DOLORES ARCHAEOLOGICAL PROGRAM

TECHNICAL REPORTS

Volume V, Chapter 9

Excavations at Casa Roca (Site 5MT2203), A Pueblo I/Pueblo II Field House

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Prepared For

Cultural Resources Mitigation Program: Dolores Project

Bureau of Reclamation, Upper Colorado Region

Contract 8-07-40-S0562

Under The Supervision Of

David A. Breternitz, Senior Principal Investigator

Final Submission

3 June 1982

MS-290 (3-78)
Bureau of Reclamation

TECHNICAL REPORT STANDARD TITLE PAGE

1. REPORT NO.	2. GOVERNMENT ACCESSION NO.	3. RECIPIENT'S CATALOG NO.
DAP-V(9)		

4. TITLE AND SUBTITLE	5. REPORT DATE
Dolores Archaeological Program Technical Reports: Excavations at Casa Roca (Site 5MT2203), a Pueblo I/Pueblo II field house	June 1982 (Submitted)
	6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.
Joel M. Brisbin	
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. WORK UNIT NO.
University of Colorado - DAP Rural Route 1, 17219 CR 26 Dolores, Colorado 81323	11. CONTRACT OR GRANT NO. 8-07-40-S0562
12. SPONSORING AGENCY NAME AND ADDRESS	13. TYPE OF REPORT AND PERIOD COVERED
U.S. Bureau of Reclamation P.O. Box 11568 Salt Lake City, Utah 84147	Contractual FY 1979
	14. SPONSORING AGENCY CODE

15. SUPPLEMENTARY NOTES

16. ABSTRACT

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17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS--

Dolores Archaeological Program,
SW Colorado, Anasazi, Archaeology,
(Archaeological method)

b. IDENTIFIERS--

c. COSATI Field/Group COWRR:

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS (THIS REPORT)	21. NO. OF PAGES
Available from the National Technical Information Service, Operations Division, Springfield, Virginia 22161.	UNCLASSIFIED	89
	20. SECURITY CLASS (THIS PAGE)	22. PRICE
	UNCLASSIFIED	

GPO 845-630

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INTRODUCTION

Casa Roca (Site 5MT2203) was excavated by the Dolores Archaeological Program as a part of the sample of sites specified in the D.A.P. implementation design (Knudson et al. [1]). This design provides a representative sample, by site type and temporal period, of the sites in the borrow areas of the Dolores Project, a Bureau of Reclamation water storage project. As a small, special-use site, Casa Roca contributes to an understanding of the total subsistence pattern employed by the prehistoric inhabitants of the area.

Work at the site began on 19 April 1979. Prior to excavation, two days were devoted to clearing the site, establishing a grid, and collecting vegetal, pollen, and soil-sediment samples and cultural surface material. Excavations started on 23 April and were completed on 22 May 1979. Final photographs were taken on 25 May 1979. A total of 16 working days was expended at Casa Roca with an eight-person crew. A total of 128 person days of excavation was required to complete the data collection objectives.

Acknowledgments

Excavation and thorough documentation were provided by a University of Colorado crew comprising J. Brisbin (crew chief), G. Brown (assistant crew chief), and M. Etzkorn, D. Harriman, M. Kennedy, J. Kleidon, N. Morris, and L. Udick. Information on site geology was prepared by Richard Glaser; the soils discussion was prepared by Mark Varien. D.A.P. Senior Staff review was provided by Allen E. Kane.

Location

Located in Montezuma County, Colorado, Casa Roca can be found on the Trimble Point Quadrangle, Colorado, U.S.G.S. 7.5 Minute Series 1965 Topographic Map. It is in the Northwest Quarter of the Northwest Quarter of Sec 36, T38N, R16W, approximately 8 km west of the town of Dolores. According to the Universal Transverse Mercator grid system, the site is located in zone 12, 714,520 mE and 4,154,420 mN. Casa Roca is located in the Sagehen Flats Locality as defined by the D.A.P. (Kane [2]).

A flat, often marshy basin lies 0.3 km south of Casa Roca; this basin drains to the east into the Dolores River. Bordering this drainage is a series of rolling hills and hillocks. The site is located on top of the southern end of a small knoll at about 2111 m above sea level (Figure 9.1).

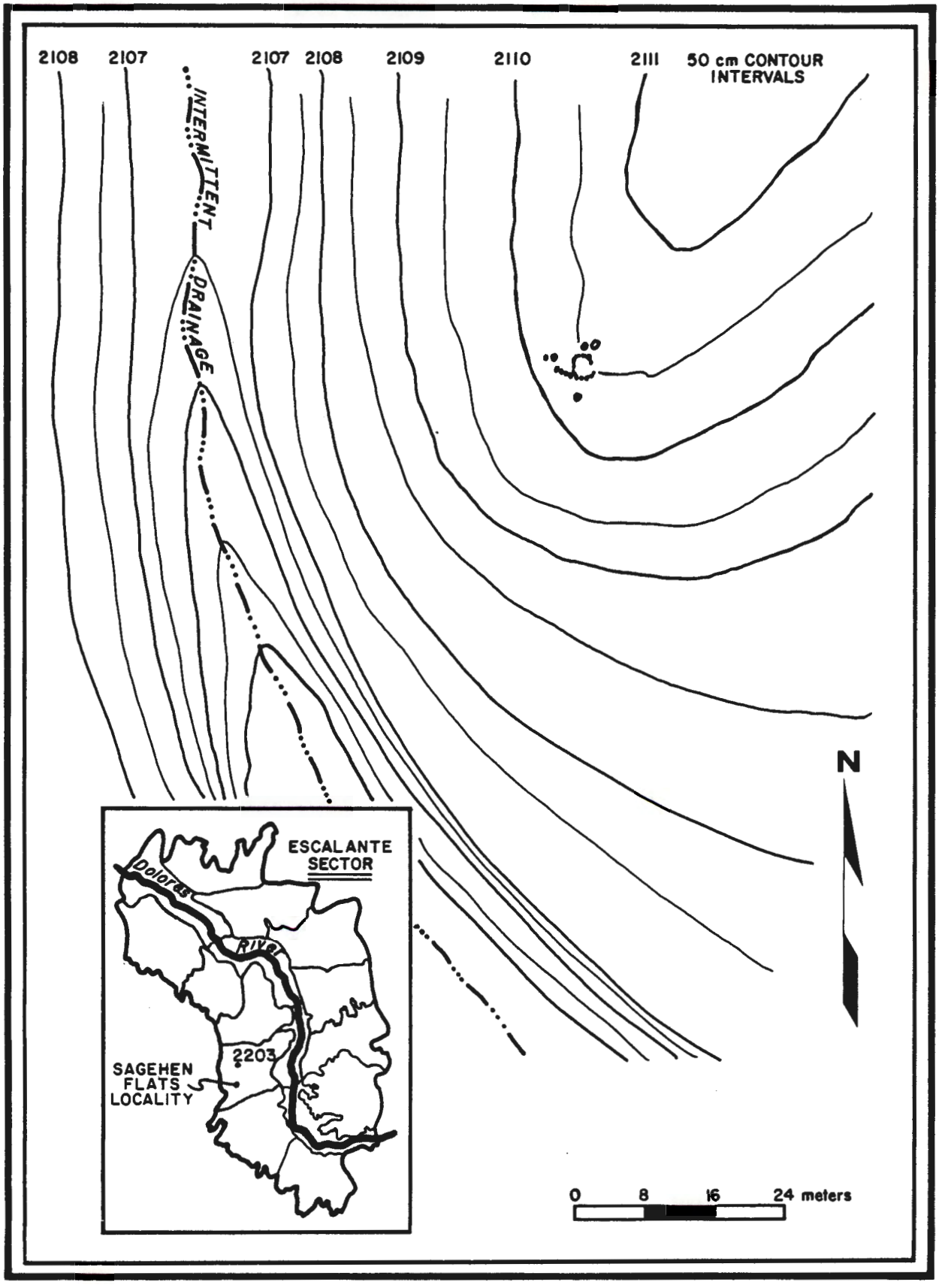


Figure 9.1 Topographic view of Casa Roca.

ENVIRONMENTAL SETTING

Climate

The present-day climate in the Sagehen Flats Locality is characterized by low humidity and wide diurnal temperature change. United States Weather Bureau (U.S.W.B.) data collected at Dolores, located 6.4 km southwest of the Sagehen Flats Locality, indicates a mean July temperature of 19.7° C and a mean January temperature of -3.1° C. Precipitation accumulates in the winter months and in the late summer. The mean annual precipitation recorded at the Dolores U.S.W.B. station is 460 mm. The U.S.W.B. at Yellowjacket, 13.7 km west of the Sagehen Flats Locality, records an average of 126 frost-free days each year. See Kane [3] for additional discussion of the modern-day climate of Sagehen Flats Locality.

Casa Roca is situated on the dip slope in the Sagehen Flats Locality at the 2111 m contour, 2.6 km west of and 40 m above the Dolores River. This location might have been selected in part to meet the need for a steady water source and to avoid the earlier frosts of the lower floodplain.

Flora

Because excavations were conducted in the early spring, the local plant community had not broken winter dormancy. The following list of plants was derived from collections made in June 1979 at a site 400 m west of Casa Roca. The flora collected include representatives of a tree layer of pinyon (Pinus edulis), juniper (Juniperus osteosperma), cottonwood (Populus sp.), and willow (Salix sp.). Found in the shrub layer are

fendlerbush (Fendlera rupicola), Woods' rose (Rosa woodsii), and serviceberry (Amelanchier utahensis). The herb layer consists of rabbitbrush (Chrysothamnus nauseosus), big sagebrush (Artemisia tridentata), wild buckwheat (Eriogonum heracleoides), globe mallow (Sphaeralcea coccinea), lupine (Lupinus sp.), prickly pear (Opuntia sp.), fleabane (Erigeron coulteri), evening primrose (Oenothera caespitosa), yarrow (Achillea millifolium ssp. lanulosa), miner's candle (Cryptantha bakerii), buttercup (Ranunculus sp.), sweet clover (Melilotus officinalis), aster (Aster sp.), Indian paintbrush (Castilleja chromosa), mariposa lily (Calochortus gunnisonii), tumble mustards (Sisymbrium sp.), stickseed (Lappula sp.), flax (Linum sp.), vetch (Astragalus sp.), bladderpod (Lesquerella sp.), and Pentstemon sp. The grass layer consists of foxtail barley (Hordeum jubatum), cheat grass (Bromus tectorum), Indian Ricegrass (Oryzopsis hymenoides), western wheatgrass (Agropyron smithii), and crested wheatgrass (Agropyron desertorum). Refer to Bye [4] for additional discussion of the vegetation in the vicinity of Casa Roca.

Fauna

Based on observations made during the summer of 1979 of animals and their tracks and scat, a list was compiled of faunal species found in the Sagehen Flats Locality. Fauna which have been documented in the vicinity of Casa Roca include mule deer (Odocoileus hemionus), American elk (Cervus canadensis), cottontail rabbit (Sylvilagus sp.), black-tailed jackrabbit (Lepus californicus), white-tailed prairie dog (Cynomys gunnisoni) rock squirrel (Spermophilus variegatus), Colorado chipmunk (Eutamias quadrivittatus), badger (Taxidea taxus), striped skunk (Mephitis mephitis), porcupine (Erethizon dorsatum), raccoon (Procyon lotor), coyote

(Canis latrans), and a variety of mice (Peromyscus sp.) and other small rodents. Avifauna observed in the area include bald eagle (Haliaeetus leucocephalus), golden eagle (Aquila chrysaetos), marsh hawk (Circus cyaneus), sparrow hawk (Falco sparverius), turkey vulture (Cathartes aura), common raven (Corvus corax), black-billed magpie (Pica pica), mountain bluebird (Sialia currucoides), scrub jay (Aphelocoma coerulescens), mourning dove (Zenaidura macroura), red-tailed hawk (Buteo jamaicensis), night hawk (Chordeiles sp.), common flicker (Colaptes auratus cafer), and numerous small passerines. Emslie [5] provides further information on the present-day fauna in the general area of Casa Roca.

Geology and Soils

The site is situated on the crest of a north-south ridge, providing good drainage. Immediately to the west of the site is an arroyo which is one of the main drainages in this area. A modern earthen dam (probably built between 1930 and 1950) was placed in this arroyo; however, the resulting stock pond is now totally filled with sandy alluvial sediments. Spring runoff is now redirected into drainages further to the west. There is a seep approximately 50 m below the earthen dam; the shale formation traps the runoff and funnels the groundwater to the arroyo, where the shale becomes exposed due to erosion.

The main architectural feature at Casa Roca was constructed on a nearly impermeable Cca soil horizon (Leonhardy [6]). The present-day soil on the tops of the ridges has been termed a Sagehen Paleosol. This is a deep soil developed in old alluvium. It has a strongly developed A-Bt-Btca-Cca horizon sequence. In many places the A horizon has been

truncated, exposing the Bt and, in some places, the Cca horizons. It seems that the Bt horizon was excavated prehistorically to utilize the Cca horizon for the field house foundation. The Sagehen Paleosol has not been classified by the Soil Conservation Service [7]. It has a very strongly developed Bt (argillic) horizon and is probably a Mollisol. In the adjacent drainage is the Ackmen loam, a deep, well-drained soil with an A-C horizon sequence. The profile is characterized by a deep (50 cm) accumulation of organic matter which forms a mollic epipedon. This loamy alluvium is the most productive agricultural soil in the area. Therefore, the combination of climate, topography, and soils in this area would make it suitable for dryland farming. See Leonhardy [8] for further discussion of the soils in the D.A.P. project area.

Local Geological Resources

Among the geological resources available today within several hundred meters of the site is sandstone from the Dakota Formation, which is abundant and was used in the construction of the structure at Casa Roca. Although clay resources are also abundant (W. Lucius, personal communication), no systematic survey has been completed to identify local sources. Outcrops of lithic material suitable for making stone tools are available in the area but have not been located within the immediate vicinity (1-km radius) of Casa Roca.

Historic Land Use

Although the land to the north of Casa Roca is currently under intensive cultivation of winter wheat and pinto beans, the system of ridges has received limited cultivation in historic times. The area has

been cleared of sage, however, and then seeded in preparation for grazing. For the last 30 years the area has been used for lambing grounds and winter grazing. One kilometer to the south of Casa Roca is an abandoned sheepherder's camp and sheep pens. Cultivation and grazing has repressed the development of the potential climax species which probably would be an ecozone dominated by big sagebrush, with scattered pinyon and juniper.

Perhaps the most significant factor aiding any archaeological interpretation of Casa Roca is that the site itself was never plowed. At adjacent sites plow scars were detected at the stratigraphic contact between the Ap and Bt soil horizons; these historic features were not present at Casa Roca. This is probably due to the presence of a sandstone rubble mound on the surface of the site which would have been avoided when the surrounding area was plowed.

SOCIAL SETTING

As a field house, Casa Roca was a part of a larger economic and social system. Because many of the sites near Casa Roca have not been excavated, it is not possible to determine which of them are exactly contemporaneous with Site 5MT2203 and may therefore have been used by the same household. However, based on both survey and excavation data, 23 sites within a 2-km radius of Casa Roca have been assigned to the McPhee Phase (Figure 9.2) (Greenwald [9]). Only three of these sites have been excavated (Sites 5MT4475, 5MT2191, and 5MT4512); the remaining 20 sites have been assigned to the McPhee Phase based on surface evidence, including ceramics.

Including Casa Roca, ten of the sites shown on Figure 9.2 are field houses. It is likely that these sites, located near seasonal drainages where crops could be grown, were used seasonally by members of households from larger, nucleated habitation sites like McPhee Pueblo (Site 5MT4475).

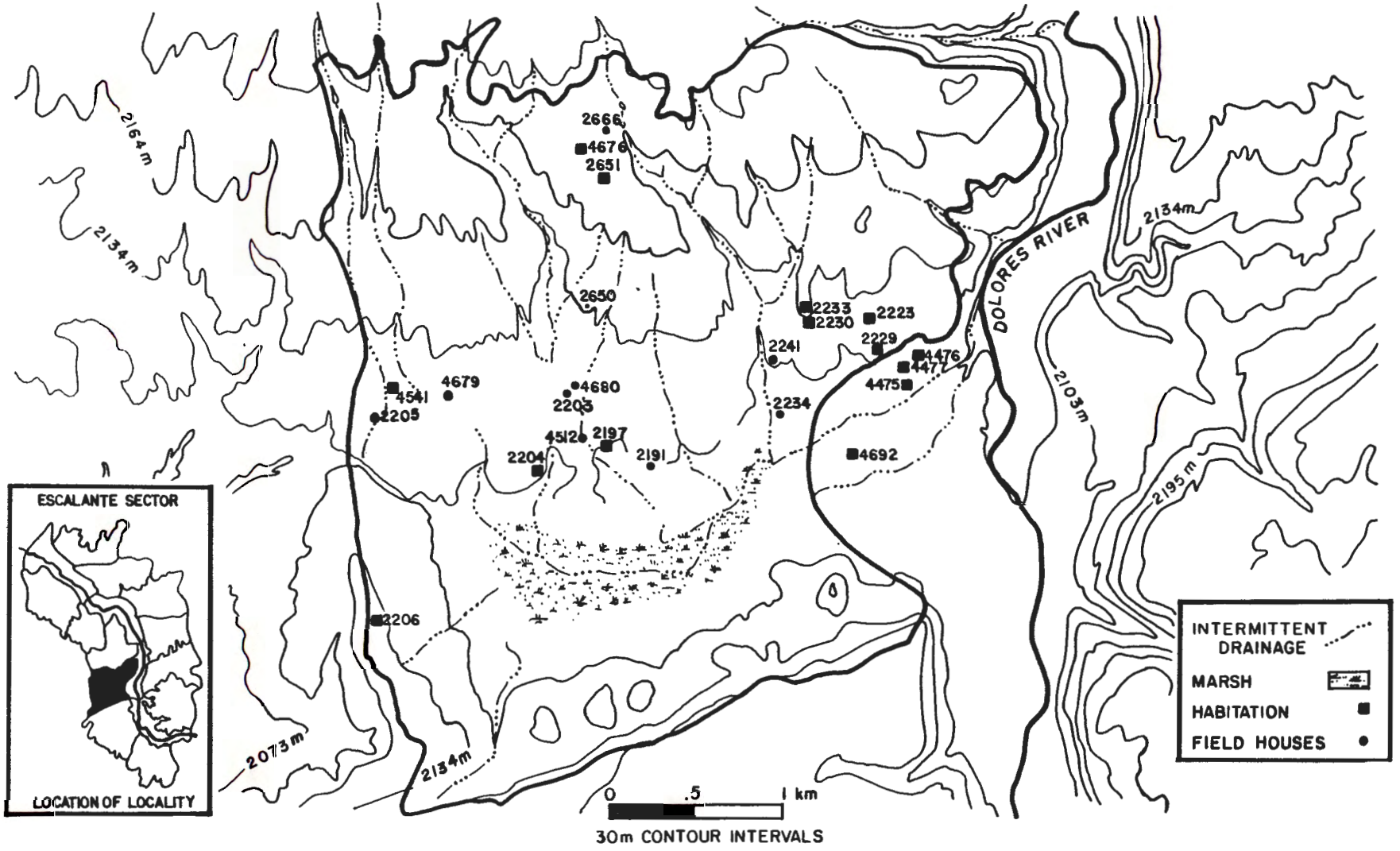


Figure 9.2 Locations of sites contemporaneous with Casa Roca.

SURFACE EVIDENCE

Magnetometer Survey

A magnetometer survey was conducted on 6 October 1978 to aid in the location of subsurface archaeological features. The survey at Casa Roca consisted of two 20-m square blocks (Figure 9.3); seven notable anomalies were detected. The first anomaly was a monopole high centered around 16S, 20E, just northeast of the sandstone rubble mound. Magnetometer evidence indicated that this was a burned area at a maximum depth of 1.5 m. Excavations in the area of Anomaly 1 recovered a slab-lined fireplace (Feature 1), detected 26 cm below the modern ground surface.

The second anomaly was a long linear monopole high. Although the intensity suggested a burned region, the elongated shape and southern orientation implied a geological phenomenon. Magnetometer units 24S, 26E, 28S, 24E, and 34S, 28E were tested to determine the cause of this anomaly. No artifacts were recovered from these units, which were excavated to the sterile Bt horizon. No features were discovered, and no cultural explanation can be offered for the presence of this anomaly. The small pit discovered 2 m west of the northern edge of this anomaly was not detected by the magnetometer.

A collection of highs occurred in the southeast section of the surveyed area. The undulating nature of the anomaly made source and depth estimates difficult; however, it was suggested that test pits be located in this area (R. Huggins, personal communication). Two magnetometer units (28S, 34E and 32S, 34E) were excavated to test this anomaly; neither test uncovered any cultural material. Subsequent discussions with the

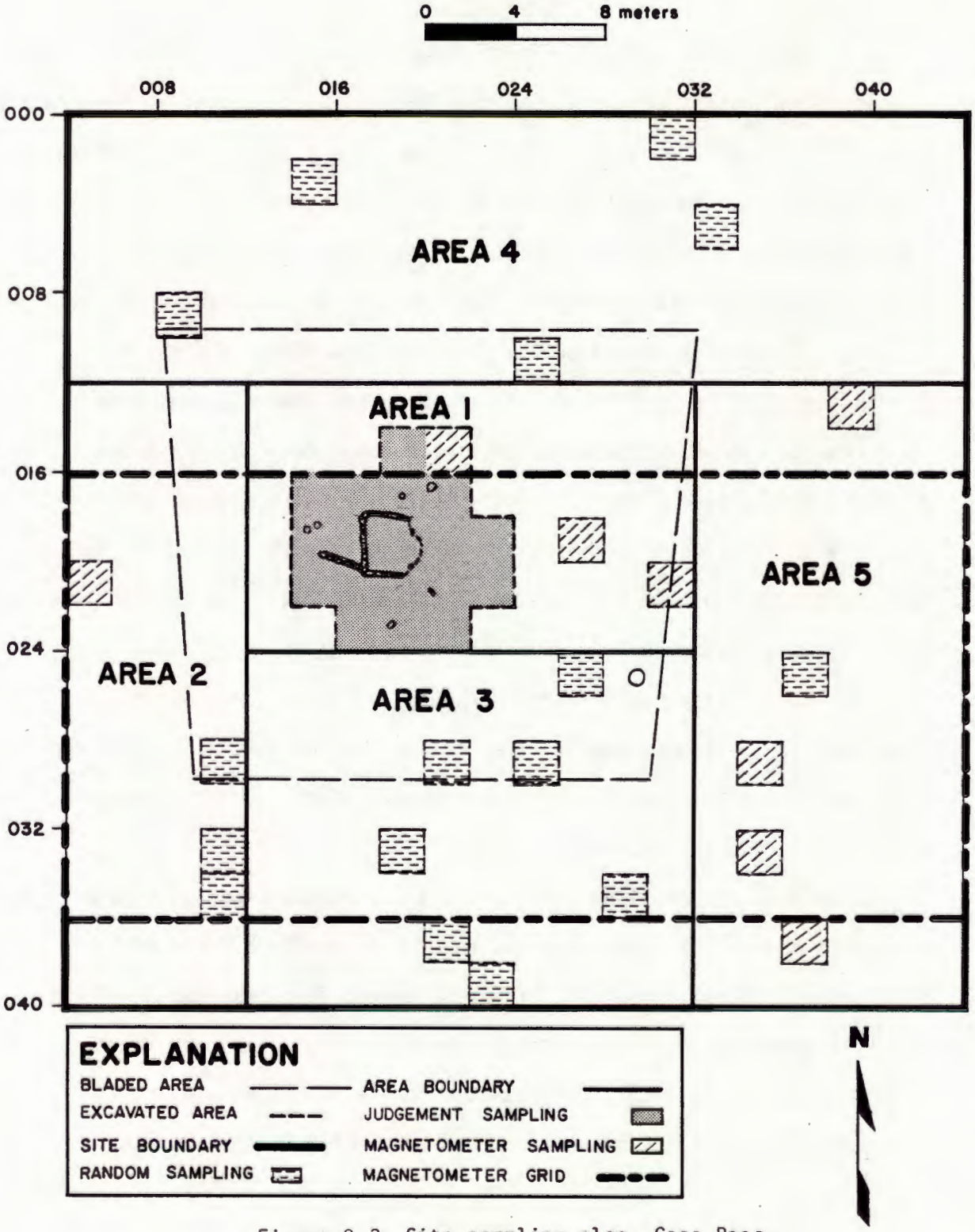


Figure 9.3 Site sampling plan, Casa Roca.

magnetometer specialist suggest that a geologic phenomenon, perhaps stream deposition of heavy minerals, is the best explanation for this anomaly.

Anomalies 4 and 5 were tested during the blading phase of the site investigations and did not reveal any cultural source. Anomaly 6 was a pronounced monopole low typical of low anomalies on other sites surveyed with the magnetometer, and it was recommended for testing (R. Huggins, personal communication). Magnetometer unit 18S, 26E was excavated to the Bt horizon where a small burned area 15 cm in diameter was found. When this feature was cross sectioned, however, it proved to be noncultural and appeared to be a burned root. The anomaly indicates an extensive, less compacted area, but excavation did not reveal such an area.

Anomaly 7 consisted of high plateaus in the northwest and southwest corners of the grid, respectively. Only the nortnwest area was tested; no cultural material was recovered, and no features were defined that could explain this anomaly. Larger anomalies such as these were tested at several sites; it appears they result from geologic sources, most probably heavy-mineral sorting by water deposition. Further information regarding the magnetometer survey method and results at Casa Roca can be found in Huggins and Weymouth [10].

Surface Collection

Along with the magnetometer survey results, natural topography and the distribution of artifacts on the surface were used to define the site boundaries at Casa Roca. The site grid established by the excavation crew extended 4 m to the west, south, and east, and 16 m to the north of the magnetometer grid, yielding a total site area of 1600 m^2.

When the site was first recorded during a 1972 site reconnaissance (Breternitz and Martin [11]), the most distinctive surface attribute was a small sandstone rubble mound. This rubble mound was located on the crest of the knoll, and sherds and lithic items were found scattered over the lower borders of this knoll. This was essentially the same configuration that existed when the 1979 program of intensive excavation at Casa Roca was initiated with systematic surface collection (Figures 9.4, 9.5, and 9.6). The sample size provided by this collection is small, and the possibility exists of contamination from Site 5MT2192, just upslope to the north.

On the basis of surface evidence, the site was divided into five sampling strata, which were labeled Areas 1 through 5, as illustrated in Figure 9.3. The portion of the site on and around the sandstone rubble mound was designated Area 1; the artifact scatter on the west-slope drainage, Area 2; and the scatter downslope of the rubble mound to the south, Area 3. Areas to the east and north of Areas 1, 2, and 3 were designated 4 and 5 and were provenienced for optional testing. Area 1 is 240 m^2 in size; Area 2, 224 m^2; Area 3, 320 m^2; Area 4, 480 m^2; and Area 5, 336 m^2.

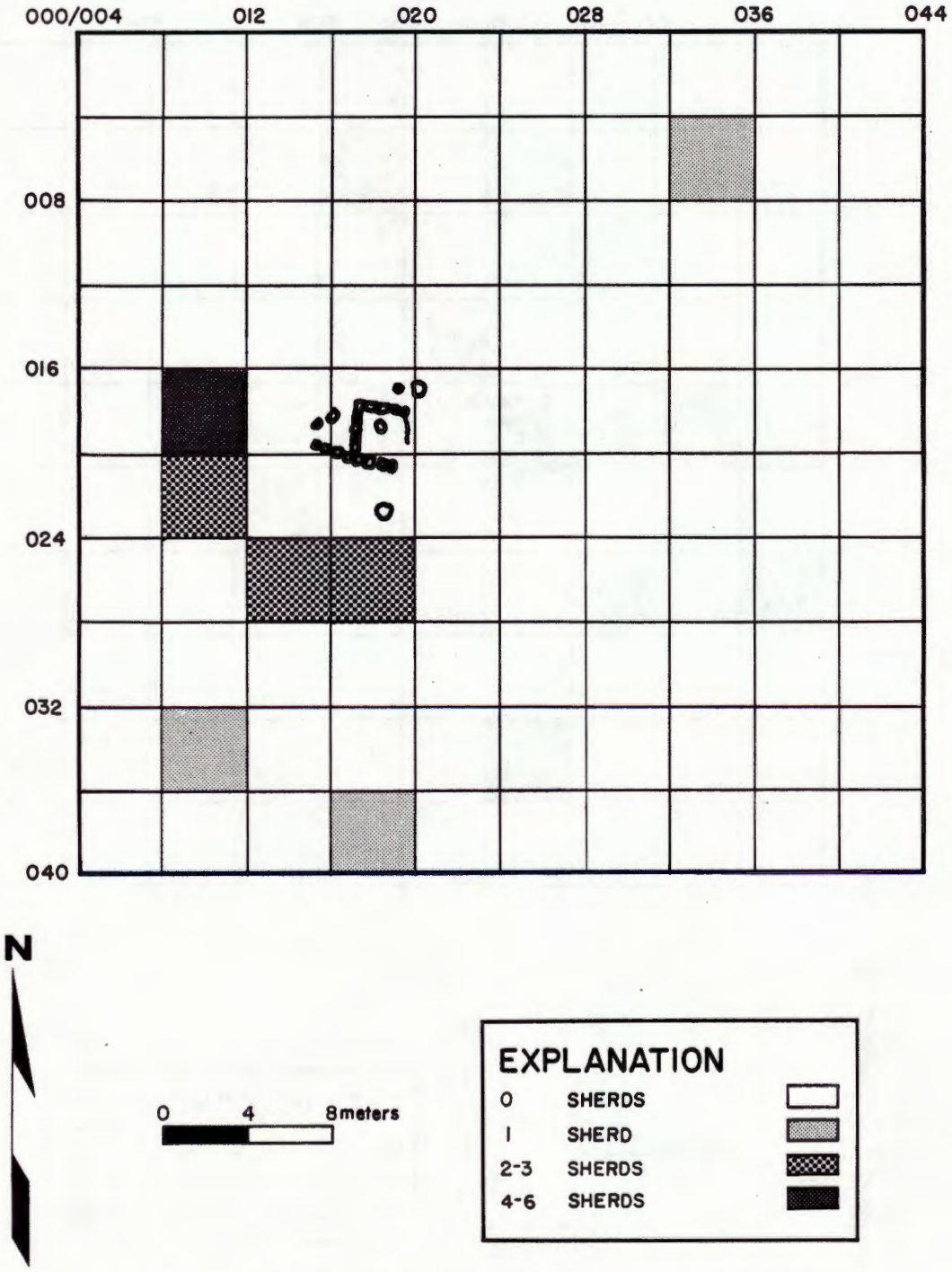


Figure 9.4 Surface distribution of ceramics, Casa Roca.

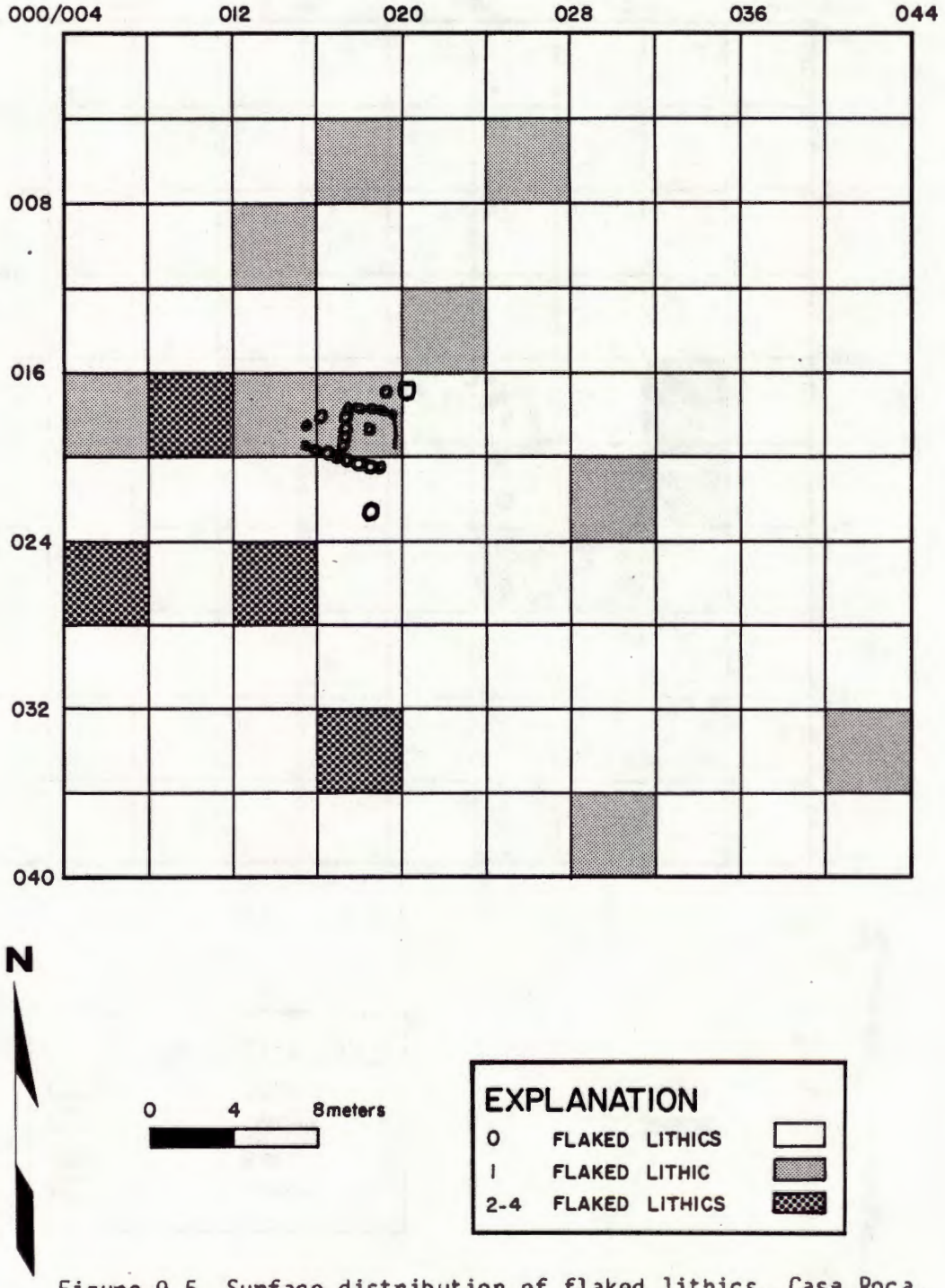


Figure 9.5 Surface distribution of flaked lithics, Casa Roca.

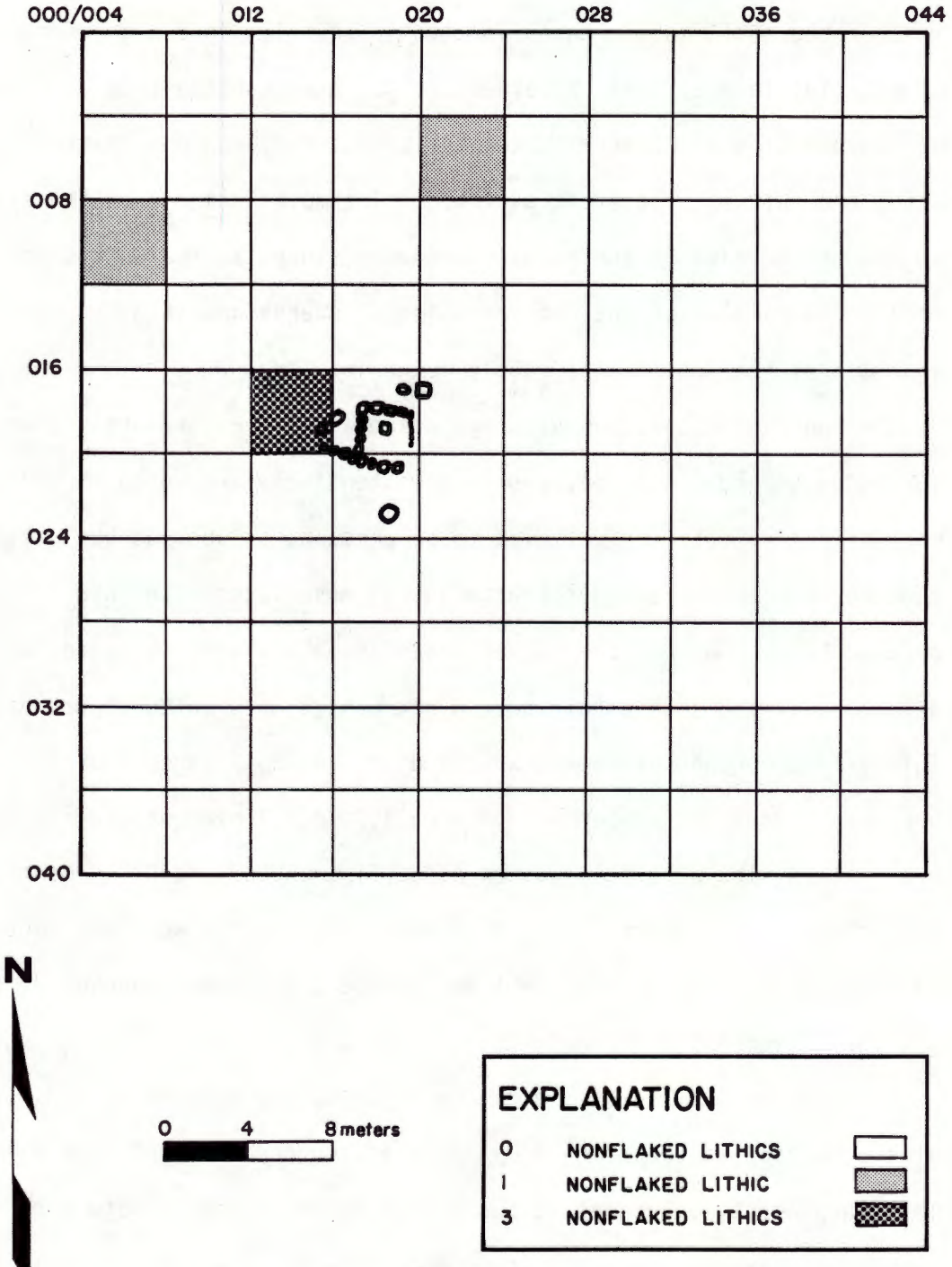


Figure 9.6 Surface distribution of nonflaked lithics, Casa Roca.

EXCAVATION METHODS AND OBJECTIVES

After the initial surface collection was completed, it was evident that the heaviest concentration of cultural material occurred in Area 2, west of the small rubble mound located in Area 1. This high concentration of material in Area 2 was hypothesized to have resulted from a combination of redeposition of cultural materials by natural erosional factors (sheet wash) and cultural placement as trash. The main drainage on the site begins at the edge of the rubble mound and slopes to the west throughout Area 2. A portion of the concentration of sherds and lithics probably eroded from the area of the rubble mound into Area 2.

A two-part excavation strategy was planned. First, Area 1, which surrounds the rubble mound, was to be intensively excavated to define the room or rooms that were believed to be present, as well as the exterior features and activity areas that might be associated with this architecture. Second, the magnetometer anomalies were to be tested to determine if the sources of these disturbances were cultural or natural. Thirty-five percent of Area 1 was hand excavated, 7 percent of Area 2, 8 percent of Area 3, 7.6 percent of Area 4, and 7.1 percent of Area 5.

All in situ wall fall was exposed (Figures 9.7 and 9.8), confirming that the masonry structure (Room 1) had fallen to the west and south. At the same time that the wall fall was exposed, the lower courses of the in situ walls were also defined.

While the outline of the room was exposed by excavating the periphery of the surface structure in 2 by 2 m grid squares, the interior fill was left in place to be removed after the exterior of the structure had been cleared down to the prehistoric ground surface. The 2 by 2 m grid squares

Figure 9.7 Photograph of west wall of Room 1, showing wall fall, Casa Roca (D.A.P. 00520).

Figure 9.8 Photograph of rubble from north wall of Room 1, Casa Roca (D.A.P. 005014).

surrounding the room were excavated in 20-cm arbitrary levels until the prehistoric ground surface was reached--generally less than 40 cm below the modern ground surface.

Bulk soil samples were taken from each level of each 2 by 2 m grid. They were also collected when any unusual fill was encountered to determine if the fill contained cultural items not visible to the unaided eye. Results of analysis of these samples are reported in Appendix A. Pollen samples were taken primarily from prehistoric surfaces. Pinch samples of pollen were also collected from the modern ground surface for comparision with the prehistoric pollen record. One archaeomagnetic sample was taken at Casa Roca (Appendix B).

In excavating Room 1, the last 5 cm of fill covering the floor was divided into 1 by 1 m excavation units. When artifacts were located, they were recorded on individual maps for each excavation unit. All material could then be transferred from individual maps onto a master map showing the total distribution of floor artifacts. Features such as hearths and floor cists were usually excavated by removing fill from one-half of the feature, to determine the presence or absence of stratified deposits. Before the remaining half was removed, a soil profile was drawn, a plan map of the feature was completed, bulk soil samples were taken, and, if a suitable context existed, a pollen sample was collected.

As a complement to the judgment excavations, 24 2 by 2 m grid units were randomly chosen from the total site area. These units were excavated by trowel and shovel to sterile soil. No cultural features were encountered in these units.

On 18 August 1979, after excavations had been completed, a grader was used to strip the A horizon from the periphery of the field house at Casa Roca. The strategy was to expose the Bt horizon in search of additional features which might not have been located during excavations. A total of 296 m^2 was stripped by the grader, exposing one additional feature, a small hearth (Feature 11) located east of the structure (Figure 9.3). Although only a single feature was discovered by this operation, it removed any doubt as to whether other features existed at the site. In general this is a valuable adjunct to hand excavation. No other method exposes as large an area within the time limits that are typical in archaeological investigation.

ARCHITECTURAL REMAINS

Room 1, located in Area 1, was the main architectural feature at the site. In the immediate area of Room 1, three prehistoric activity areas have been defined based on clusters of features surrounding Room 1. These are depicted graphically in Figure 9.9, and illustrated in Figure 9.10. Figures 9.11 and 9.12 illustrate the architectural profiles, including Room 1 and surrounding features. The description that follows will begin with Room 1 and then move outside the room to the three activity areas.

Room 1

Dimensions:

North Wall:	
Length:	2.40 m
Width:	0.28 m
Greatest height:	0.24 m
South Wall:	
Length:	2.40 m
Width:	0.27 m
Greatest height:	0.20 m
East Wall:	
Length:	2.80 m
Width:	0.10 m
Greatest height:	0.10 m
West Wall:	
Length:	2.90 m
Width:	0.30 m
Greatest height:	0.18 m
Inside north-south diameter:	2.40 m
Inside east-west diameter:	2.10 m
Floor area:	5.04 m^2

Room 1 (Figure 9.13) is a small masonry room with a "paved" floor and an irregularly shaped hearth at the north end. A complete single course and a fragmented second course of rough-shaped sandstone form the north, west, and south walls. From remaining evidence, the east wall appears to

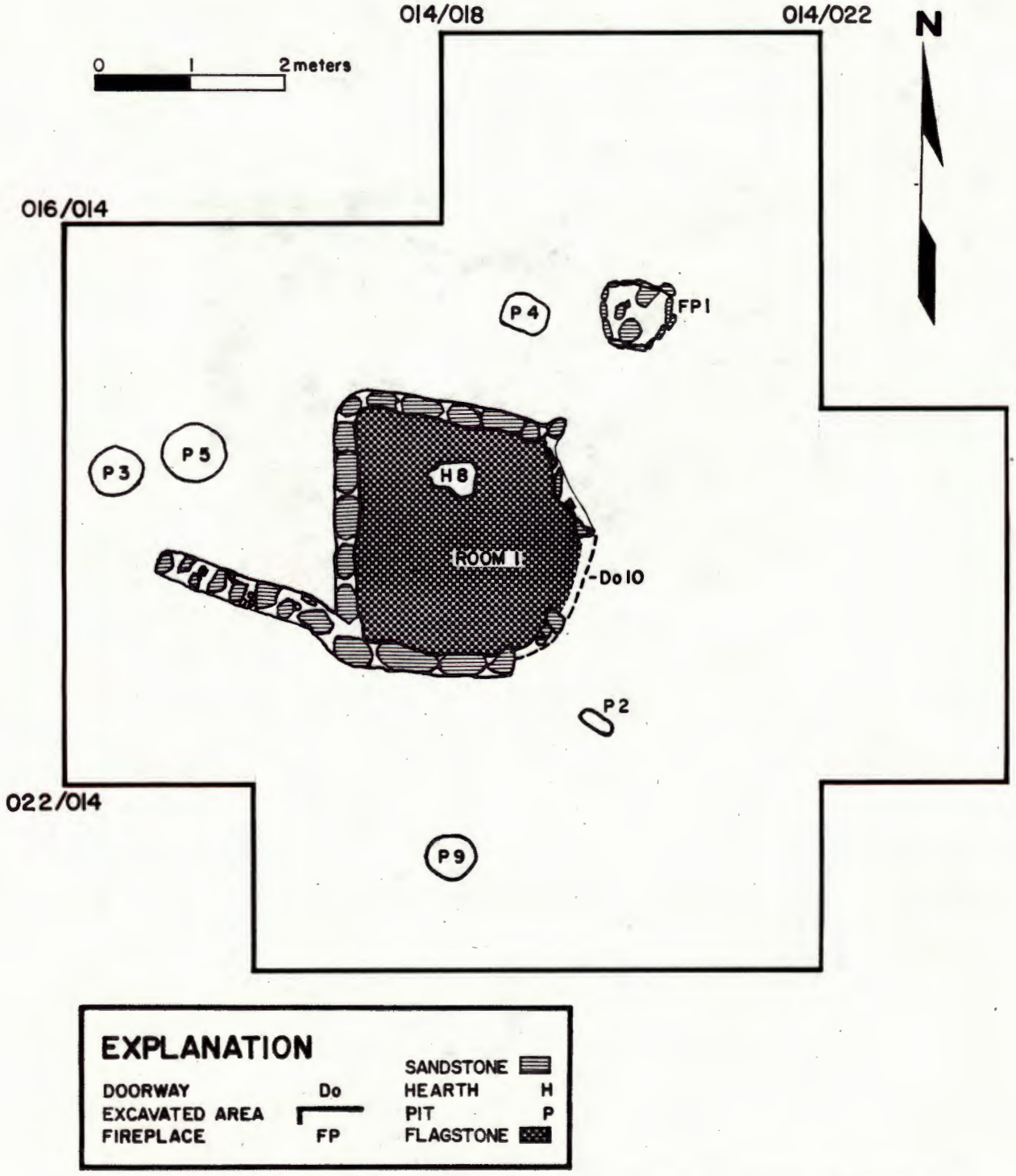
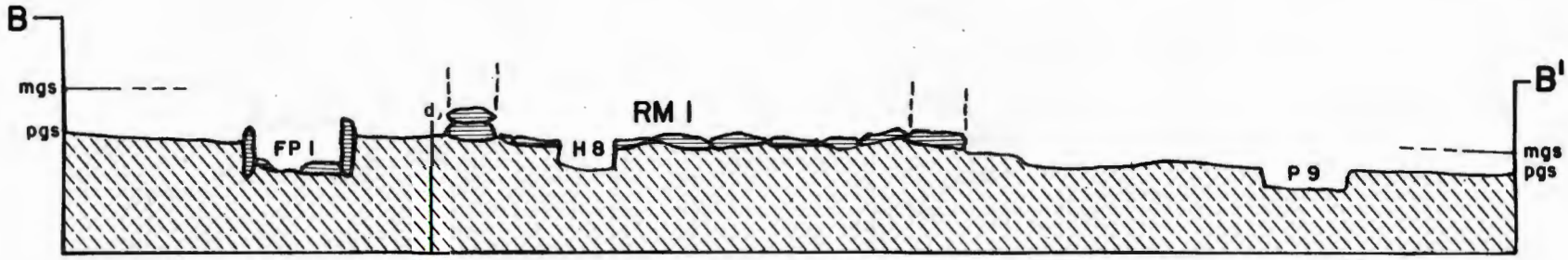
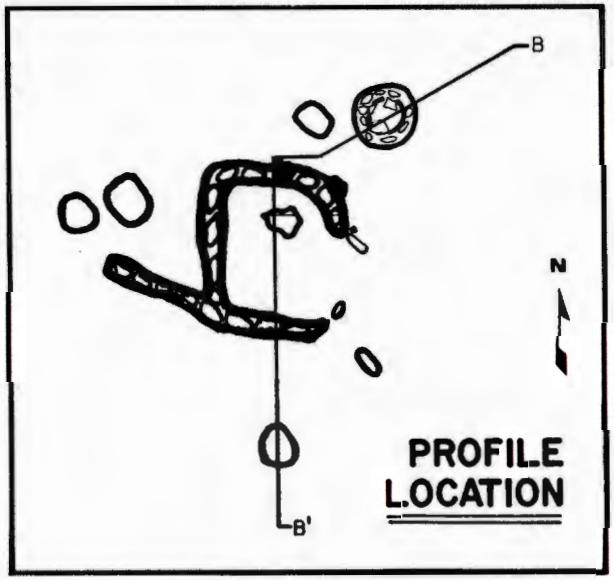


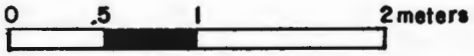
Figure 9.9 Spatial relationship of major cultural units at Casa Roca.

Figure 9.10 Room 1 and surrounding activity areas, Casa Roca (D.A.P., 005108).

Figure 9.11 Architectural profile (north-south), Casa Roca.







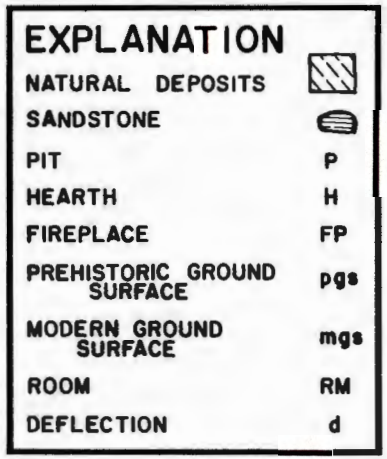
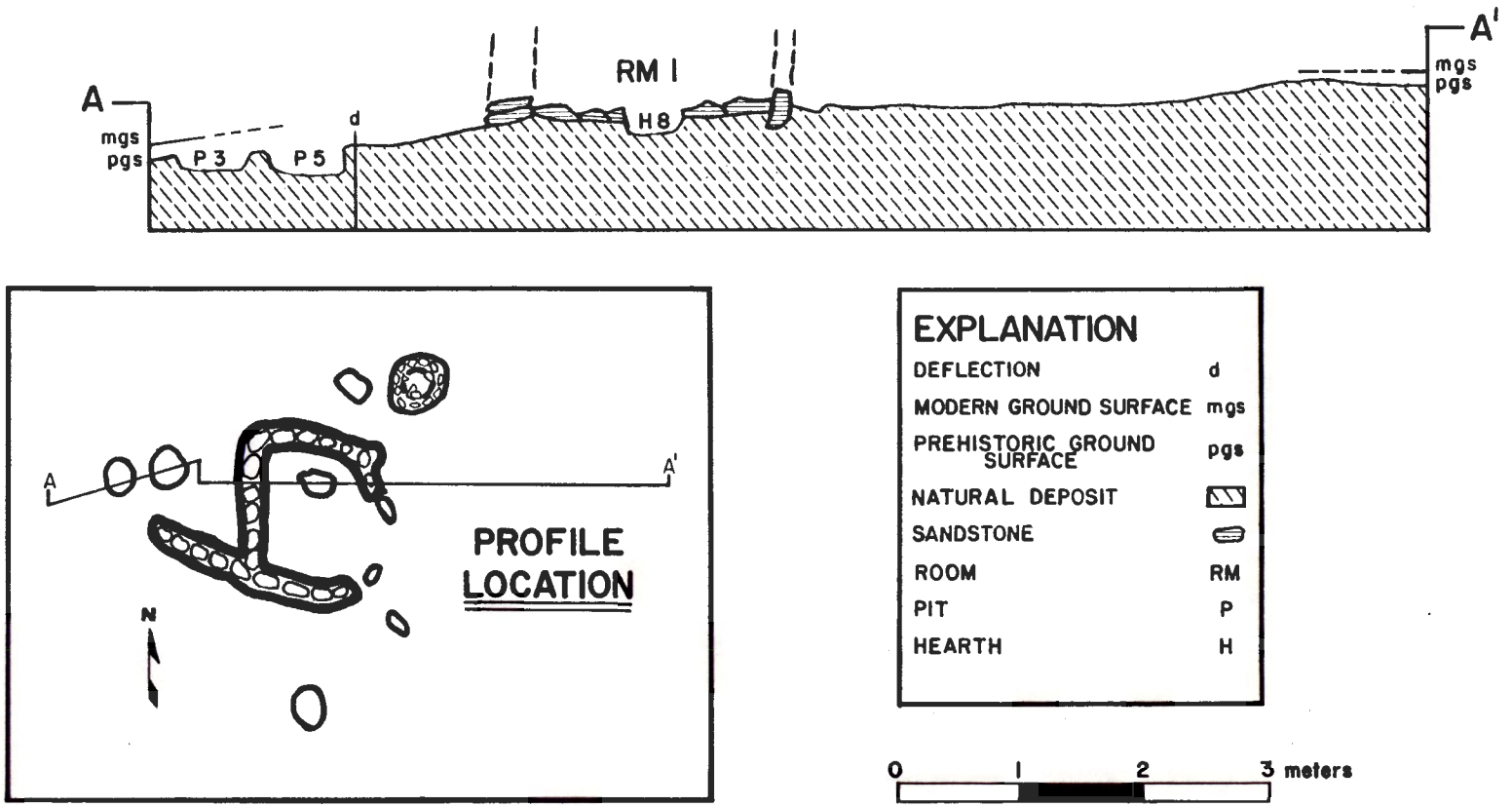


Figure 9.12 Architectural profile (east-west), Casa Roca.



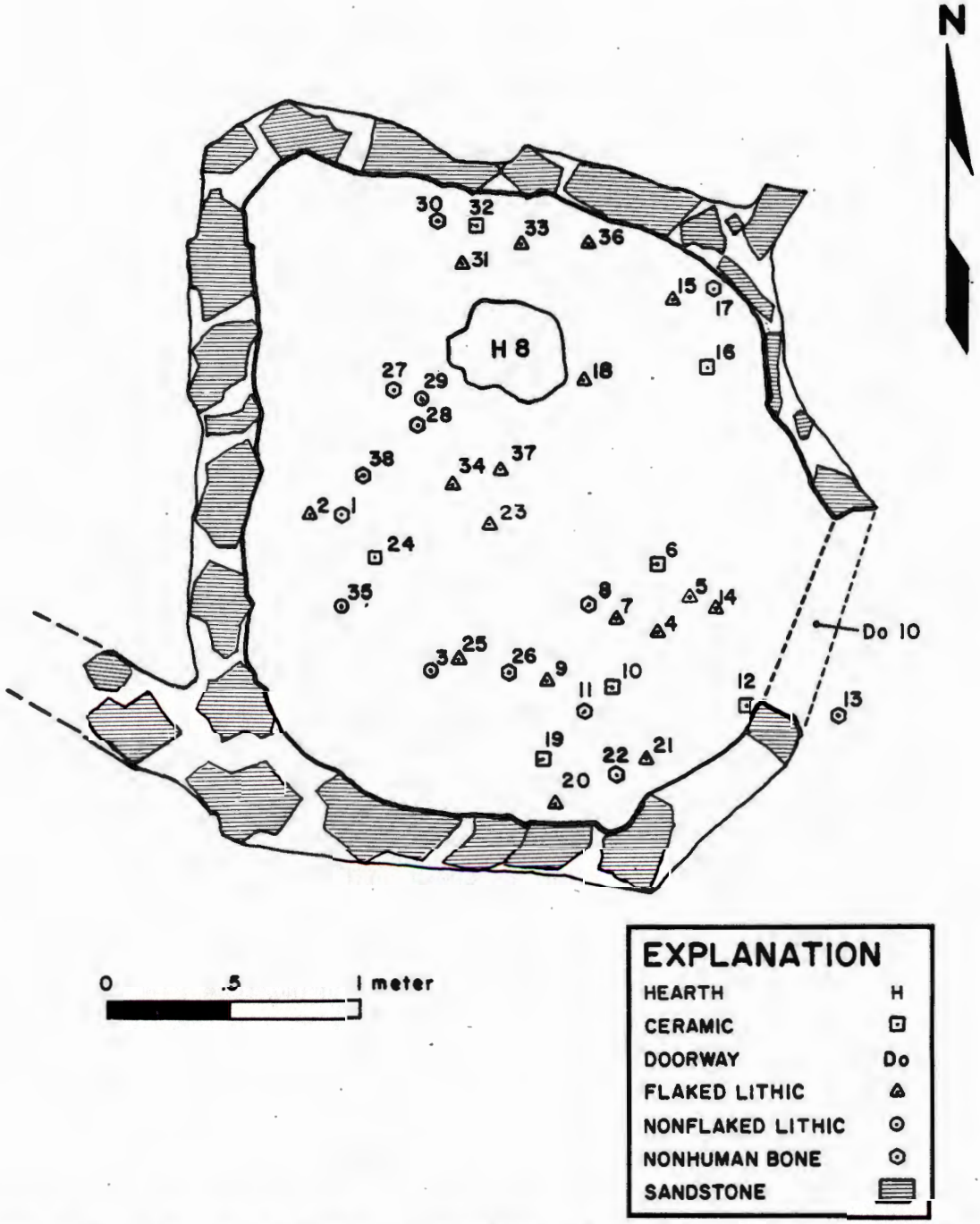


Figure 9.13 Plan map of Room 1, Casa Roca. See Table 9.1 for numbered artifact descriptions.

have been jacal, with an upright slab skirt along the base for support. An entryway was incorporated into this wall at the south end. It was approximately 60 cm wide and was marked by a raised threshold of adobe.

Most of the paving stones covering the floor of Room 1 were tabular, with the more amorphously shaped stones placed in the corners. Because none of these stones were finely dressed, and because they were of different thicknesses, they left an uneven surface. This rough surface had been smoothed by adding a layer of sandy soil over the stones. Figure 9.14 illustrates the underlying paving slabs after half of the sandy layer had been excavated.

Storage, mostly of foodstuffs, appears to have been the primary function of Room 1. Other functions, possibly extraneous to the room's primary function, might also have existed.

Floor artifacts from Room 1 (Table 9.1) include 22 pieces of flaked stone and six sherds from a single reconstructable vessel (RC 3). One hammerstone was also located on the floor of Room 1. Sixteen nonhuman bones, probably representing food scraps, and one large fragment of a metate, which appears to have been used in the wall construction, were also retrieved. These floor artifacts were clustered primarily in the southeast quadrant of the room, as shown in Figure 9.13. The greatest concentration of flaked lithics occurs in this area of Room 1. It is possible that a small amount of tool manufacturing took place just inside the doorway.

Figure 9.13 shows three areas within the room that have no artifacts. These "blank" areas may represent spaces occupied by stored material prior to abandonment. They occur in the southwest and northwest corners and along the central portion of the east wall. The artifacts that were found

Table 9.1 Point-Located Artifacts, Room 1, Casa Roca

PL #*	Item Description
1	Nonhuman bone, Cynomys gunnisoni
2	Flaked lithic debitage
3	Nonflaked lithic, not modified
4	Flaked lithic debitage
5	Flaked lithic, used core
6	Ceramic, Cortez Black-on-white bowl sherd, RC 3
7	Flaked lithic, utilized flake
8	Nonhuman bone, large mammal
9	Nonhuman bone, Sciuridae
10	Ceramic, Cortez Black-on-white bowl sherd, RC 3
11	Nonhuman bone, Sciuridae
12	Ceramic, Early Pueblo Gray jar sherd
13	Nonhuman bone, Mustela frenata
14	Flaked lithic debitage
15	Flaked lithic debitage
16	Ceramic, item misplaced
17	Nonhuman bone, mammal
	Nonhuman bone, small mammal
	Nonhuman bone, Sylvilagus sp.
	Nonhuman bone, Cynomys gunnisoni (2)
18	Flaked lithic, utilized flake
19	Ceramic, Cortez Black-on-white bowl sherds (2), RC 3
20	Flaked lithic debitage
21	Flaked lithic debitage
22	Nonhuman bone, small mammal
23	Flaked lithic debitage
24	Ceramic, Cortez Black-on-white bowl sherds (2), RC 3
25	Flaked lithic, utilized flake
26	Nonhuman bone, Sciuridae
27	Nonhuman bone, Cynomys gunnisoni
28	Nonhuman bone, Cynomys gunnisoni
29	Nonflaked lithic, hammerstone
30	Nonhuman bone, small mammal
	Nonhuman bone, Cynomys gunnisoni
31	Flaked lithic debitage
32	Ceramic, Early Pueblo Red bowl sherd
33	Flaked lithic, thick uniface
34	Flaked lithic debitage
35	Nonflaked lithic, trough metate (fragment)
36	Flaked lithic, thick uniface
37	Flaked lithic debitage
38	Nonhuman bone, small mammal

*See Figure 9.13 for artifact locations.

( ) - Number of items, if greater than one.
RC - Reconstructable vessel

Figure 9.14 Room 1, with paving stones exposed, Casa Roca (D.A.P. 005116).

throughout the room form a path between these blank areas, leading to the hearth.

Hearth (Feature 8).

Dimensions:

Length:	47 cm
Width:	37 cm
Depth:	9 cm

A hearth (Feature 8) was defined in an area where the underlying paving stones had been removed and a shallow basin scooped into the subsoil. The paving stones surrounding the hearth area are slightly fire reddened. If Room 1 was indeed used for storage of food, then this hearth might have been used to help dry the stored produce. The use of stones to pave the floor was probably to prevent rodents from burrowing into the structure and to keep the stored material from contact with soil moisture.

Doorway (Feature 10).

Dimensions:

Length:	80 cm
Width:	40 cm

Access to Room 1 was through Feature 10, a ground level doorway at the extreme south end of the east wall. A slight sill was formed by a low adobe ridge which spanned the doorway. North of the doorway was a small space flanked by two sandstone slabs. This may have been a posthole, but severe rodent disturbance in this area made positive identification impossible.

Activity Areas

Six features were encountered on the prehistoric ground surface outside Room 1 (Figure 9.3). These features were assigned to three activity areas, defined as the physical locus where a single, main activity

was performed by a member of the household (Kane [2]). The activity areas at Casa Roca were defined by clustering of the features and are interpreted as primarily food-processing oriented. Also used in defining these areas of prehistoric activity were artifact scatters, which tend to be concentrated around the features and thin out as the distance from the feature clusters increases.

Activity Area 1.

Pit (Feature 3):

Dimensions:

Length:	45 cm
Width:	43 cm
Depth:	16 cm

Pit (Feature 5):

Dimensions:

Length:	65 cm
Width:	63 cm
Depth:	24 cm

Activity Area 1 (Figure 9.15), located west of Room 1, is bounded on the south by a masonry wall which juts out from the southwest corner of Room 1. It consists of two small, unlined, basin-shaped pits. Photographic details of these pits (Features 3 and 5) are presented in Figures 9.16, 9.17, and 9.18. These pits contained dark, ashy fill mottled with charcoal bits, a few burned sandstone spalls, and small amounts of burned sagebrush. Neither of the pits exhibited heavy oxidation of their walls. The smaller of the two pits (Feature 3) had light oxidation; however, this was not hard or deep enough to represent extreme heat. One archaeomagnetic sample was collected from Feature 3, but did not yield a date (Appendix B). The artifacts lying on the surface in this activity area indicate waste material (e.g., sherds, nonhuman bone, and lithic

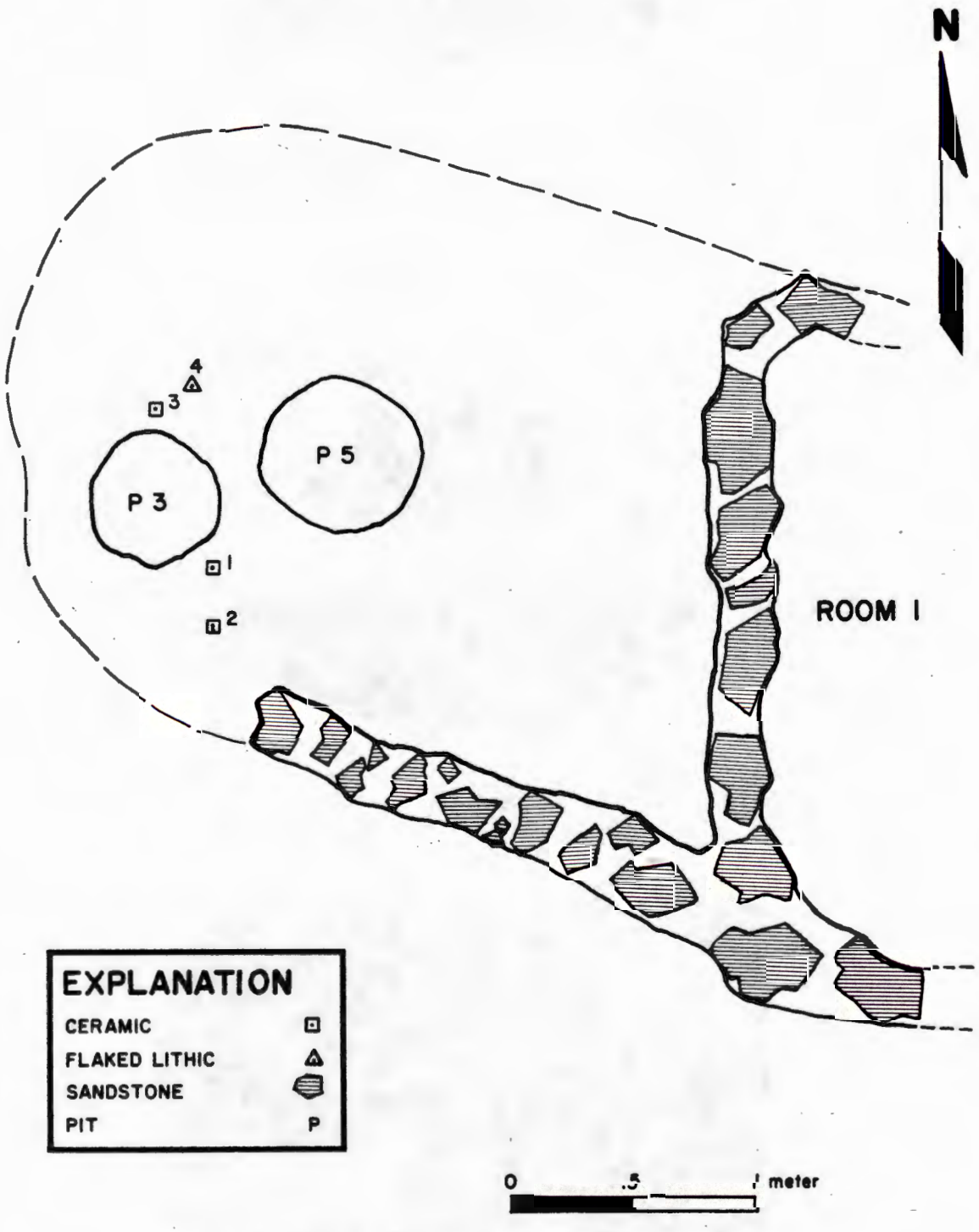


Figure 9.15 Plan map of Activity Area 1, Casa Roca.

Figure 9.16 Hearth (Feature 3), Casa Roca (D.A.P. 005125).

Figure 9.17 Hearth (Feature 5), Casa Roca (D.A.P. 005127).

Figure 9.18 Hearths (Features 3 and 5), in profile, Casa Roca. View to the north (D.A.P. 005128).

debitage) suggestive of human occupation. Two of the floor artifacts were bowl sherds--one Early Pueblo White and one Late Pueblo White--and one was an Early Pueblo Gray jar sherd. Additionally, three pieces of flaked lithic debitage were recovered from the surface of Activity Area 1.

Activity Area 2.

Fireplace (Feature 1):

Dimensions:

Length:	64 cm
Width:	61 cm
Depth:	28 cm

Pit (Feature 4):

Dimensions:

Length:	57 cm
Width:	44 cm
Depth:	15 cm

Activity Area 2 (Figure 9.19) is northeast of Room 1, and is defined by two cultural features dug into the prehistoric ground surface. Feature 1 (Figures 9.20 and 9.21) is a slab-lined fireplace that was filled by natural processes and contained no ash or charcoal lenses. The highly oxidized nature of the lining stones indicates that extreme heat was used in the fireplace. The lack of ash and charcoal indicates the feature was cleaned out prehistorically.

The other feature (Feature 4) is an irregularly shaped pit only 0.15 m in depth. It is located 0.5 m west of Feature 1; Figure 9.22 shows the relationship between these two features. This shallow pit contained fill that might have been removed from the fireplace: dark, organically stained soil, charcoal bits, and burned and smoke-blackened pieces of fractured sandstone.

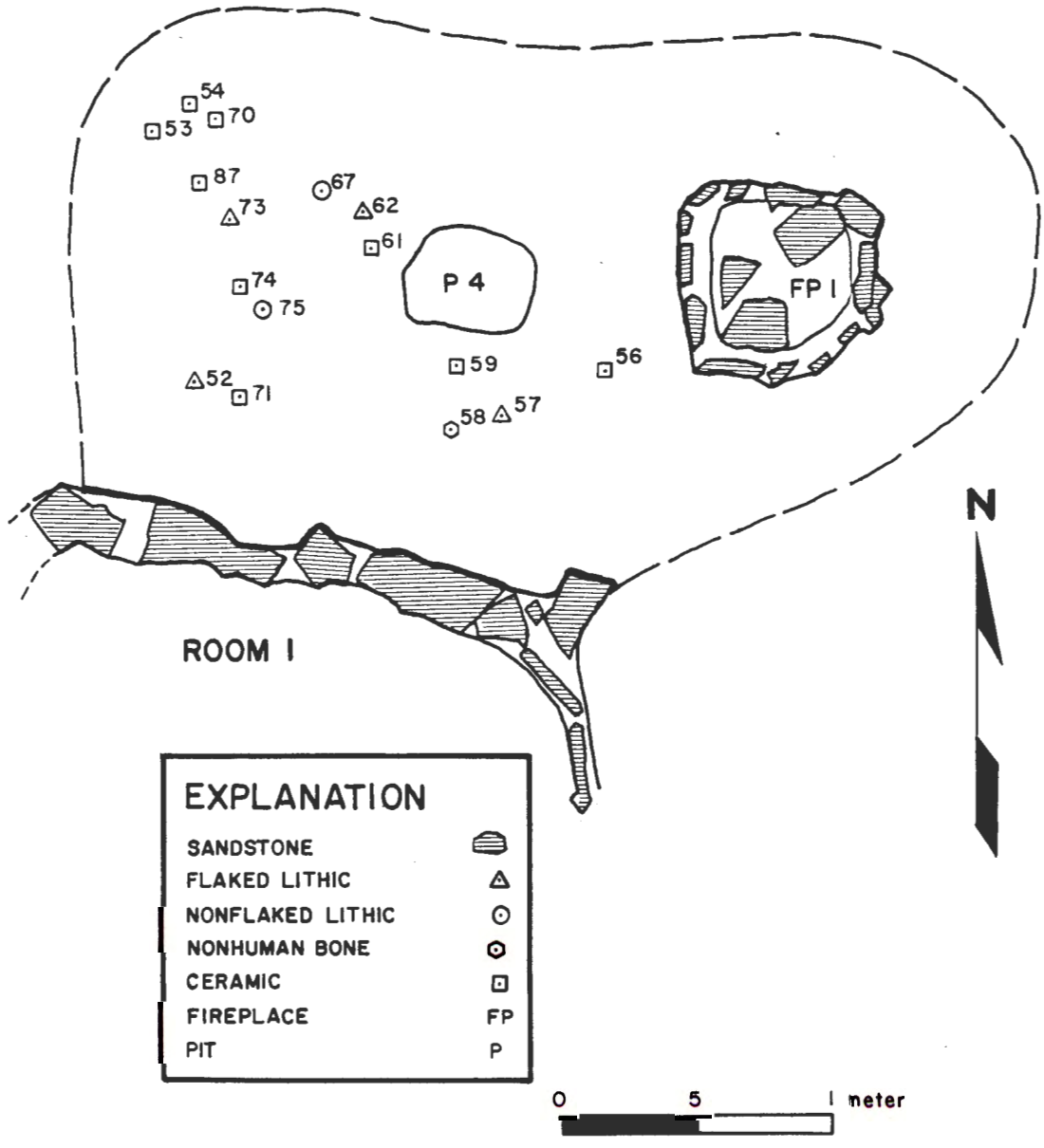


Figure 9.19 Plan map of Activity Area 2, Casa Roca.

Figure 9.20 Fireplace (Feature 1), in profile, Casa Roca (D.A.P. 005132).

Figure 9.21 Fireplace (Feature 1), full view, Casa Roca (D.A.P 006727).

Figure 9.22 Activity Area 2, view to the north showing fireplace and hearth (Features 1 and 4), Casa Roca (D.A.P. 006705).

Artifacts point located in Activity Area 2 are described in Table 9.2. These include six sherds, one nonhuman bone, and four pieces of flaked lithic debitage.

Activity Area 3.

Pit (Feature 2):

Dimensions:

Length:	20 cm
Width:	35 cm
Depth:	10 cm

Pit (Feature 9):

Dimensions:

Length:	46 cm
Width:	46 cm
Depth:	14 cm

Activity Area 3 (Figure 9.23 and 9.24) is located directly south of Room 1; like Activity Area 1, it includes two pit features with little evidence of heavy oxidation. Feature 9 (Figure 9.25) is a basin-shaped pit filled primarily with dark, organically stained soil with bits of charcoal throughout. The dark soil is probably a result of decomposed charcoal which stained the surrounding matrix. Feature 2, possibly a warming pit (Figure 9.26), was greatly disturbed by rodent activity but appears to have been a small basin-shaped pit with burned sandstone fragments lining the bottom. Table 9.3 describes the artifacts point-located on the surface in Activity Area 3. These include 10 sherds, a utilized flake, and 6 pieces of flaked lithic debitage.

Table 9.2 Point-Located Artifacts, Activity Area 2, Casa Roca

PL #*	Item Description
52	Flaked lithic debitage
53	Ceramic, Early Pueblo Red bowl sherd
54	Ceramic, Deadmans Black-on-red bowl sherd
56	Ceramic, Early Pueblo Red bowl sherd
57	Flaked lithic debitage
58	Nonhuman bone, Thomomys bottae
59	Ceramic, Cortez Black-on-white bowl sherd
61	Ceramic, item misplaced
62	Flaked lithic debitage
67	Nonflaked lithic, not modified
73	Flaked lithic debitage
74	Ceramic, Cortez Black-on-white bowl sherd
75	Nonflaked lithic, not modified
87	Ceramic, Early Pueblo Red bowl sherd

*See Figure 9.19 for artifact locations.

Table 9.3 Point-Located Artifacts, Activity Area 3, Casa Roca

PL #*	Item Description
6	Ceramic, Late Pueblo Gray jar sherd (10)
8	Flaked lithic debitage
9	Ceramic, Cortez Black-on-white jar sherd
10	Ceramic, Corrugated jar sherd
11	Ceramic, Late Pueblo Gray jar sherd
12	Flaked lithic debitage
13	Ceramic, Blue Shale Corrugated jar, RC 1
14	Flaked lithic debitage
16	Ceramic, Late Pueblo White jar sherd
31	Ceramic, Late Pueblo Gray jar sherd
32	Ceramic, Early Pueblo Gray jar sherd
33	Ceramic, Early Pueblo Gray jar sherd
47	Flaked lithic, utilized flake
48	Ceramic, Cortez Black-on-white bowl sherd, RC 2

*See Figure 9.23 for artifact locations.

( ) - Number of items, if greater than one.
RC - Reconstuctable vessel

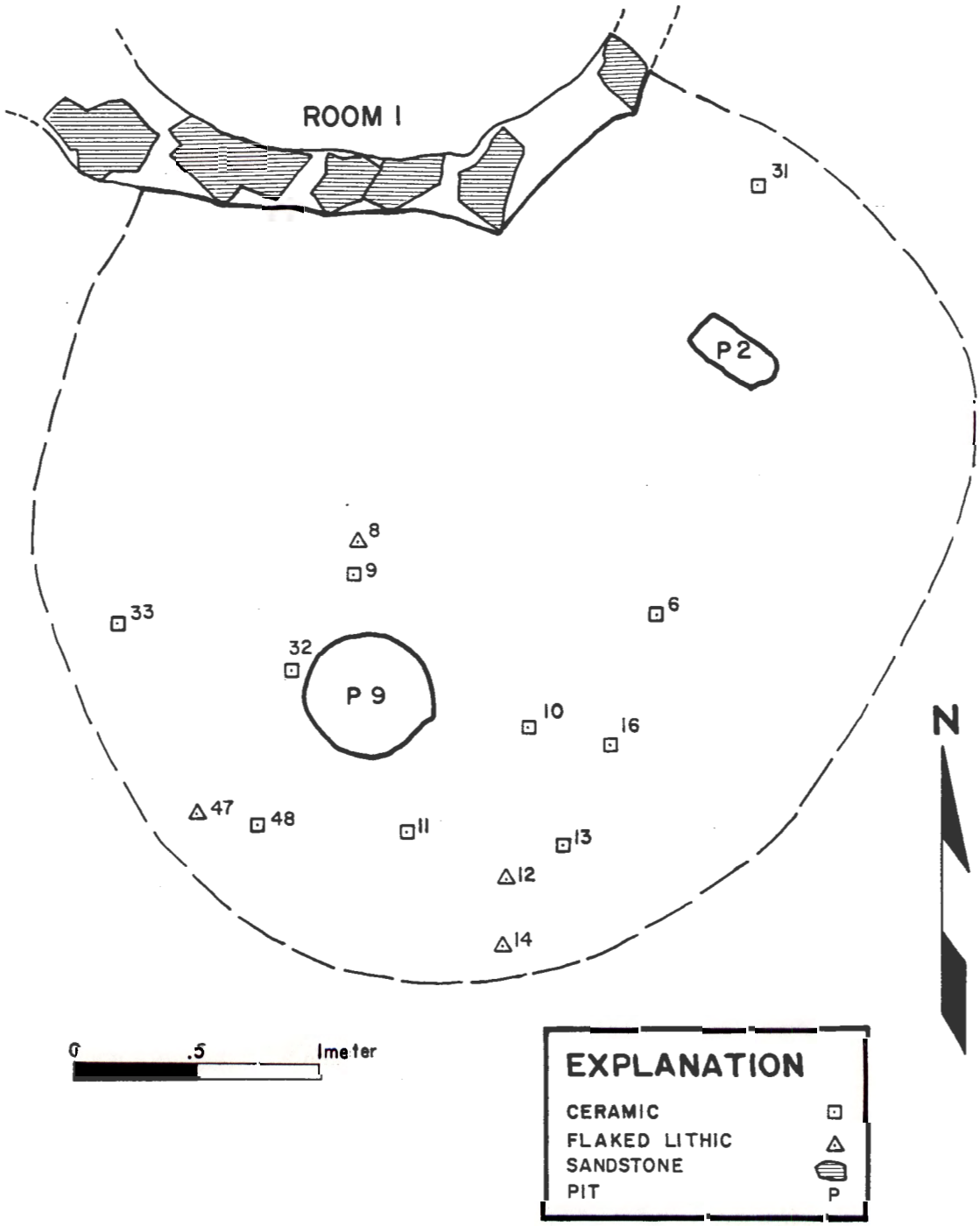


Figure 9.23 Plan map of Activity Area 3, Casa Roca. See Table 9.3 for numbered artifact locations.

Figure 9.24 Activity Area 3, view to the north, Casa Roca (D.A.P. 005108).

Figure 9.25 Pit (Feature 9), in profile, Casa Roca (D.A.P. 006720).

Figure 9.26 Pit (Feature 2), Casa Roca (D.A.P. 006722).

MATERIAL CULTURE

The Casa Roca site is interpreted as a seasonally occupied site consisting of one masonry room, three activity areas, and an area of thin sheet trash primarily on the slope southwest of Room 1. The activity areas and Room 1 have already been discussed; following is a discussion of the portable segments of the material culture recovered from Casa Roca.

Ceramics

Gray ware, white ware, and red ware ceramics were found throughout the site. The gray wares recovered include four temporally diagnostic types. Of these, Chapin Gray, Mancos Gray, and Mancos Corrugated represent locally manufactured types, whereas Blue Shale Corrugated (Figure 9.27) has its origin in the Chuska Mountains of northeastern Arizona. Blue Shale Corrugated dates from A.D. 925-1150 (Windes [12]). Chapin Gray, because of its long-term popularity, is a poor temporal indicator. Mancos Gray and Mancos Corrugated indicate a time period that began at A.D. 875 and extended well into the tenth century A.D.

White ware at the site is the temporally sensitive Cortez Black-on-white, dating from A.D. 900 to 1000 (Breternitz et al. [13]). Two red wares were also identified: Bluff Black-on-red and Deadmans Black-on-red, which are dated as occurring in the Dolores River valley from A.D. 800-900 and A.D. 900-1000, respectively.

Dating of the site by ceramics is possible due to the occurrence of well-dated types in the ceramic assemblage. The presence of Cortez Black-on-white, Deadmans Black-on-red, and Blue Shale Corrugated, none of which are known to occur until after A.D. 900, indicate a tenth century

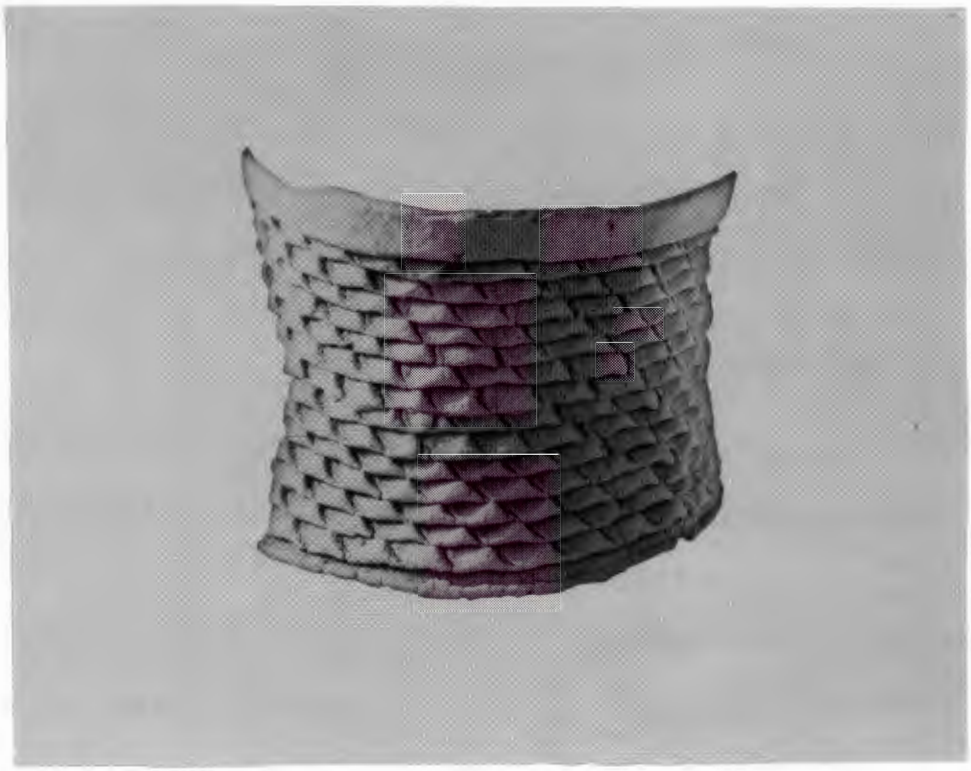


Figure 9.27 Partial Blue Shale Corrugated vessel (RC 1) from Activity Area 3, Casa Roca (D.A.P. 039328).

A.D. date for the utilization of the site. The presence of Mancos Gray and Bluff Black-on-red suggests that the site may have been in use as early as A.D. 875. These factors, coupled with the masonry style of Room 1, suggest an occupation in the ninth century A.D. until as late as the middle of the tenth century, or A.D. 875-950. A further discussion of the ceramic materials collected at Site 5MT2203 is presented in Appendix C.

Flaked Lithics

There were 51 flaked lithic fragments found on the prehistoric ground surface around Room 1 and the floor surface of Room 1. Analysis of this material showed use patterns on seven of these flakes. Six of these seven tools or utilized flakes were recovered on the floor of Room 1, and only one, a chopper/scraper, was found outside of Room 1 on the prehistoric ground surface of Activity Area 1. The tools and utilized flakes found on the floor of Room 1 consisted of two utilized flakes, two chopper/scrapers, one core, and one thick scraper. Two projectile points were found at the site; these are illustrated in Figure 9.28.

In general, the type of stone tools found at the site strengthens the view that Casa Roca was a temporary station where initial steps in the food-processing chain took place. The flaked lithic assemblage from Site 5MT2203 is discussed in greater detail in Appendix D.

Nonflaked Lithics

Nine nonflaked lithic tools were among the 26 pieces of nonflaked lithic material recovered from Casa Roca. Three of these tools--a mano, a generalized unhafted tool, and a hafted hammer--came from the surface collection. A hammerstone and a trough metate were found on the floor of

Figure 9.28 Projectile points recovered at Casa Roca left, modern ground surface; right, plow zone east of Room 1 (D.A.P. 118802).

Room 1; however, the trough metate was only a large fragment that seems to have been used as part of the wall. A mano, a hammerstone, and two generalized unhafted tools were found in the fill throughout the rest of the site. The nonflaked lithic assemblage for Site 5MT2203 is discussed in greater detail in Appendix D.

Building Material and Construction

The single masonry room at Casa Roca was constructed from both coursed masonry (west, south, and north walls) and jacal (east wall). The masonry stones were sandstone from the Dakota Formation, which is readily available in the site area in arroyo cuts and in alluvial debris on or near the surface. This stone was roughly shaped into blocks and set into horizontal courses with large quantities of mud mortar. The binding mortar was a brown clay loam with fine-grained sand temper. An extension wall protrudes from the southwest corner of Room 1. This wall is a continuation of the south wall and extends 2 m to the west-northwest. The method of construction is the same as that of the masonry walls of Room 1 just described. It forms a partial southern boundary for Activity Area 1 (Features 3 and 5) and probably served as a windbreak and shade area for outdoor activities. An artist's reconstruction of Casa Roca is presented in Figure 9.29.

The east wall of Room 1 is defined by three upright slabs; two larger stones are located on either side of the defined entryway. Based on the presence of upright slabs and one probable posthole, the construction of this wall is inferred to have been jacal. Poles and basal upright slabs have been noted in many other instances where wall preservation has been

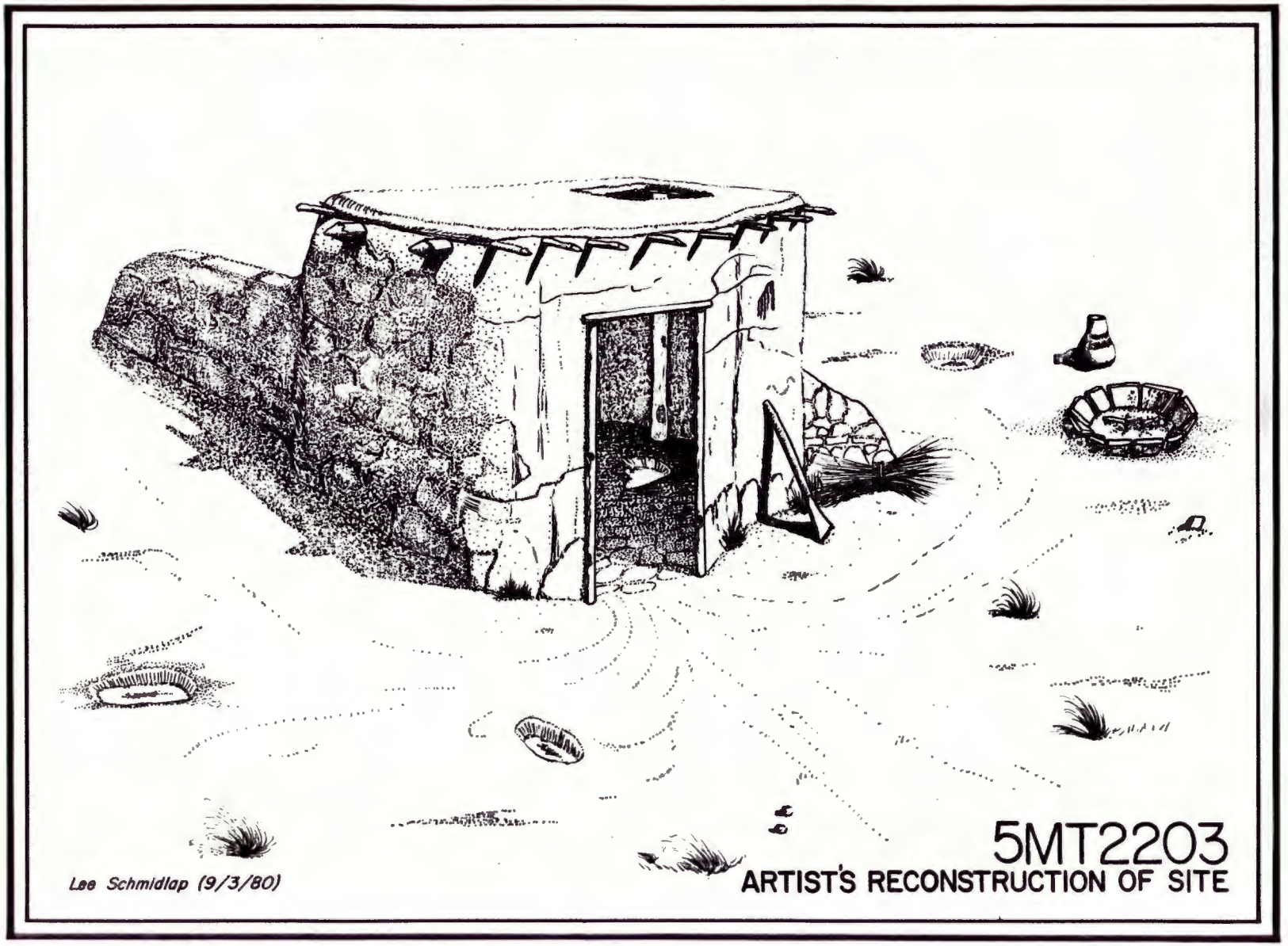


Figure 9.29 Artist's reconstruction of Casa Roca.

excellent and the jacal construction quite evident (Bullard [14], Lancaster and Watson [15]).

Subsistence Data

Faunal Remains

A total of 44 nonhuman bones, representing 5 species and 11 taxonomic categories, was recovered at the site. Included in this assemblage are 28 bones that were found outside Room 1 and apparently represent intrusive rodent activity. The 16 remainjng bones, however, were located on the floor of Room 1 and seem to indicate a cultural affiliation. All but one of these culturally associated bones represent small mammals. Most of these are mammals which could easily have been obtained by garden hunting or obtained while out foraging for wild foods.

It seems probable that the people staying at the field houses subsisted not on food brought with them from the parent site but on what was available and in season around the field house. A detailed report on the faunal remains recovered at Casa Roca is presented in Appendix E.

Pollen

Four of the sixteen pollen samples taken at Casa Roca were analyzed. These are described by provenience in Table 9.4. One of these, from the northeast corner of Room 1, did not yield any pollen. The other three samples came from around the slab-lined hearth located in Activity Area 2. These three pollen samples contain very similar amounts of arboreal pollen: 16 percent, 18 percent, and 17 percent, respectively; nonarboreal pollen percentages are also similar. No Zea pollen was noted in the samples, and the limited amount of Cleome (beeweed) pollen observed was not enough to reveal whether or not Cleome was processed at the site.

Table 9.4. Results of Pollen Analysis from Casa Roca

Pollen Sample #	FS #	Provenience and Comments	
8	56	Room 1	NE quad, Surface 1, no pollen
13	51	Feature 1	Adjacent to N side of fireplace
14	51	Feature 1	Adjacent to W side of fireplace
15	51	Feature 1	Adjacent to W side of fireplace

Macrobotanical Remains

Eight plant genera found in the bulk soil samples from Casa Roca were charred, probably indicating manipulation by man. Among these were several types of wood which were probably used as fuel, including *Artemisia*, *Pinus*, *Populus*, and *Quercus*. Charred *Zea mays* fragments were recovered from Room 1 and Features 3, 4, and 9, indicating that corn was one of the plants being processed and stored at the site. Appendix A presents additional results and discussion of the macrobotanical materials recovered at Casa Roca.

CONCLUSIONS

Casa Roca, from the nature of the remains, falls into the field house category as defined by the D.A.P. A field house is an area which functioned as a base away from the habitation, where tasks associated with horticulture or agriculture were performed. Activities such as field preparation, planting, weeding, predator control, harvesting, initial processing, and temporary storage were either performed or based at these loci (Kane [2]). Casa Roca meets all of these criteria.

Chronology

Unfortunately, as so often happens with a site of this sort, no means of absolute dating is available. The single archaeomagnetic sample taken did not yield an interpretable date. Inferential dating, based on architectural and ceramic evidence, must therefore be used.

A variety of ceramic types, including one trade-ware ceramic, were recovered from the excavations. The most temporally diagnostic type evident on the site is Cortez Black-on-white, which dates from A.D. 900-1000 (Breternitz et al. [13]). The presence of Deadmans Black-on-red and Mancos Corrugated sherds confirms a Pueblo II (McPhee Phase) date assignment. Mancos Gray and Bluff Black-on-red sherds may indicate some usage of the site prior to A.D. 900, possibly beginning by A.D. 875. The combination of crude coarsed masonry with jacal also points to a construction date in the late ninth or early tenth century. This phenomenon of scabbled masonry is discussed under architectural features in the Badger House Community (Hayes and Lancaster [16]).

From ceramic and architectural evidence, Casa Roca can be placed temporally in the early portion of the tenth century A.D. and possibly as early as the latter part of the ninth century A.D.

Adaptation and Economy

Casa Roca can be considered a component of a larger economic unit. Several permanent habitation sites have been defined by survey and/or excavation as belonging to the McPhee Phase (A.D. 850-970), including the nearby McPhee Pueblo (Brisbin [17]), located east of Casa Roca.

If the interpretation of Casa Roca as a field house used for temporary storage is correct, it is likely that food materials processed there were moved to a permanent site. A necessary step in the processing at Casa Roca would have had to be preservation, which probably included some form of dehydration.

A Pueblo woman visiting the project area described a method used at her pueblo to preserve corn. The corn is first boiled while fresh. The boiled corn is then placed in shallow pits and covered overnight with hot ashes. The heat from the ashes removes excess moisture. After the corn is removed from the ashes, it can be stored for a fairly long period of time without spoiling.

The features found at Casa Roca are compatible with this form of food preparation. The large slab-lined hearth might have been used to heat rocks to boil water; the hot coals and ash residue remaining from the fuel might have been placed on top of the boiled corn after it was placed into the shallow "heating" basins already described. When the produce was removed, it could have been stored in the masonry room for further drying or simply until enough accumulated to make it necessary to remove it to

the main site for permanent storage. The presence of corn fragments at the site supports the inference that corn was one of the plants processed and stored there.

The site is located in a spot which is at present suitable for the activities mentioned above. First, it is on a ridge unsuited for farming; second, the good, loamy soil found in the shallow drainages is readily accessible both to the west and east. If horticultural plots were located in these areas, transport of produce to the food-preparation and storage unit would have been a simple matter. The site would also be a good camp for anyone wanting to watch over the maturing crops for predator control.

Paleodemography

The question at Casa Roca is not how many people lived at the site, but how many people were present at any one time for seasonal use of the facilities. Based on the size of the site (Room 1 and outside features) and on its inferred function, it seems likely that no more than five people, probably members of a single household, stayed at the site to work, while an unknown number brought in the produce and hauled the prepared food to the habitation site for winter use. The estimate of use of the site by no more than five persons at a given time is based on the number of available work spaces in and around Room 1.

Social Organization

It has already been stated that Casa Roca was not a habitation, but rather, that it was a field house where harvested crops (both domestic and wild) were processed, preserved, and stored. This stored material was eventually transported back to the habitation. Therefore, a discussion

of the social organization at Casa Roca requires examining the social organization of larger habitation sites and the inferred relationship between the two types of sites.

Ethnographically it was a common practice for Pueblo families to leave the main residential group for entire seasons to be near their fields as well as to undertake other forms of resource procurement. These isolated groups could at any time be summoned from their farmsteads to the central village for ceremonial occasions.

This form of social patterning could well be the case at Casa Roca. However, the few recorded Sagehen Locality sites exhibiting Pueblo II characteristics are within a one-half hour walk of this field house and may indicate that Casa Roca was only used for short periods of time.

Trade

The artifact assemblage at Casa Roca allows little to be said about social relations with groups foreign to the area. Such relations would be more apparent at the habitation site associated with Casa Roca. That foreign contact occurred is indicated by the partial vessel found south of Room 1. This vessel is a Blue Shale Corrugated, which has a rather limited area of manufacture near the Chuska Mountains in northeastern Arizona. Perhaps the vessel was traded into the Dolores area, was acquired by the household using Casa Roca, and eventually was used for utilitarian purposes at the field house location.

APPENDIX A

MACROBOTANICAL REMAINS FROM CASA ROCA

by

Bruce F. Benz and Meredith H. Matthews

Remains representing 10 families and 13 genera of plants were recovered from bulk soil samples and one vegetal specimen from Site 5MT2203. The twelve samples selected for preliminary analysis were collected from feature fills and occupation surfaces. The results of preliminary analysis are presented in Table 9.A.1.

The present sampling strategy employed by the D.A.P., using a system of control samples (Litzinger [18]), was not implemented prior to excavation of this site. Therefore, interpreting the remains that are not charred is problematic. It is difficult to determine if noncharred plant remains are contemporary intrusives or a direct/indirect byproduct of human occupation of the site. Since Site 5MT2203 is an open air site and the sampling loci are relatively close to modern ground surface, it is believed that the noncharred macrobotanical remains are intrusive, noncultural material.

Eight genera of plants were recovered in a charred condition and it is presumed that charring indicates human activity. Five genera and two classes of wood were recovered (Artemisia sp., Pinus sp., Populus sp., Quercus gambelii, Rhus aromatica, Dicotyledoneae and Gymnospermae. All except the fragments of R. aromatica probably represent fuel resources. The R. aromatica twigs were constructional elements in a fragment of basketry.

The paucity of small scale, charred remains (Samples 21, 24, 32) increases interpretational ambiguity. Features 1, 3, 8 and 9 were all identified as firepits of some type, with Features 3 and 9 containing in situ cultural deposits. Feature 4 is a pit without evidence of burning that contained redeposited hearth fill. As illustrated in Table 9.A.1 very few charred seeds and fruits were recovered from these feature fill

samples. The limited quantity of this category of macrobotanical remains precludes an interpretation of direct economic utilization of these resources. The occurrence of these small remains could also be a byproduct of indirect incorporation, during the use of the hearth or pits, of parts of plants that commonly occur in disturbed habitats.

The presence of Zea mays is unquestionably a product of direct utilization by the prehistoric occupants. Domesticates are dependent upon human manipulation for survival/propagation and therefore are present in a site only through deliberate human activity. The inclusion of fragments of Z. mays in feature fills (Samples 18, 21, 32, 34) may be due to accidents in food preparation, a product of cleanup activity, or possibly the occupants of 5MT2203 used the cobs as a fuel resource. The remains of Z. mays on Surface 1 of Room 1 and Activity Area 2 most likely represent generalized debris spread over these surfaces from post-occupational natural activity.

Table 9.A.1 Macrobotanical Remains from Casa Roca

Taxon	FS 58 Rm 1 Surf 1 BS 13	FS 57 Rm 1 Surf 1 BS 15	FS 66 A/A 2 F 1 BS 17	FS 69 A/A 1 F 3 BS 18	FS 58 Rm 1 Surf 1 BS 19	FS 57 Rm 1 Surf 1 BS 20	FS 71 A/A 2 F 4 BS 21	FS 80 Rm 1 Surf 1 BS 24	FS 91 A/A 3 F 9 BS 32	FS 86 Rm 1 F 8 BS 33	FS 92 A/A 3 F 9 BS 34	FS 69 A/A 1 Surf 1 Veg
Amaranthaceae												
Amaranthus sp.												
seed							8/N	2/N				
Anacardiaceae												
Rhus aromatica												
wood							+/W					
Chenopodiaceae												
Chenopodium sp.												
fruits	1/N	1/N	18/N		2/N	2/N	3/N	9/N	5/N	2/N	8/N	
Compositae												
Artemisia sp.												
wood			+/C	+/C		+/C	+/C		+/C	+/C	+/C	
Chrysothamnus sp.												
leaf			+/N							+/N		
Helianthus sp.												
fruit				1/C								
Dicotyledoneae												
Indeterminate												
wood						+/C						
Fagaceae												
Quercus gambelii												
wood				+/C								
Gramineae												
Zea mays												
kernel									+1/C			
cob		+/C		1fg/C		2fg/C			1fg/C		5fg/C	4fg/C
cupule				31X/C		9/C	1/C		32X/C		34X/C	
Gymnospermae												
Indeterminate												
wood				+/C								
Pinaceae												
Pinus sp.												
wood				+/C								
Polygonaceae												
Polygonum sp.												
fruit									1/C			
Portulacaceae												
Portulaca sp.												
seed							1/C	1/C				
Salicaceae												
Populus sp.												
wood			+/C	+/C		+/C						
Indeterminate												
wood			+/C									
Solanaceae												
Solanum sp.												
seed							1/N					
Indeterminate												
seed		1/C	+/PC		1/N & 2/C		4/N			1/C		
wood			+/C									

Key for Table 9.A.1:

Rm	- Room	C	- charred
A/A	- Activity Area	N	- not charred
Surf	- Surface	PC	- partially charred
F	- Feature	+	- less than or equal to 1 gm
BS	- Bulk Soil Sample	X	- fragments only, no number assessable
Veg	- Vegetal specimen	fg	- fragment
		W	- worked vegetal item

APPENDIX B

ARCHAEOMAGNETIC REPORT FOR CASA ROCA

by

J. Holly Hathaway and Jeffrey L. Eighmy

Archaeomagnetic dating is a relatively recent chronometric method employed by archaeologists. Archaeomagnetism is based on the fact that burned material can record the direction of the earth's magnetic field at the time of incineration at that location. By using the Southwest master curve (DuBois [19]) of independently dated magnetic poles and other known pole positions for the area under study, the magnetic orientations of cultural contexts can be relatively dated. For a complete discussion of laboratory and field methods employed by the D.A.P., as well as an evaluation of the applicability of the current Southwest master curve to the Dolores area, see Hathaway and Eighmy [20].

Sampling and Methods

One sample was collected at Site 5MT2203 during the 1979 field season. The site is located at 37.52° north latitude and 251.42° east longitude in the Sagehen Flats area of the Dolores valley.

Sample 1 was collected from a surface hearth (Feature 3) located on Surface 1 of Activity Area 1. Twelve specimens were collected for the sample. Each specimen (an estimated 3.4 cm^3 volume) was encased in a 2.5 cm plaster cube (15.6 cm^3). The orientation of the cube was maintained by leveling the cube and measuring the magnetic declination of one cube side. To control for current magnetic declination, North Star was sighted on 2 September 1978. The average observed magnetic declination was 13.5°, one-half degree different than the U.S.G.S. 1965 Geological Map and in substantial agreement with expected values estimated from the National Oceanic and Atmospheric Administration Map "Magnetic Declinations in the United States - Epoch 1975.0.0."

Laboratory Results

Results from Sample 1 area included in Table 9.B.1. The sample was demagnetized at 25 oersteds; demagnetization is a process used to eliminate effects from secondary components such as viscous or low temperature thermoremanent magnetizations. No paleopole position was plotted for Sample 1 due to a large alpha 95 value; alpha 95 is defined as the radius of a circle centered on the observed mean direction within which the true mean will fall 95 percent of the time. Small values indicate tight clustering about the mean. A good archaeomagnetic sample is defined by alpha 95 values less than 3.5°. Two other tests of reliability were calculated for the sample: the precision parameter and mean sample vector. The precision parameter is estimated by Fisherian statistics and values increase geometrically with internal consistency. The mean sample vector indicates internal consistency as the value approaches the number of specimens used for determination of the mean.

Table 9.B.1 Archaeomagnetic Results from Casa Roca

Archaeomagnetic Designation	Feature and Provenience Feature 3, Surface 1 Activity Area 1
Specimens used in final analysis/total collected	12/12
Degauss level	25 oersted
Mean Inclination	72.24
Mean Declination	359.70
Mean Intensity	0.515 by 15^4
Mean Sample Vector	8.97
Precision Parameter (k)	3.64
Alpha 95	26.56
Paleolatitude	70.16
Paleolongitude	250.94
Error along great circle (EP)	41.53
Error perpendicular to great circle (EM)	46.97

APPENDIX C

CERAMIC REPORT FOR CASA ROCA

by

William A. Lucius

Preliminary (inventory) analysis of the ceramic materials from Site 5MT2203 was accomplished by members of the Additive Analysis Laboratory of the D.A.P. Description of the preliminary analysis procedures, structure, and data interpretability is available in Lucius [21]. Familiarity with the inventory analysis program will aid in the understanding of the data and interpretations provided below.

Table 9.C.1 summarizes the ceramic assemblage for Casa Roca (ceramics collected during the initial survey are not included). Ceramic items are grouped by "culture categories and wares" (Lucius [22]). Wares of the Mesa Verde Culture Category are listed in sequence and reflect those items assigned to a local (Mesa Verde region) manufacturing tradition. Within each ware, temporally diagnostic "types" are listed sequentially from early to late, and grouped types (e.g., Early Pueblo Gray), which represent body sherds of the various wares, are listed last.

Reconstructable Ceramic (RC) items, which include all whole or fragmentary vessels as well as special nonvessel shapes, are not included in the data totals, but are discussed in this appendix. A graphic representation of diagnostic type occurrences, based on the relative percentage of each traditional type of the gray, white, and red ware categories has been included as a supplement to Table 9.C.1 (Figure 9.C.1). Only the temporally diagnostic types of the Mesa Verde Culture Category appear in this figure. The temporal designations for the diagnostic types are based on Breternitz et al. [13] with some adjustments as indicated by the dating control provided by the D.A.P. data base. The figure was constructed by calculating the percentage contribution (based on weight) of each type to the ware total. The relative contribution of each ware to the site ceramic total is included in parentheses with each

Table 9.C.1 Summary of Ceramics at Casa Roca

Ware / Traditional Type	By Count												Weights	
	Bowl		Jar		Other		Total		Rims		Modified			
	#	%	#	%	#	%	#	%	#	%	#	%	g	%
Mesa Verde Gray														
Chapin Gray			8	5.3	1	20.0	9	4.7	9	36.0			68.1	4.2
Mancos Gray			11	7.3			11	5.7	1	4.0			28.1	1.7
Mancos Corr			1	0.7			1	0.5	1	4.0			2.3	0.1
Early Pueblo			55	36.7			55	28.6					202.5	12.4
Late Pueblo			44	29.3			44	22.9					192.1	11.8
Corr Bod			7	4.7			7	3.6					50.1	3.1
Indeterminate					2	40.0	2	1.0					2.0	0.1
Mesa Verde White														
Cortez B/W	1	2.7	2		1	22.0	4	2.1	2	8.0			352.8	21.6
Early Pueblo	7	18.9	1				8	4.1					42.8	2.6
Late Pueblo	5	13.5	10		1	20.0	16	8.3	3	12.0			97.4	6.0
Mesa Verde Red														
Abajo R/O			1	0.7			1	0.5					2.5	0.2
Bluff B/R	5	13.5					5	2.6	3	12.0			45.0	2.8
Deadman's B/R	4	10.8					4	2.1	3	12.0			105.8	6.5
Early Pueblo	15	40.5	9	6.0			24	12.4	2	8.0			134.7	8.3
Chuska Gray														
Blue Shale Corr			1	0.7			1	0.5	1	4.0			305.5	18.7

Key:
B/W - Black-on-white
R/O - Red-on-orange
B/R - Black-on-red

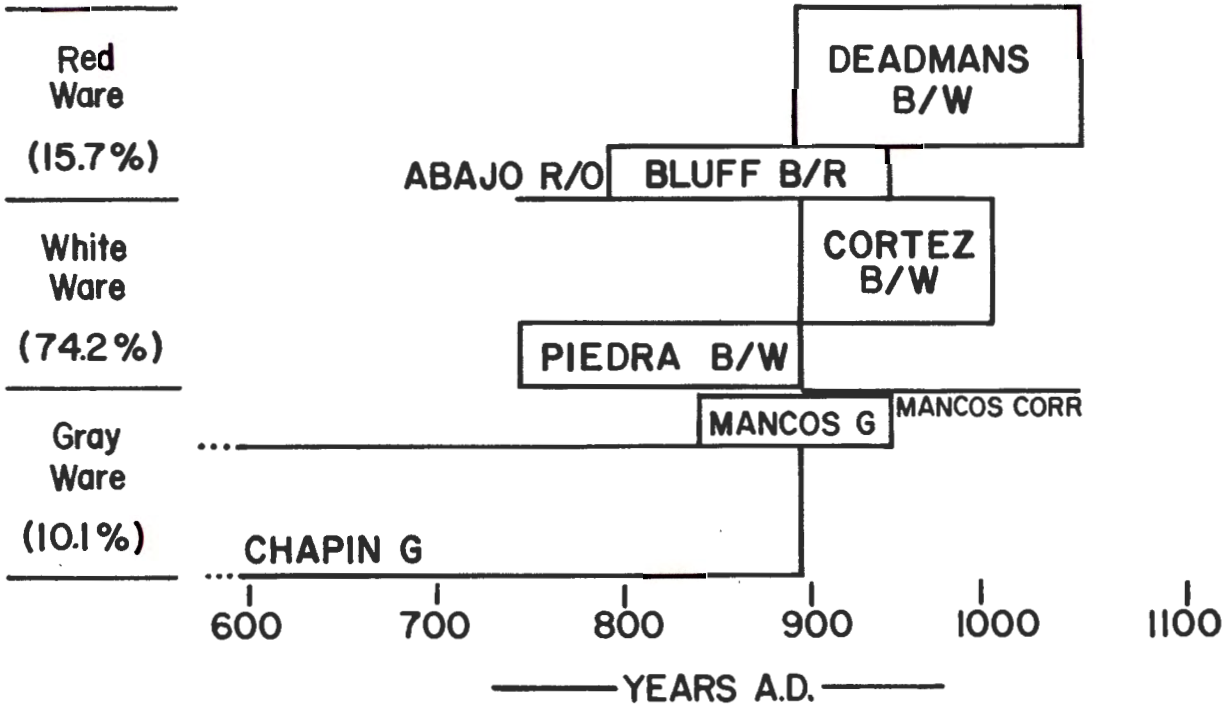


Figure 9.C.1 Diagnostic type occurrences for ceramics at Casa Roca.

ware. The figure allows for illustration of the range and intensity of diagnostic ceramic types for the site and for comparison of the various excavated and bladed sites of the D.A.P.

Table 9.C.2 summarizes the ceramic materials from selected cultural units at the site and from the surface collection. In contrast to Table 9.C.1, it does not include the entire site assemblage. Reconstructable vessels are also omitted from this table.

The ceramic complement from Site 5MT2203 reflects a range of occupation of approximately 100 years (A.D. 900-1000). The presence of late Pueblo I sherds (Mancos Gray and Bluff Black-on-red) in association with early Pueblo II materials (Cortez Black-on-white, Mancos Corrugated, and Blue Shale Corrugated) suggests an extended usage of the site (A.D. 850-1050). The primary temporal association of the site appears to be with Site 5MT4475 (McPhee Pueblo) (Brisbin [17]). Site 5MT2203 is a seasonal-use site which might represent limited activity by the same group of people responsible for the other (and minimal) Pueblo II usage of the D.A.P. area. The lack of post and late McPhee Phase sites in the area (A.D. 950-1050) can be cited as the rationale for dating the cessation of site usage by A.D. 950. The use of Site 5MT2203 during the McPhee Phase is most likely associated with the final occupation of McPhee Pueblo.

Crushed igneous cobble is the primary tempering agent in the site (73.4 percent by weight), with sherd and crushed rock also present. Crushed-sherd/crushed-rock temper is a temporal indicator for the Pueblo II and Pueblo III periods of the Mesa Verde Anasazi. A distinctive nonlocal temper type (trachybasalt) is also present in the collections in the form of a partial vessel (26.5 percent of total). The presence of a neck portion of a Blue Shale Corrugated jar is notable, as the derivation

Table 9.C.2 Ceramic Surface Collections for Casa Roca

	Surface Collection (N=13)	Room 1 floor (N = 7)	Activity Area 1 surface (N = 11)	Activity Area 2 surface (N = 3)	Activity Area 3 surface (N = 15)	Total	
	%	%	%	%	%	#	%
MESA VERDE GRAY WARE							
Chapin Gray	15.4					2	4.1
Mancos Gray					6.7	1	2.0
Early Pueblo Gray	38.5	71.4	63.6			17	34.7
Late Pueblo Gray					40.0	6	12.2
Corr Body Sherds					13.3	2	4.1
Dolores Brown					6.7	1	2.0
MESA VERDE WHITE WARE							
Cortez B/W					6.7	1	2.9
Early Pueblo White	7.7		18.2			2	6.1
Late Pueblo White	15.4		9.1		20.0	6	12.2
MESA VERDE RED WARE							
Abajo R/O		14.3				1	2.0
Deadmans B/R				33.3		1	2.0
Early Pueblo Red	23.1	14.3	9.1	66.6		7	14.3
TRADE WARES							
Chuska					6.7	1	2.0
OTHER							
TOTALS	100.0					49	100.
VESSEL FORMS							
Bowl	7.7	14.3	27.3	100.0		7	20.0
Jar	42.3	85.7	72.7		100.0	28	80.0
Other							

Key:
PL - Point Locations
Corr - Corrugated
B/W - Black-on-white
B/R - Black-on-red
R/O - Red-on-orange

of the vessel is ultimately from the Chuska Mountain area, located well to the south of the project area (Windes [12]). Trachybasalt (or sanadine basalt) temper appears in limited quantities just prior to A.D. 900 and by the final occupation of McPhee Pueblo (A.D. 900-1000) numerous examples of this foreign temper have been recovered. The presence of such a trade item in what is essentially a field house raises interesting questions concerning the value and distribution of trade ceramics in Pueblo II site types. No comparable field houses have been examined for comparison.

A total of four Reconstructable Ceramic (RC) items were recovered from the excavations. None of the items represent whole vessels; rather, they appear to be large sherds or vessel fragments (such as the Blue Shale Corrugated neck portion) which were discarded as somewhat more complete units and subsequently broken into smaller fragments prior to recovery by excavation operations. A Cortez Black-on-white bowl fragment (RC 2) and a Cortez Black-on-white dipper fragment (RC 3) were recovered from the occupational surfaces of Activity Area 2 and Room 1, respectively. Sherds of the Blue Shale Corrugated vessel fragment (RC 1) were found on the surface of Activity Area 3, on occupational surfaces not defined as activity areas, and in fill units. Similarly, sherds of a Cortez Black-on-white jar fragment (RC 4) were found on the occupational surface of Activity Area 3, on occupational surfaces not assigned to an activity area, and in fill.

APPENDIX D

LITHICS REPORT FOR CASA ROCA

by

Thomas H. Hruby and Carl J. Phagan

The data presented in Tables 9.D.1 9.D.2, and 9.D.3 represent part of the lithic reductive-technology analysis completed for Site 5MT2203. From a 12-attribute Flaked Lithic Tool (FLT) analysis system, 4 attributes were selected to illustrate general technological, functional, and raw-material variablity. A traditional, morphological-use classification, a ranked estimation of production technology input for dorsal and ventral surfaces, and a grain-size evaluation are included. Six variables are included from the Flaked Lithic Debitage (FLD) analysis system: grain-size ranking, classification of items with cortex, items which retain a striking platform, obsidian items, mean weight, and total number of debitage items. The Nonflaked Lithic Tool (NFLT) analysis system is represented by four variables: traditional morphological-use item classification, production-input evaluation, indication of item completeness, and raw-material, grain-size evaluation. The complete lithic-analysis systems are described elsewhere in D.A.P. publications (Phagan [23]).

During 1980 the D.A.P. lithic-laboratory personnel have repeatedly reviewed the utility and reliability of the lithic-analysis systems. In this review, a number of analysis variables have been modified, particularly the item morphological-use variables on both the FLT and NFLT systems. Analytical perspectives change as information accumulates and as models of tool production and use improve. In order to minimize the effects of this analytical modification on interpretation, the observed values of these variables have been regrouped into larger categories within which analytic consistency is reliable.

For comparative purposes, the tables include data for a grouping of temporally and functionally similiar D.A.P. sites, as well as data for all D.A.P. Anasazi sites analyzed prior to the 1980 field season. The latter

"Anasazi group" data have been generated from computer files which have not undergone complete editing, and final figures may differ slightly from those presented. Comparisons and interpretations presented here, particularly those of an intersite nature, are based on a qualitative assessment of lithic profile variation, since significance has not been statistically established.

Site 5MT2203 is classified as a seasonally occupied field house in the Cline Subphase of the McPhee Phase. Since it is the only field house excavated from the Cline Subphase so far, three field houses from the Periman Subphase of the McPhee Phase will be used for comparisons; comparisons are based on the phase level, not the subphase level as in other appendixes.

There are just 16 flaked lithic tools from Site 5MT2203; the small assemblage allows for few interpretations. The percentage of FLT is similar for Site 5MT2203 and the Anasazi group, about 60 percent; the group of Periman Phase field houses has 43 percent flaked lithic tools. The proportion of flaked lithic tools at Site 5MT2203 is unique for field houses and is probably a result of the small sample size. Though there are some small differences between Site 5MT2203 and the other two profiles, patterns within Tables 9.D.1 and 9.D.2 indicate that both groups of field houses are closely related. As in other field houses, choppers/scraper planes and projectile points are overrepresented, while utilized flakes are underrepresented, suggesting a similar specialization, probably hunting, at other field houses.

The FLT assemblage appears comparable with other field houses, even though the number of items is very low. All field houses show a relatively low percentage of microscopic-grained items and a high number

relatively low percentage of microscopic-grained items and a high number of flakes with platforms, indicating a selection for locally available raw materials and the production on site of low-input tools. The relatively large mean weight of the debitage might also support this conclusion.

The NFLT analysis results for Site 5MT2203 are very difficult to interpret because there were so few tools recovered. Nothing appears to be unusual in the profile except the unusually low number of nonflaked lithic tools.

In summary, lithic evidence indicates that Casa Roca is closely related to other field houses in the project area. The small sample size, however, allows for few significant interpretations.

Table 9.D.1 Lithic Analysis Data Summary for Casa Roca, Flaked Lithic Tools (Page 1 of 2)

	Surface Collection (N = 1)		Room 1 floor (N = 6)		Activity Area 1 surface (N = 1)		Other Excavated Units (N = 8)	
	#	%	#	%	#	%	#	%
MORPHO-USE FORM								
Indeterminate							1	12.5
Utilized flakes			2	33.3			2	25.0
Cores	1	100.0	1	16.7				
Choppers, Scraper planes			2	33.3	1	100.0		
Thick scrapers			1	16.7			3	37.5
Thin scrapers								
Bifaces								
Projectile points							2	25.0
Specialized forms								
THINNING STAGE: DORSAL								
Indeterminate								
Unmodified core	1	100.0	1	16.7				
Unthinned item, w/cortex			2	33.3			2	25.0
Unthinned item, no cortex			2	33.3			4	50.0
Prelim shaping, w/cortex								
Prelim shaping, no cortex								
Primary thinning			1	16.7				
Secondary thinning								
Well-shaped					1	100.0	2	25.0
Highly stylized								
THINNING STAGE: VENTRAL								
Indeterminate							1	12.5
Unmodified core	1	100.0	1	16.7				
Unthinned item, w/cortex								
Unthinned item, no cortex			4	66.7			2	25.0
Prelim shaping, w/ cortex								
Prelim shaping, no cortex								
Primary thinning			1	16.7				
Secondary thinning								
Well-shaped					1	100.0	5	62.5
Highly stylized								
GRAIN SIZE								
Medium (coarse)			1	16.7	1	100.0		
Fine								
Very Fine (detrital)	1	100.0	4	66.7			4	50.0
Microscopic (nongranular)			1	16.7			4	50.0

Table 9.D.1 Lithic Analysis Data Summary for Casa Roca, Flaked Lithic Tools (Page 2 of 2)

	Site 5MT2203 Total (N = 16)		McPhee Phase Sites 2191, 4512 & 2205 Total (N = 171)		Anasazi Group (N = 7048)
	#	%	#	%	%
MORPHO-USE FORM					
Indeterminate	1	6.3	3	1.8	0.5
Utilized flakes	4	25.0	57	33.3	43.6
Cores	2	12.5	33	19.3	19.0
Choppers, Scraper planes	3	18.8	40	23.4	10.4
Thick scrapers	1	6.3	10	5.8	6.4
Thin scrapers	3	18.8	7	4.1	10.1
Bifaces			4	2.3	3.9
Projectile points	2	12.5	13	7.6	3.7
Specialized forms			4	2.3	2.3
THINNING STAGE: DORSAL					
Indeterminate			2	1.2	0.3
Unmodified core	2	12.5	42	24.6	19.8
Unthinned item, w/cortex	4	25.0	32	18.7	31.7
Unthinned item, no cortex	6	37.5	40	23.4	31.4
Prelim shaping, w/cortex			22	12.9	3.7
Prelim shaping, no cortex			10	5.8	2.6
Primary thinning	1	6.3	2	1.2	1.2
Secondary thinning			3	1.8	1.1
Well-shaped	3	18.8	16	9.4	7.5
Highly stylized			2	1.2	0.7
THINNING STAGE: VENTRAL					
Indeterminate	1	6.3	1	0.6	0.2
Unmodified core	2	12.5	39	22.8	19.5
Unthinned item, w/cortex			6	3.5	1.9
Unthinned item, no cortex	6	37.5	84	49.1	64.4
Prelim shaping, w/ cortex			3	1.8	1.4
Prelim shaping, no cortex			17	9.9	3.4
Primary thinning	1	6.3	2	1.2	1.2
Secondary thinning			1	0.6	1.0
Well-shaped	6	37.5	16	9.4	6.4
Highly stylized			2	1.2	0.7
GRAIN SIZE					
Medium (coarse)	1	6.3	18	10.5	2.1
Fine			27	15.8	6.2
Very Fine (detrital)	10	62.3	99	57.9	65.3
Microscopic (nongranualr)	5	31.3	27	15.8	26.3

Table 9.D.2 Lithic Analysis Data Summary for Casa Roca, Flaked Lithic Debitage (Page 1 of 3)

	Surface Collection (N = 19)		Room 1 floor (N = 21)		Activity Area 1 surface (N = 7)	
	#	%	#	%	#	%
GRAIN SIZE						
Medium (coarse)						
Fine	2	10.5	7	33.3		
Very Fine (detrital)	14	73.7	13	61.9	7	100.0
Microscopic (nongranular)	3	15.8	1	4.8		
Items with Cortex	7	36.8	4	19.0	1	14.3
Items with Platform	10	52.6	11	52.4	3	42.9
Obsidian Items						
Mean Weight (grams)	20.5		10.1		10.4	
Total Debitage	19		21		7	

Table 9.D.2 Lithic Analysis Data Summary for Casa Roca, Flaked Lithic Debitage (Page 2 of 3)

	Activity Area 2 (N = 7)		Activity Area 3 (N = 9)		Other Excavated Units (N = 77)	
	#	%	#	%	#	%
GRAIN SIZE						
Medium (coarse)	1	14.3				
Fine						
Very Fine (detrital)	4	57.1	8	88.9	70	90.1
Microscopic (nongranular)	2	28.6	1	11.1	7	9.1
Items with Cortex	3	42.9	1	11.1	18	10.4
Items with Platform	6	85.7	5	55.6	45	58.4
Obsidian Items						
Mean Weight (grams)	12.8		8.2		9.8	
Total Debitage	7		9		77	

Table 9.D.2 Lithic Analysis Data Summary for Casa Roca, Flaked Lithic Debitage (Page 3 of 3)

	Site 5MT2203 Total (N = 140)		McPhee Phase Sites 2191, 4512 & 2205 Total (N = 1538)		Anasazi Group (N = 66,095)
	#	%	#	%	%
GRAIN SIZE					
Medium (coarse)	1	0.1	76	4.9	3.2
Fine	9	6.4	594	38.6	21.4
Very Fine (detrital)	116	82.9	729	47.4	51.6
Microscopic (nongranular)	14	10.0	139	9.0	23.7
Items with Cortex	34	24.3	392	25.5	25.9
Items with Platform	80	57.1	909	29.1	38.8
Obsidian Items			2	0.1	18.0
Mean Weight (grams)	11.38		9.8		7.93
Total Debitage	140		1538		66,095

Table 9.D.3 Lithic Analysis Data Summary for Casa Roca, Nonflaked Lithic Tools (Page 1 of 2)

	Surface Collection (N = 3)		Room 1 floor (N = 2)		Other Excavated Units (N = 4)	
	#	%	#	%	#	%
MORPHO-USE FORM						
Indeterminate	1	33.3				
Generalized, unhafted					2	50.0
Hammerstones			1	50.0	1	25.0
Manos	1	33.3			1	25.0
Slab Metates						
Trough Metates			1	50.0		
Unspecified & Frag Metates						
Generalized, hafted						
Miscellaneous Specialized	1	33.3				
PRODUCTION EVALUATION						
Indeterminate						
Nodule	1	33.3	1	50.0	4	100.0
Minimally Shaped	2	66.7				
Well-shaped			1	50.0		
High Stylized						
ITEM COMPLETENESS						
Indeterminate						
Small Fragment			1	50.0	2	50.0
Partial Implement						
Complete Implement	3	100.0	1	50.0	2	50.0
GRAIN SIZE						
Indeterminate	1	33.3			1	25.0
Coarse						
Medium	1	33.3	1	50.0		
Fine	1	33.3	1	50.0	2	50.0
Nongranular					1	25.0

Table 9.D.3 Lithic Analysis Data Summary for Casa Roca, Nonflaked Lithic Tools (Page 2 of 2)

	Total (N = 9)		McPhee Phase Sites 2191, 4512 & 2205 Total (N = 224)		Anasazi Group (N = 4318)
	#	%	#	%	%
MORPHO-USE FORM					
Indeterminate	1	11.1	31	13.8	9.2
Generalized, unhafted	3	33.3	31	13.8	24.0
Hammerstones	1	11.1	27	12.1	9.9
Manos	2	22.2	81	36.2	33 5
Slab Metates			10	4.5	2.1
Trough Metates	1	11.1	9	4.0	9.4
Unspecified & Frag Metates			23	10.3	5.2
Generalized, hafted			1	0.4	2.5
Miscellaneous Specialized	1	11.1	11	4.9	4.0
PRODUCTION EVALUATION					
Indeterminate			38	17.0	8.4
Nodule	6	66.7	128	12.5	53.5
Minimally Shaped	2	22.2	40	25.0	16.7
Well-shaped	1	11.1	18	37.5	21.1
Highly stylized					0.1
ITEM COMPLETENESS					
Indeterminate					0.9
Small Fragment	3	33.3	9	12.5	3.3
Partial Implement			121	54.0	45.6
Complete Implement	6	66.7	94	42.0	50.8
GRAIN SIZE					
Indeterminate	2	22.2	9	4.0	8.1
Coarse			55	24.6	16.5
Medium	2	22.2	17	52 2	39.4
Fine	4	44.4	39	17.4	34.5
Nongranular	1	11.1	4	1.8	1.2

APPENDIX E

FAUNAL REPORT FOR CASA ROCA

by

Steven D. Emslie

Introduction

This reports includes the analysis of faunal remains recovered from Site 5MT2203 during the 1979 field season. All material was collected through excavation using one-quarter-inch mesh screens.

Methods

Faunal remains were identified using modern comparative skeletons collected in the D.A.P. region. All bones were identified to species when possible or to other taxonomic categories. Bones of the cottontail, Sylvilagus sp., were identified only to genus, as several species occur in the D.A.P. region which are not osteologically recognizable. One bone of a grouse was not further identified due to lack of adequate comparative material. Minimum number of individuals (MNI) for each species represented in the entire site collection was calculated by counting the most numerous element of the same side of the body.

The Data

A total of 44 bones, representing 5 species and 11 taxonomic categories, was recovered from the site (Table 9.E.1). Bones, and represented MNI's, of the cottontail and Gunnison's prairie dog are most numerous, followed by unidentifiable mammal, rodent, jackrabbit, long-tailed weasel, mule deer, and grouse. Identification of bones found on the floor of Room 1 is presented in Table 9.E.2. Unidentifiable mammal, cottontail, rodent, prairie dog, gopher, and weasel are represented on the floor. No worked bone or bone displaying cut marks was recovered from the site.

Table 9.E.1 Faunal Taxa Identified at Casa Roca

Taxon	No. of Bones	MNI*
Mammal, small	6	
Mammal	1	
Mammal, large	3	
Black-tailed jackrabbit (*Lepus californicus*)	2	1
Cottontail (*Sylvilagus* sp.)	10	3
Sciuridae	8	
Gunnison's prairie dog (*Cynomys gunnisoni*)	10	3
Valley pocket gopher (*Thomomys bottae*)	1	1
Long-tailed weasel (*Mustela frenata*)	1	1
Mule deer (*Odocoileus hemionus*)	1	1
Tetraonidae (unidentified grouse)	1	
TOTAL	44	

* MNI - minimum number of individuals

Table 9.E.2 Point Locations (PL's) of Nonhuman Bone Recovered at Casa Roca

FS/Cat.	PL	Taxon	Element
51-02-2,	PL 38	Thomomys bottae	skull, distal 1/2
55-02-1,	PL 27	Cynomys gunnisoni	right femur
55-02-2,	PL 28	Cynomys gunnisoni	right mandible w/ proximal end broken
55-02-3,	PL 30	Mammal, small	long bone fragment
55-02-4,	PL 30	Cynomys gunnisoni	right scapula, distal
55-02-5,	PL 38	Mammal, small	scapula, medial
56-02-5,	PL 17	Mammal, small	lumbar vertebra
56-02-6,	PL 17	Sylvilagus sp.	left calcaneum
56-02-7,	PL 17	Cynomys gunnisoni	right and left maxillae, medial w/ left burned completely
57-02-1,	PL 1	Cynomys gunnisoni	right femur
57-02-2,	PL 26	Sciuridae	right ilium
58-02-1,	PL 11	Sciuridae	right ulna w/ proximal end broken
58-02-2,	PL 8	Mammal, large	long bone fragment
58-02-3,	PL 9	Sciuridae	left femur w/ ends broken
58-02-4,	PL 22	Mammal, small	long bone fragment
58-02-5,	PL 13	Mustela frenata	left tibia, complete (length: 37.8 mm)

Discussion

The relatively small size of the faunal collection from this site allows few interpretations. Bones of the valley pocket gopher and Gunnison's prairie dog may be intrusive in the site; these species are common in the D.A.P. region and prefer areas of deep light soil. However, they commonly occur in archaeological sites in the Southwest and their use as food by modern tribes is known. These species are also highly attracted to agricultural areas and their presence near prehistoric fields would have allowed the prehistoric populations to consistently snare and trap them. Similar inferences may be made concerning the cottontail remains in the site. The presence of all these species on the floor at the site supports these cultural interpretations.

The mule deer is also common in the D.A.P. region and is widely used as a food source by modern tribes. One bone of this species, a fragment of a metapodial, suggests similar uses prehistorically at Site 5MT2203.

The long-tailed weasel is common in the D.A.P. region, particularly along streams and rivers, where it preys on small mammals. The presence of this species on the floor at the site indicates it is cultural and may have been eaten or used for its skin. Another possibility is suggested by the fact that among the Pueblo Indians weasels are believed to have great supernatural powers (Tyler [24]).

Conclusions

Unfortunately, the relatively small size of the faunal assemblage from this site allows few ecological or cultural interpretations. All represented species commonly occur in the D.A.P. region and were probably used by the prehistoric occupants, primarily for food. Comparison of this

site with other sites in the D.A.P. region, once all analyses are complete, may reveal further information on prehistoric faunal utilization at Site 5MT2203.

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