is 20.2 cm long, 16.4 cm wide, and 4.3 cm thick; (b) incised base of an oval mortar (FN 6454); mortar is 18.7 cm long, 15.4 cm wide, and 5.3 cm thick.

Figure 9.5. Lapstone (FN 5700) recovered from the floor of a Cienega phase pithouse, Feature 29, at the Clearwater site, AZ BB:13:6 (ASM). Both sides used to process red pigment with a slightly different shade processed on each side. Something other than pigment was subsequently processed wearing a clean spot in the middle of the grinding surface. Lapstone is 13.4 cm long, 10.2 cm wide, and 2.2 cm thick.

as with the Early Agricultural burial previously described. However, as mentioned previously, other Cienega phase burials have been uncovered that did contain red-stained items or pigment processing tools (Adams 1998b:170; Thiel and Mabry 1998:Table 6.1).

Manufacturing activities represented among the Cienega phase deposits include eight polishers, a flat abrader, a lapstone, the unfinished metate previously mentioned, and an unused grooved abrader, as well as two unusual items—a spindle base and a whorl. Both tools were found on the floor of Feature 3262, and may be evidence for fiber processing. The spindle base is a spherical piece that was ground enough to enhance its natural shape. Natural depressions on either end have use-wear consistent with the working of wood. The whorl was ground to shape and has four deep parallel lines on one side. The sheen in the hole is consistent with the insertion of a wooden spindle.

Manufacturing activities are most obviously associated with pithouse Feature 15. An unfinished item that was either intended to be a disk mortar or a donut stone was on the floor (Adams 2002:130-134, 201-204). There is no obvious use-wear in the pecked depressions to indicate it was used as is. A broken donut stone was found near the floor of Feature 3262. It was manufactured from vesicular basalt and has a biconical hole, but it is otherwise too small to determine more about it.

Three polishers were near the floor of Feature 15; two were used to burnish hard, probably stone surfaces, and the third was probably collected for eventual use as a polisher. Polishers were also found near the floors of Features 7, 97, and 121. The polisher from near the floor of Feature 7 has use-wear very similar to that found on pottery polishers; however, because there were no pots manufactured at this time, the use-wear must have been from burnishing plaster. One polisher is a disk-shaped pebble with well-worn edges that have use-wear consistent with burnishing hard wooden or bone surfaces. It was found on

the floor of Feature 3270. Similar disk-shaped pebble polishers were found at Los Pozos, with use-wear consistent with polishing stone surfaces (Adams 2001:126, Figure 5.13).

A hand axe recovered from a posthole in Feature 3264 may have been used to procure materials for manufacture, such as the wood items worked by the flat and grooved abraders. The flat abrader was recovered from the floor of Feature 3296, and the unused grooved abrader was in a floor groove in Feature 3273.

The 115 ground stone items analyzed from Cienega phase contexts provide a glimpse of the activities that occurred at the Brickyard and Mission loci of the Clearwater site. Most of the assemblage is typical for this time period along the Santa Cruz River. The spindle base is unusual, and although no stone whorls have been recognized among other Cienega phase contexts, six were recovered from San Pedro deposits at Las Capas (Adams 2005:Table 4.3). Consequently, there is some evidence for whorl-driven spinning, either of fibers or of drills. The co-occurrence of a spindle base in the Cienega phase deposits at Clearwater is stronger evidence for fiber processing. Food-processing technology during the Cienega phase continues to have predominately flat/concave tool designs, and as with most Early Agricultural period settlements, the metates were probably removed postoccupation.

Figure 9.6. Flat/concave mano (FN 8245) secondarily used to process red pigment recovered from the floor of an Early Ceramic period pithouse, Feature 3014, at the Clearwater site, AZ BB:13:6 (ASM). Mano is 10.4 cm long, 6.1 cm wide, and 6.1 cm thick. Note that the color has been enhanced to make the pigment more clearly visible.

Early Ceramic Period

Twenty-two ground stone artifacts were analyzed from two Early Ceramic period pithouses in the Mission Gardens locus at Clearwater. Half are fire-cracked fragments and another 18 percent are broken (see Table 9.8). Many (64 percent) were recovered from near the floors of two pithouses, Features 3014 and 3048 (see Table 9.5).

The only item clearly in contact with the floor in Feature 3014 is a flat/concave mano that was secondarily used to process red pigment (Figure 9.6; see Table 9.9). Processed earthy hematite was recovered near the floor, but it is a yellow shade of red (see Table 9.9). Colors were not the only ornamentation associated with this pithouse, however. A ground fragment of mica was either debris from ornament manufacture or an unfinished piece. It was recovered from near the floor. Another possible ornament was ground to shape, but retains much of its naturally rectangular shape. One narrow end has a small notch or a V-shaped groove in which there is use-wear from contact with something soft. The notch may have confined a sinew lashing that held another component in place. A lapstone found near the floor has use-wear consistent with shaping small hard items and may have been used in the manufacture of the possible ornaments. Two broken netherstones were also found near the floor, but not enough remains for confident identification of how they were used. One of the netherstone fragments and one unidentified fragment near the floor, as well as another fragment from the fill, are fire-cracked, which may indicate they were once used in roasting pits and dumped as trash into the abandoned pithouse.

The only item clearly associated with the floor of Feature 3038 is a flat/concave mano that was never used. One edge was partially pecked to create what appears to be a finger grip. The cobble from which it was made is thin, and its intended use may have been as a lapstone. Two processed pieces of pigment were recovered from near the floor; one is earthy hematite and the other is earthy limonite (see Table 9.9). A netherstone recovered from roof/wall fall deposits was used to process red pigment (see Table 9.9). It and a broken trough mano were burned, and another piece from the same deposit was fire-cracked. These items may have belonged to the occupants of this pithouse and may have been stored either on or within the roof; the structure may have subsequently burned. Four items recovered from near the floor of this pithouse were fire-cracked, which seems more in keeping with the dumping of trash from roasting pit cleanout as discussed for Feature 3014. An unburned polisher was recovered from the roof/wall deposits, although it was not used enough to result in identifiable use-wear.

Processing and manufacturing activities were apparently similar during both the Early Agricultural and Early Ceramic periods, assuming these few analyzed artifacts are representative. Mica ornament manufacture and pigment processing have a long history, as can be seen by the previous Early Agricultural and Cienega assemblage descriptions reported here and elsewhere, including Santa Cruz Bend, Stone Pipe, Square Hearth (Adams 1998a), Las Capas, Los Pozos (Adams 2005), Wetlands (Adams 1998b), Valencia Vieja (Adams 2003), Julian Wash (Adams 2006), and Sunset Mesa (Adams 2000).

Hohokam Periods

Evidence for Hohokam occupation was uncovered at four features within the Mission Gardens locus, one feature in the Brickyard locus, and one feature at the Presidio (see Tables 9.1 and 9.5). Fifty-seven ground stone items were analyzed (see Table 9.7). Relatively few of the items were recovered from on or near pithouse floors (see Table 9.8); 72 percent of the items analyzed from this time period were a cache of tools and raw materials in an extramural pit (Feature 3058) (Figure 9.7).

The cache was in the Mission Gardens locus and contained tabular tools in various stages of manufacture and use—all tabular cobbles of andesite. Thirty-two pieces were unmodified; four had been flaked to create usable edges and were lightly worn. Two were used to scrape pliable surfaces; both have use-wear from where they were handheld. The third tabular tool was used to slice something pliable. The edge is thicker and more irregular than those used for scraping. The fourth tabular tool has a notch in the center of the edge that was used to scrape something pliable and round. Such a tool would have been useful for debarking branches. Two pieces in the cache are debris from edge manufacture and have no obvious use-wear. Also in the extramural pit were a mano, a pestle, and a chopper (Figure 9.8). The mano has moderate wear from use against a flat/concave metate. The chopper was lightly used in general processing, perhaps for cleaning fibers or chopping off agave leaves. The pestle remains unused.

The fill of pithouse Feature 3005, also in the Mission Gardens locus, was probably used as a dump for fire-cracked rock cleaned out of a roasting or heating pit. All seven of the ground stone items analyzed from the fill were fire-cracked—five are too small to recognize their original artifact type. One was a pecking stone and another was a handstone; both are currently too broken to recognize more about them.

Two broken manos were found in the fill covering human burials in the Mission Gardens locus. One, Feature 3019, was heavily used in a basin metate, and the other, Feature 3025, was heavily used against a flat/concave metate. The broken manos are assumed to have been in the dirt used to cover the bodies and were likely not intentionally placed.

Six items were analyzed from pithouse Feature 308 in the Congress Street locus. Two tablet-like pieces were minimally modified on the edges to shape. One is broken and was found in the fill; the other is whole and was found near the floor. A lapstone that had been used to smooth small hard objects was on the floor, and it was redesigned into a tabular tool with a serrated edge. The serrated edge had received enough use to wear the serrations almost smooth and to create use-wear from where the tool was handheld. Two pottery polishers were recovered from an interior pit. Both were used enough to create facets.

Figure 9.7. Field photograph of a tabular tool cache, Feature 3058, at the Clearwater site, AZ BB:13:6 (ASM).

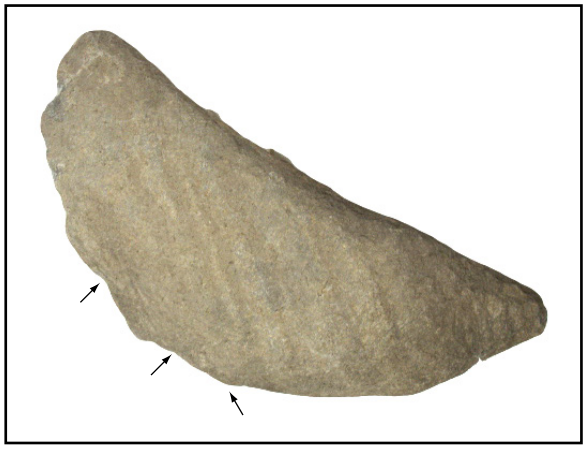

Figure 9.8. Tabular tool (FN 9365) from the tool cache, Feature 3058, at the Clearwater site, AZ BB:13:6 (ASM). Tool was used as a chopper and is 29.3 cm long, 11.8 cm wide, and 2.7 cm thick. Arrows point to the flaked and worn edge.

The only Hohokam artifact analyzed from the Tucson Presidio was a broken palette (Figure 9.9a). All that remains is a small section of one side with enough to determine the surface was distinguished from the border by an incised line. The border is decorated with an incised line that parallels the edge, with exterior edge notching.

Although few artifacts were associated with Hohokam periods, some inferences about specific manufacturing activities are possible. The cache of tabular tools and raw materials was probably the work of someone who specialized in at least the procurement of the appropriate materials, if not in the manufacture of tabular tools. The source for tabular andesite was probably more than 1 km away and may have required a day-long trip. Collectively, the tabular material weighs 21.6 km (47.6 lbs)—a weight that could have been carried by one individual with some effort, or easily by two or three people. Pottery manufacture was evident by the two well-worn pottery polishers. These were found in the same interior pit and probably belonged to a single potter. Wear rates have not been experimentally or ethnographically documented, although judging from pottery polishers used by a modern Hopi potter, those with facets may have been used by more than one generation of potter. These are two clear examples of manufacturing behaviors typical of Hohokam periods.

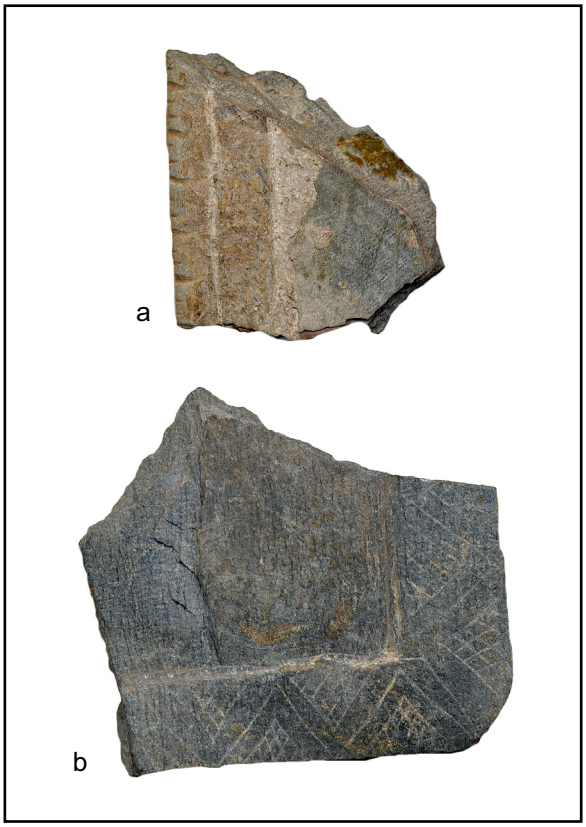

Figure 9.9. Palette fragments recovered from the Tucson Presidio, AZ BB:13:13 (ASM): (a) found in the fill of a Hohokam pithouse, Feature 417 (FN 3996); the fragment is approximately 5 cm on a side; (b) found in a Spanish period exterior pit, Feature 409 (FN 4371); the fragment is less than 10 cm long.

Spanish Period O'odham

Thirty ground stone items were analyzed from Spanish period O'odham contexts. All of the contexts were in the Mission locus. Eighty percent of the artifacts were from trash, Features 64 and 166, and the rest were from four extramural pits. Eighty percent of the analyzed artifacts recovered from sheet trash, Feature 64, are fire-cracked and were probably cleaned out from roasting or heating pits. The two unburned artifacts are abraders that were too lightly used to create recognizable use-wear. Ninety-three percent of the analyzed ground stone from Feature 166 were fire-cracked fragments. The only whole artifact, a handstone, was also burned and may not have been heated and cooled enough to crack apart like the other fragments. If these artifacts were associated with the Spanish period occupation at this location, they were probably recycled prehistoric artifacts used in historic-era roasting pits.

The pottery polisher and an abrader from Feature 177 are the only unburned artifacts recovered from any of the extramural pits dated to the Spanish period; both have moderate wear. If these were used during the Spanish period, they appear to be based on technological traditions that developed at least as early as the Hohokam periods. The four other analyzed artifacts from three extramural features (Features 178, 193, and 203) are all fire-cracked, although only the two from Feature 203 are so small that they cannot be identified by artifact type. A fire-cracked fragment of a trough mano was recovered from Feature 193, and a whole but fire-cracked chopper was recovered from Feature 178.

These few artifacts provide little insight into the Spanish period O'odham occupation of the area. Prehistoric trash was probably recycled into roasting pits and may also have been mined for other usable tools such as manos and polishers. These are behaviors that probably had a long history in the area.

Spanish and Mexican Periods

Six ground stone items were analyzed from three exterior pits (Features 373, 409, and 422) that have been dated to the Spanish and Mexican periods at the Tucson Presidio (see Table 9.1). All six items are broken, two because they were fire-cracked (see Table

9.8). A broken palette corner was recovered from Feature 409 (Figure 9.9b). Only enough of the palette remains to discern that the basin was distinguished from the border by an incised line. Incised running triangles decorate the border and extend from the corner onto two sides of the basin. The triangles fill the entire border width, are outlined with plain bands, and are filled with diamond shapes. There is no obvious use-wear or evidence of intentional breakage; it may have broken during manufacture.

Three fragments of muscovite were recovered from Feature 373. Two were incompletely ground to specific shapes and may be evidence of the continued manufacture of mica ornaments. Similarly unfinished mica ornaments were found in earlier Spanish period O'odham deposits at Clearwater. A fire-cracked mano was the only other ground stone item recovered from Feature 373. It was used in a flat/concave metate long enough to create moderate wear and was probably then recycled into a roasting activity. Whether it had anything to do with the use of Feature 373 is unknown. The same uncertainty is expressed for the broken ground stone item recovered from Feature 422. It was fire-cracked into a piece too small for further recognition.

Very little can be learned about the Spanish and Mexican period occupations from these few ground stone pieces. Even though the extramural pits were stratigraphically associated with these occupations, these stone items could have filled in the pits with surrounding dirt and trash from earlier occupations.

CONCLUSIONS

This sampling of items uncovered during the excavations in advance of the Rio Nuevo Archaeology project has provided interesting glimpses into the daily lives of those who lived here at different points in time. What has been learned fits well with the information gathered from other projects in the Santa Cruz River basin (see Tables 9.2 and 9.3). Prior to 800 B.C., the technologies for processing pigments, grinding foods, and manufacturing stone and wooden items through pecking and polishing techniques were apparently well established. Carefully shaped items such as knobbed trays are representative of masterful skill levels and perhaps of a style that extended beyond the Tucson Basin (Ferg 1998). Mortuary rituals that may also have had meaning beyond the local were represented by the powdering of red pigment over a deceased woman. The accompanying, compatible mano and metate were probably her well-used, and perhaps cherished, possessions.

A continuation of food grinding, pigment processing, and manufacturing technologies is evident with the recovered Cienega phase artifacts. Food continued to be ground with basin or flat/concave manos and metates. Pigment was processed on lapstones and netherstones. Polishers and abraders were used in manufacturing. New evidence for spinning technology was uncovered with the whorl and spindle base from one Cienega phase pithouse.

The technological evidence from Hohokam contexts was not as broadly representative as was the case with previous contexts (see Tables 9.2 and 9.3). However, the cache of tabular material from one extramural pit (see Figure 9.7) provides invaluable insight into the gathering and preparation of raw material for the manufacture of a tool type that can be used in many different cutting, scraping, and slicing tasks. The well-used pottery polishers also speak to the efforts of what were probably a single individual who used her tools long enough to create distinctive wear facets. The manos recovered from Hohokam contexts do not reflect the incorporation of trough designs that were evident in other Hohokam contexts in the Santa Cruz River basin beginning in the Tortolita phase (Adams 2003:Table 6.19) and continuing throughout prehistory. This omission is probably the result of sample size and not the lack of technological development.

Even into the Hohokam periods, the technologies of food grinding and pigment processing changed little, and apparently neither did the removal of certain objects, such as metates, either by departing residents or by subsequent scavengers. Consistently, through time, whole manos are found on pithouse floors far more often than whole metates. Not much can be said, however, about the technological traditions specific to the Spanish period O'odham, or during the Spanish and Mexican periods. Most of the ground stone items removed from the historic-era contexts were recycled trash dumps from heating or roasting pits.

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