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The 1979 Testing Program

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During the 1979 field season of the Dolores Archaeological Program, nine sites were partially excavated as part of a testing program. This program was initiated to supplement data obtained from fully excavated sites. Specifically, this program was designed to provide additional information about the occupation of the Sagehen Flats Locality of the Dolores Project area during the Sagehen Phase which is comparable to the Basketmaker III-Pueblo I period. Each site investigated as part of this program was subjected to standard testing procedures that were designed to extract a considerable amount of data without expending the time and effort that is required for intensive excavation. Investigation of these sites revealed that five of them were limited activity sites and four were hamlets; all were occupied or used during the Sagehen Phase.

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ABSTRACT

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PART I: AN OVERVIEW OF THE 1979 TESTING PROGRAM

INTRODUCTION

During the 1979 field season of the DAP (Dolores Archaeological Program) a site testing program was initiated. As a result of this program 10 sites were tested, and 9 of the subsequent site reports are included as sections of this report. These sites were investigated by David Greenwald and Nancy Hewitt.

The rationale behind this testing program is simple and straightforward. Within the Dolores Project area there are many more sites than can be excavated thoroughly in the time allowed. While sites representing various phases and communities have been and will be totally excavated, the proportion of totally excavated sites is small. This small sample leaves unanswered many questions that have been outlined in the DAP Research Design. Many of these questions are very general, such as "How many sites within a given locality were occupied during the Sagehen Phase?" or "What is the population estimate for the McPhee Phase?" Although some of the information to answer these questions is available from initial survey records, it is often hard to determine what is below the surface based on what is on the surface. Therefore, temporal and functional interpretations based on survey data alone are often limited and risky.

The testing program was designed to bridge the gap between surveyed sites and thoroughly excavated sites, and to allow for the collection of data that could not be obtained from survey operations. Although the testing program did not provide the detailed sort of data that can be obtained through intensive excavation, it provided basic data that can be

used to help answer general questions. It is also data that otherwise would have been lost forever due to the McPhee Dam construction activities.

The DAP mitigation design (Knudson et al. 1981:42) outlines various levels of field recovery efforts. These levels represent relative positions along a continuum of effort intensity and are called "tracks." The tracks are numbered from 4 to 1 with 4 being the least intensive level. According to this design the testing program is considered to be Track 2 work, which is less than intensive excavation but more than surficial examination.

Site Selection

During the 1979 field season, intensive excavations focused on sites that are located in the Sagehen Flats Locality and that are dated to the Sagehen Phase (A.D. 600-850). Data recovered from the intensive excavation of these sites along with the survey data indicated that there were sizable dispersed communities in this part of the Escalante Sector. However, only a small percentage of the known sites in this area were scheduled to be completely excavated, thus many questions about these early communities remained unanswered. Therefore, sites to be tested were chosen because of their potential to augment the data base obtained from excavated sites. The goal was to obtain more information not only about early habitation sites but also about early limited activity sites. An assessment of potential sites was made on the basis of survey data and information obtained from magnetometer surveys. This assessment resulted in the selection of 10 sites to be included in the 1979 testing program. Table 1 lists the selected sites by number and name; sites will be referred to by name throughout this report.

Table 1. Tested sites, numbers and names

Site number	Site name
5MT2162	Lone Pine Hamlet
5MT2236	Horsefly Hamlet
5MT2844	Charred House
5MT2848	Rusty Ridge Hamlet
5MT2853	Deer Hunter Hamlet
5MT2857	Cansado Camp
5MT4513	Lee Side Camp
5MT4640	Sunflower Hamlet
5MT4642	Desecho Camp
5MT4649	Roadside Camp

ENVIRONMENTAL SETTING

The sites tested during the 1979 field season are located in the Sagehen Flats Locality; the limits of the locality and the locations of these sites are shown in figure 1. In DAP terminology a locality is an administrative subdivision of the Escalante Sector; the sector is basically coterminous with the project area.

The locality divisions were based primarily on environmental characteristics (Kane 1981a:44) and are intended to provide convenient and standard geographical references for DAP staff communication; they do not reflect prehistoric divisions. Although local topographic features create subtle environmental variation within the localities, the following descriptions generally apply to all of the tested sites. Since presence or absence and availability of natural resources often affects site location, this section is presented with respect to prehistoric utilization of these resources.

Climate

This portion of southwestern Colorado has a semiarid climate characterized by low humidity and wide diurnal temperature changes. Annual moisture, which averages 460.5 mm (recorded at the U.S. Weather Bureau Station in Dolores, Colorado), is primarily attained during two wet periods: one during winter and early spring and the other in late summer. July is the hottest month with an average temperature of 19.7° C, and January is the coldest month with an average temperature of -3.1° C. Frosts can occur as late as mid-June and begin as early as mid-September, often resulting in a short growing season (Hewitt 1980; Montgomery

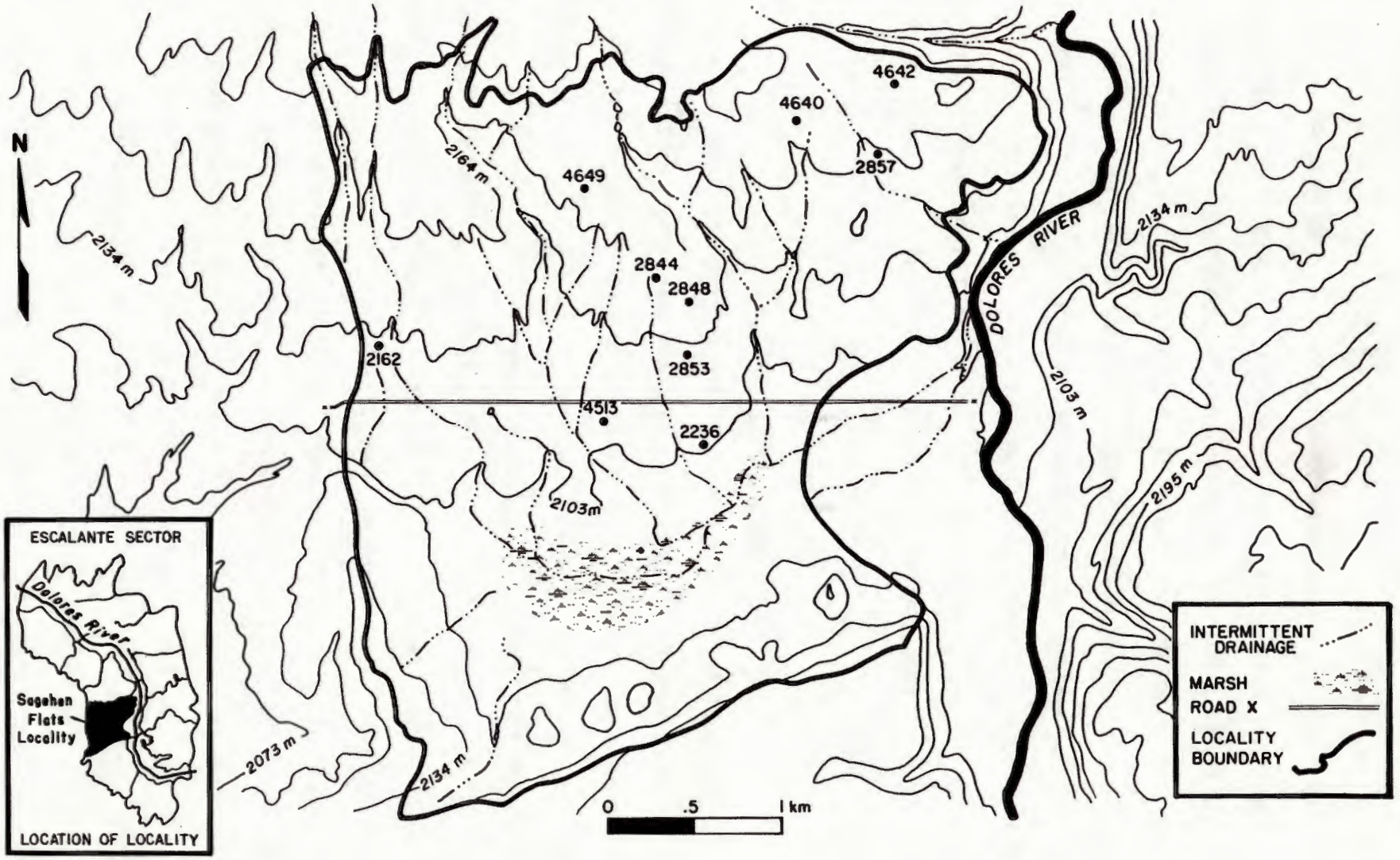

Figure 1. Location of tested sites within the Sagehen Flats Locality.

1982:6). Regional climatic data collected between 1964 and 1975 indicate that the frost-free period ranges from 100 to 145 days (Kane 1981b). However, during 1979 and 1980, according to data collected at a DAP weather station just north of the Sagehen Flats Locality, the frost-free period was less than 100 days (Shuster 1983). Although these may have been anomalous years, this has important implications for prehistoric land-use practices since many crops require at least 100 frost-free days to attain maturity. Although the Anasazi might have been growing hardy strains of maize and other crops, local climatic variation might have resulted in frequent crop failure (Kane 1981b).

Physiographic Features

In contrast to other localities in the project area, the terrain within the Sagehen Flats Locality is flat and open. Most of the locality consists of flat bottomlands surrounded by uplands in the form of low hillocks and ridges. The central feature of the locality is the Sagehen Flats Marsh that occupies a lowland area west of the Dolores River.

Elevation within the locality ranges from 2075 to 2135 m. The most striking vertical relief occurs at the eastern edge of the locality where low cliffs rise above the river (Kane 1981b).

Two major geologic phenomena are responsible for the topographic features of the locality: a dip slope and the House Creek Fault. The dip slope, an area of low relief, is the most prominent geomorphic feature in the project area and is controlled by the dip of the Dakota Sandstone. Erosion has sculpted this slope into "a series of broad, parallel trending, low relief, convex ridges separated by shallow drainage ways" (Leonhardy and Clay 1982:38). Arroyos have also cut into the dip slope

but have created deeper, more pronounced drainages. The House Creek Fault forms the southern edge of the locality. Here the northern block drops about 150 m below the southern block creating a fault line scarp (Leonhardy and Clay 1982:40). Many hillocks occur along this fault; all of them are erosional remnants of Mancos Shale.

All of the tested sites included in this report are located on the north side of the marsh, which has a flatter terrain than the south side. Hills and ridges in this northern area appear to be particularly suitable for habitation sites, possibly because of their proximity to valuable resources such as building stone and arable soils. Exposed areas of Dakota Sandstone are plentiful in this area, and this stone was widely used for tools and construction. Other lithic tool sources are available in the Dolores River canyon and along the House Creek Fault where underlying strata are exposed.

Water was also an important resource and could have been obtained from the Dolores River and intermittent drainages in the north Sagehen Flats area. If the marsh existed prehistorically, it too might have been a source of water.

Soils

A variety of soil types occurs within the Sagehen Flats Locality, but only those associated with the tested sites are included in this discussion. Except for the Gladel soil series, all of the soil types associated with the tested sites have developed in deep loess or alluvium and are probably well suited for growing crops since they are deep and well drained (Leonhardy and Clay 1982). Their depth also makes them ideal for the construction of pitstructures. The sites and the soils with which

they are associated are listed in table 2. For more detailed discussions of DAP soils terminology and soil types refer to Leonhardy and Clay (1982).

Table 2. Soil types associated with tested sites

Site name	Soil type
Charred House	Bowdish-Pulpit complex
Cansado Camp	Witt loam
Lee Side Camp	Sagehen Paleosol
Desecho Camp	Witt loam
Roadside Camp	Gladel stony fine sandy loam
Lone Pine Hamlet	Witt, Pulpit, or Sharps (undifferentiated) loam
Rusty Ridge Hamlet	Bowdish-Pulpit complex
Deer Hunter Hamlet	Bowdish-Pulpit complex
Sunflower Hamlet	Witt loam
Horsefly Hamlet	Bowdish-Pulpit complex

Flora

Due to modern agricultural practices most of the Sagehen Flats Locality is characterized by disturbed vegetation zones (Kane 1981b). This is particularly true north of the marsh where the tested sites are located. At the time of excavation this area was planted with either wheat or pinto beans. A few areas around these fields appear to be undisturbed woodlands. These vegetation zones include pinyon-juniper woodlands and scrub oak woodlands. If these zones were present during prehistoric occupation of the area, they would have provided many necessary resources such as nuts, berries, seeds, and wood.

South of this area is the marsh and its surrounding wetlands, which support a lush growth of cattails (Typha latifolia), willow (Salix sp.), and bulrush (Scirpus sp.). This area would have added a variety of plants to the resource base of a prehistoric foraging group, but the question of

whether or not the marsh existed in the prehistoric past has not been resolved (Kane 1981b).

Along the Dolores River stands a riparian woodland that may have been exploited by groups living in the northern part of the locality. Various woods, nuts, and berries are available in this vegetation zone.

Fauna

Each of the vegetation zones found in the locality also supports a variety of animal species. In particular the area north of the marsh is part of the wintering ground for American elk (Cervus elaphus) and mule deer (Odocoileus hemionus). Smaller mammals are more abundant and include mice (Peromyscus spp. and Perognathus spp.), cottontails (Sylvilagus spp.) jackrabbits (Lepus spp.), chipmunks (Eutamias spp.), gophers (Thomomys spp.), and ground squirrels (Spermophilus spp.). Several predator species are also found in this area and include coyote (Canis latrans), badger (Taxidea taxus), bobcat (Lynx rufus), and gray fox (Urocyon cinereoargenteus) (Montgomery 1982; Kane 1981b). Numerous birds, snakes, and lizards also inhabit this part of the locality.

Many of the faunal species probably were important food resources to prehistoric peoples living in the locality. Data recovered from sites in the project area and in the surrounding region (e.g., Mesa Verde) indicate that many of these species were available and exploited in the prehistoric past (Rohn 1971; Hayes and Lancaster 1975).

Historic Land Use

Modern farmers living in the Dolores River valley have used the flatland areas in the Sagehen Flats Locality for dryland farming since the

1930's. The area north of County Road X (fig. 1) seems to be a more suitable farming area since the area continues to be farmed, but the area south of this road was abandoned sometime in the 1950's (Duranceau 1980).

Before plowing, the farmers apparently dragged a chain across the area to remove vegetation; both of these activities have had adverse effects on sites in the locality. Chaining can destroy surface structures and greatly displace items located on the ground surface. Plowing destroys surface structures and occupational surfaces and displaces artifacts to a depth of 30-40 cm. This "plow zone" is so disturbed that the archaeological integrity of items in this zone is extremely questionable. Therefore, this zone is usually removed as a single unit during excavation activities.

DAP TEMPORAL AND SPATIAL SYSTEMATICS

In order to answer questions relating to the DAP research design a well-conceived and systematic scheme of spatial and temporal units was devised (Kane 1981a). Since some of the terms and concepts used in this scheme are unique to the DAP and are used in the following site reports, they will be briefly described here. Although spatial and temporal units occasionally overlap, they can be thought of as separate hierarchical constructs.

Spatial Systematics

According to the DAP scheme spatial units can be broken into intra-community and intercommunity types. Both types have their own usefulness for studying prehistoric cultures. Table 3 lists units belonging to each type and includes a brief definition of each. The smallest unit is at the top of the table, the largest unit is at the bottom.

Temporal Systematics

For initial investigations in the project area in 1978, the Pecos Classification system was used to make temporal assignments. But as analysis and excavation operations increased it became apparent that the Pecos system was not entirely suitable; therefore, a modified temporal system was developed (Kane 1981a). This system follows basic archaeological schemes by using terms such as phase and subphases; however, some terms are unique to the DAP and should be explained for clarity. Table 4 lists the DAP temporal units and includes a brief definition of each. The smallest unit is listed at the top of the table, the largest is at the bottom.

Table 3. DAP spatial systematics

Intracommunity units	Definition
Activity area	Physical locus where a single or main activity was performed
Use area	Physical locus where multiple activities were performed
Household cluster	Space and facilities used by a household
Interhousehold cluster	Space and facilities used by several households
Habitation	One or more household clusters in a centralized location
Community cluster	Habitations plus outlying camps, use areas and activity areas used by a community
Intercommunity units	**Definition**
Locality	Subdivision of sector, regarded as maximum subsistence - settlement unit
Sector	Spatially related groups of localities
District	Group of sectors sharing the same general cultural patterns
Region	Groups of districts sharing the same general cultural patterns

Source: Data from Kane 1981a.

Table 4. DAP temporal systematics

Unit	Definition
Episode	Briefest use of a site, may be limited to a few hours
Element	A single major building or remodeling event, substantial occupation
Component	Manifestation of a phase at a site, consists of one or more elements
Subphase	Division of a phase, consists of one or more elements
Phase	A unit possessing traits that distinquish it from other similar units
Local sequence	Chronological sequence of components within a community cluster
Sector sequence	Manifestation of a tradition in a single sector; sequence of phases
Subtradition	Division of a tradition; assemblage of phases
Tradition	Temporal and spatial divisions of cultures

Source: Data from Kane 1981a; Farley 1982.

ARCHAEOLOGICAL SETTING

Although localities are convenient spatial units for discussion of environment procurement zones, they are not as well suited for discussions of prehistoric social groups. The community is a more realistic unit for studying social groups. Admittedly, it is difficult to define the limits of a prehistoric community, and the assignment of sites to certain communities is based primarily on relative proximity of sites to each other and on the character and temporal placement of the sites. The material or archaeological remnant of the community is the community cluster.

Various types of community clusters have been identified in the project area. These types are defined by the degree of site dispersal within the cluster (Kane 1981a:39). The community cluster patterns change through time as sites become more aggregated. The earliest identifiable communities in the Escalante Sector belong to the Archaic period. The manifestation of the Archaic period is quite limited and the few identified sites are widely scattered throughout the Escalante Sector. Kane (1981a:35) has postulated that Archaic communities practiced a seasonal round of restricted wandering; such groups are termed bands. Most site components and materials thought to represent the Archaic period have been assigned to the North Marsh Band territory, an early dispersed community cluster.

Early in the Anasazi Tradition, the population was distributed in small farmsteads or hamlets consisting of one or two pithouses. Although these hamlets are located several hundred meters from each other, dispersed aggregations of these hamlets have been identified. These dispersed communities are called neighborhoods, and their material remnants are

called neighborhood clusters. Several such clusters have been identified and defined for the Escalante Sector.

Later in the Anasazi sequence the communities become nucleated settlements with village sites as community centers that have smaller outlying habitations and limited activity sites. The material remnants of these communities are called village clusters, and many have been identified within the sector.

Tested sites within the Sagehen Flats Locality have been assigned to four different community clusters. The earliest community cluster is the North Marsh Band Territory, which is a sector-wide cluster. Two other clusters are restricted to the locality. The West Sagehen Neighborhood Cluster consists of sites located in the western portion of the locality that date to the Sagehen Phase (A.D. 600-850). The Milhoan Neighborhood Cluster consists of sites located in the northeastern part of the locality that also date to the Sagehen Phase. The fourth community cluster is the McPhee Village Cluster. The center of this cluster, McPhee Village, is located in the Periman Locality, but it has outliers in several adjacent localities. Sites belonging to this cluster date to the McPhee Phase (A.D. 850-975). Table 5 lists the tested sites and the community clusters with which they are associated.

Table 5. Community clusters and associated tested sites

Community cluster	Tested sites
North Marsh Band Territory	Lee Side Camp, Element 1 Horsefly Hamlet, Element 1
West Sagehen Neighborhood Cluster	Lee Side Camp, Element 2 Lone Pine Hamlet Charred House Rusty Ridge Hamlet Deer Hunter Hamlet Horsefly Hamlet, Element 2
Milhoan Neighborhood Cluster	Cansado Camp Sunflower Hamlet Desecho Camp Roadside Camp
McPhee Village Cluster	Lee Side Camp, Element 3

INVESTIGATIVE STRATEGY

Magnetometer Survey

Investigation of each of the tested sites (with the exception of Desecho Camp) began with a magnetometer survey. This survey employed a proton magnetometer to record subsurface magnetic anomalies. A map showing these anomalies was used to help determine site limits. In most cases, anomalies that appeared to be the result of archaeological phenomena were investigated through blading or auger testing.

Surface Collection

The next step in the testing of sites involved the establishment of a grid system over the extent of the surface artifact scatter; this grid was tied into the previously established magnetometer grid. The grid consisted of 4- by 4-m squares and was used as a means of standardizing the surface collection. At each site, artifacts from every other square were recovered, which resulted in a 50-percent surface collection. All artifacts from the collected squares were sent to the laboratory for analysis. During the surface collection activities a topographic map was made of the site area.

Subsurface Investigations

After the surface collection was completed each site was bladed with mechanized equipment to remove the plow zone, except in areas where rubble mounds were present. This blading was done to expose structures and features that were not observable on the surface. Once these features and

structures below the plow zone were identified, they were usually further investigated by hand in order to determine type, size, shape, and depth. These investigations varied from site to site, but included auger testing, shovel scraping, and the digging of small test trenches. If pitstructures were present, they usually were trenched north to south with a backhoe to reveal the limits of the pitstructure and to determine whether or not a ventilator or antechamber was present. An east-west trench was also excavated to determine the limits of the structure, the presence or absence of a bench, and the location of the central hearth. Some magnetic anomalies were also trenched to determine their correlation with cultural phenomena.

At this point in the investigations an evaluation of the site was made to determine if further excavation was necessary. If it was believed that basic architectural and temporal data had been obtained, the site was mapped to the fullest extent possible and investigations ceased. On the other hand, if it was believed that more data was needed or that data of special interest could be obtained with further excavations, work continued. Usually, work continued in pitstructures that had burned and, therefore, had potential for containing burned beams suitable for tree-ring dating. None of the surface structures associated with pitstructures appeared to have been burned, so none was excavated. No materials from any context were screened.

Organization of Reports

Nine of the 10 sites investigated during the 1979 testing program are reported in the following sections. Investigations at Horsefly Hamlet

(5MT2236) are summarized in a separate document (Kane and Chenault 1982); data from that site was not included in making the summary statements for this report. These summary reports are organized by site type; the first four sites are limited activity sites, the last five are habitation sites.

PART II: TESTED SITES

CHARRED HOUSE (SITE 5MT2844)

Introduction

Charred House was first recorded in 1976 by a survey crew from the University of Colorado (Kane 1977). Limited investigations at the site commenced on 12 September 1979 and were completed on 12 October 1979. A total of 36 person-hours was expended during these operations.

Investigation of the site revealed the remains of a single room and an extension wall. Based on the ceramic assemblage associated with the room, it is believed to have been used sometime between A.D. 600 and 720. Because the room had burned it was given the name Charred House.

Location

Charred House is located in Montezuma County, Colorado in the NE 1/4 of the SW 1/4, sec. 25, T38N, R16W. The Universal Transverse Mercator grid coordinates for the site location are 4,155,410mN, 714,950mE, zone 12.

Charred House is located near the center of the Sagehen Flats Locality at about 2155 m above sea level. It is situated on a gradual, south-trending slope (fig. 2). The major physiographic feature near the site is a large drainage that is about 520 m east of the site. This drainage originates north of the site and follows a southerly course to where it enters Sagehen Flats Marsh, which is 1170 m south of the site. Similarly, 1060 m west of the site is another drainage, which also empties into the marsh. Smaller drainages are found closer to the site.

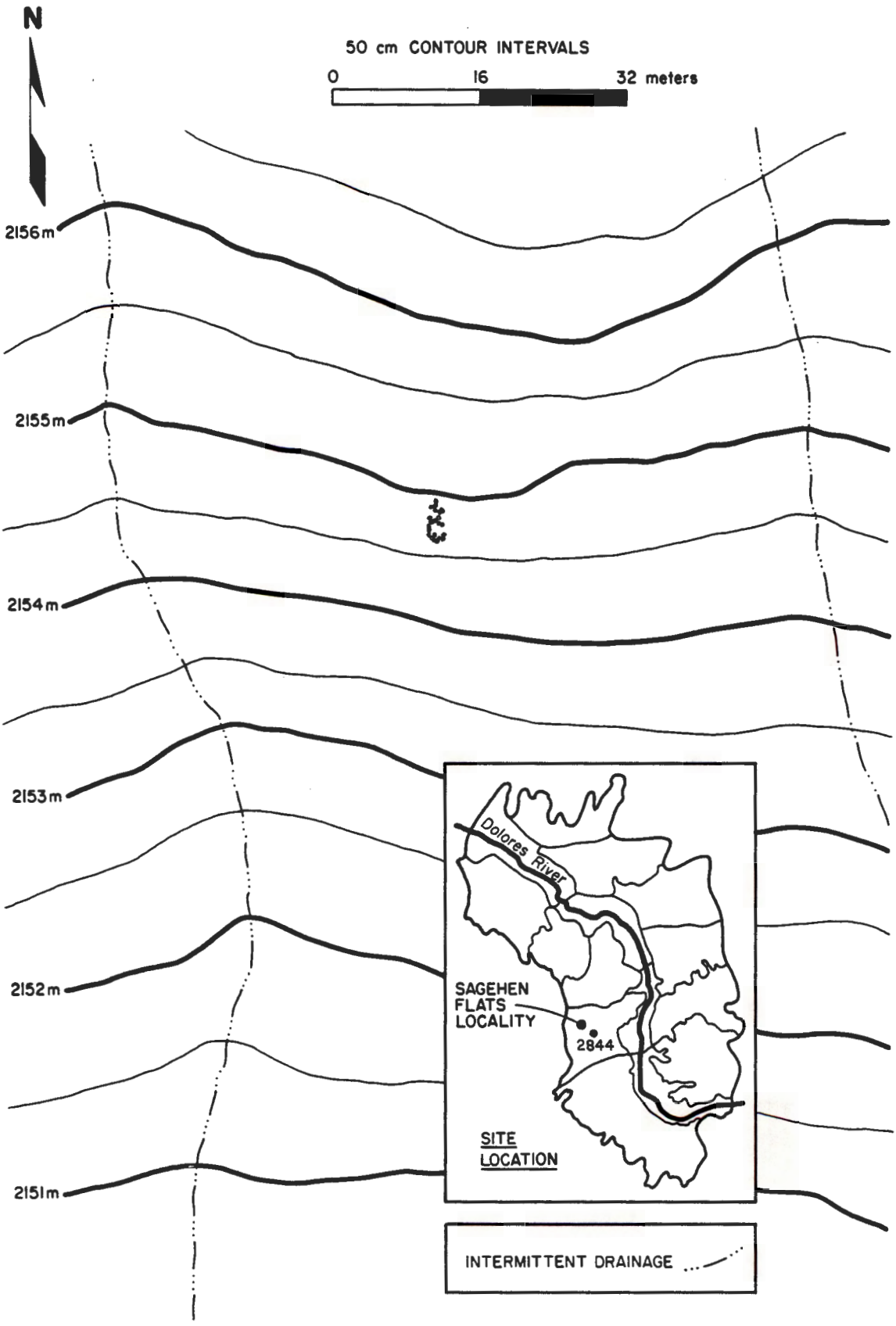

Figure 2. Topographic map of Charred House.

Investigative Strategy

General details about the investigative strategy employed at all the tested sites have been discussed in the "Introduction" section of this report. The following discussion includes site specific details about the magnetometer survey, surface collection, and subsurface excavations.

Magnetometer Survey

During the 1978 field season a magnetometer survey was conducted at Charred House. This survey covered an area of 800 m^2 and resulted in the definition of six magnetic anomalies. The anomalies and limits of the survey area are shown in figure 3.

The source of anomaly 1 was believed to be longer in the north-south dimension and was suspected to be a pitstructure.[1] Investigation of this area revealed the source to be a surface structure (Room 1).

Anomaly 2 was a large lobe that was suspected to be the result of a geologic feature. Investigation of this area did not reveal any cultural features, so it is believed that the source is a geologic feature at some depth below the surface.

Anomaly 3 was believed to represent a burned area, and Anomaly 4 was suspected to be a shallow feature such as a pit. Apparently, neither of these phenomena was the result of prehistoric cultural activity.

Anomaly 5 was suspected to be caused by an iron object. Investigation in this area did not recover an iron object, nor were any cultural materials or features observed.

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[1]Each anomaly is assigned a priority between 1 and 5, with 1 indicating the clearest and most identifiable anomalies (definite pitstructures or kivas) and 5 indicating the least identifiable anomalies (activity areas, middens, etc.). Anomalies with the same priority are distinguished by lowercase a, b, etc.

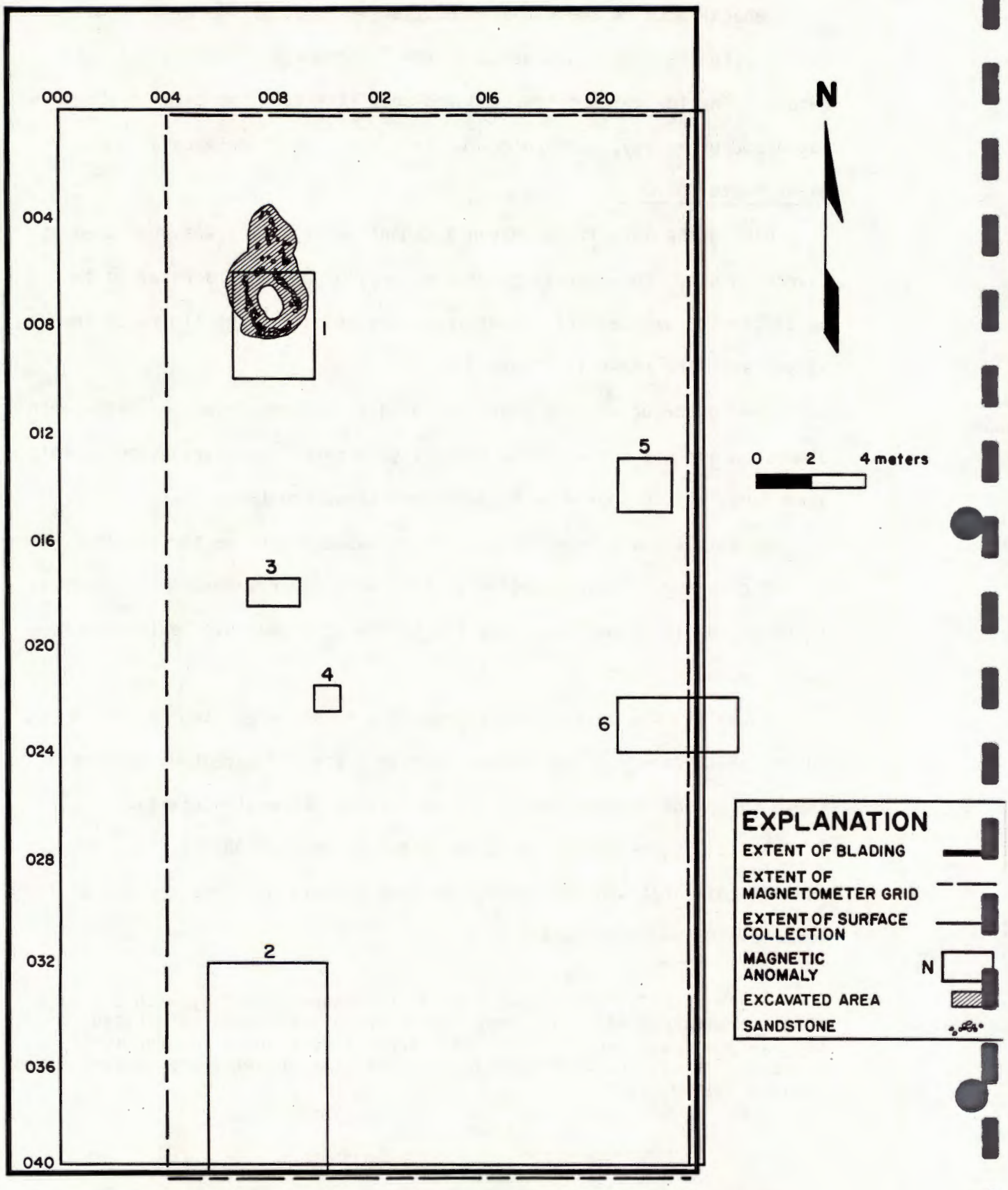

Figure 3. Site sampling plan, Charred House.

Anomaly 6 was in the form of two lobes, one of which extends east, outside of the magnetometer survey area. Although this anomaly was similar to those found at other sites, a suggestion as to its source was not given. Investigation of this area did not reveal any cultural features.

Surface Collection

To facilitate a 50-percent surface collection, the limits of the site were gridded into sixty 4- by 4-m squares. Artifacts from every other square were collected; distributions of these artifacts are shown in figures 4, 5, and 6. In general, the artifacts seem to be scattered over the entire site area; however, there are higher frequencies of all artifact categories in the vicinity of the surface structure. Items recovered during surface collection activities are described in more detail in the "Material Culture" discussion of this section.

Subsurface Excavations

After the surface collection was completed and the topography was mapped, the entire site area was bladed to remove the disturbed plow zone. The resultant bladed surface was examined for stains representing cultural features. Only one stain was observed; it consisted of a heavy concentration of burned soil and sandstone. An auger was used to test the depth of the burned soil; culturally sterile soil was reached at a depth of less than 25 cm. The rubble associated with this stain was roughly in a circular pattern, so the area outside of the stones was trenched by hand. This was done to determine the extent of the stain and to further define the extent of the stones. These trenching operations also revealed a stone alinement that extended north from the rubble circle. Trenches were hand excavated on either side of this wall.

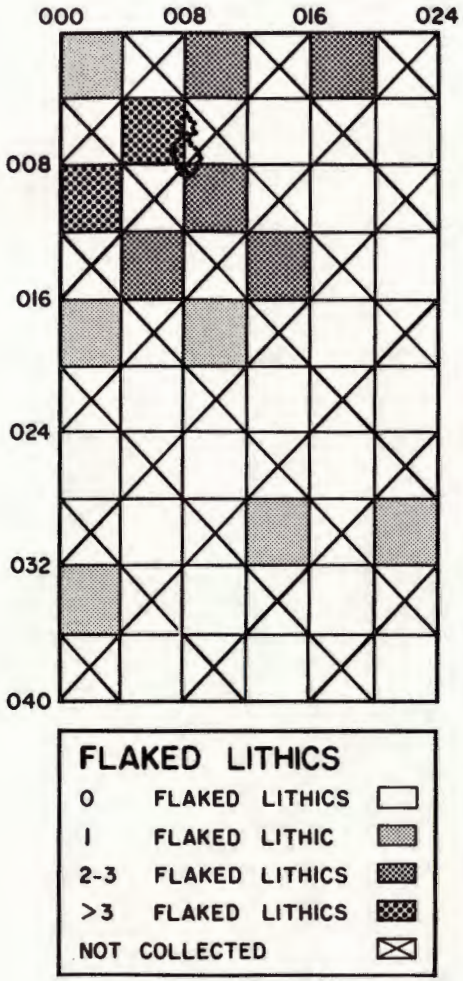

Figure 4. Surface distribution of flaked lithic items, Charred House.

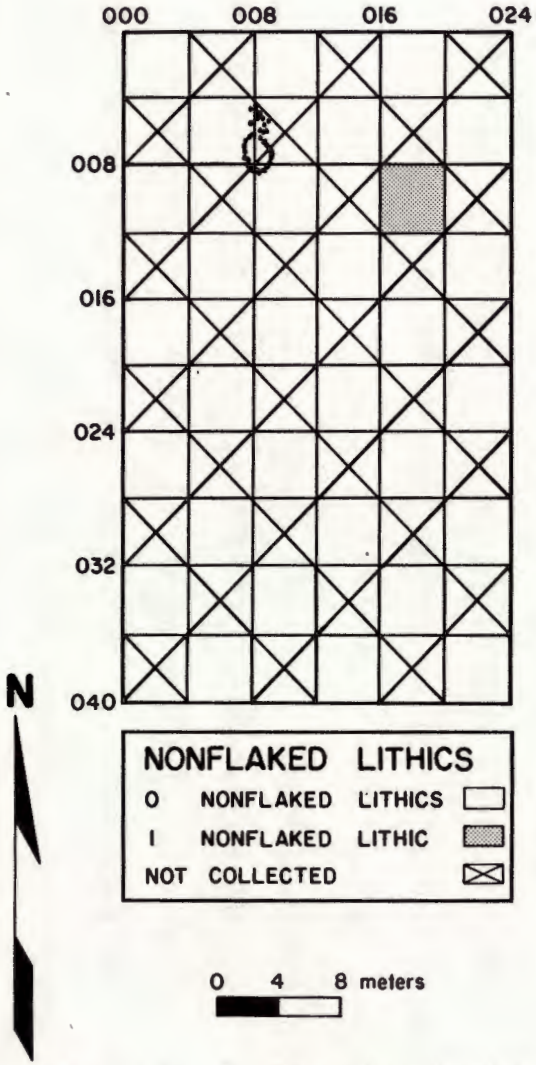

Figure 5. Surface distribution of nonflaked lithic items, Charred House.

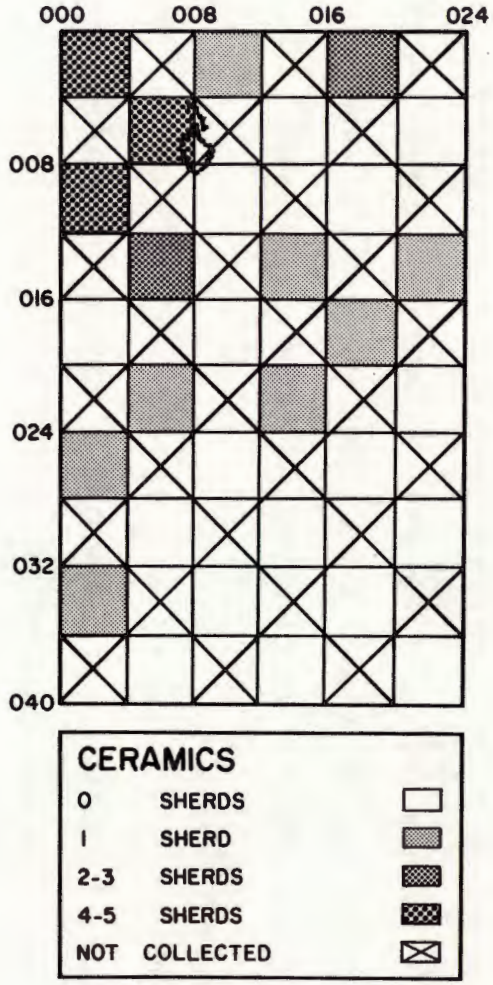

Figure 6. Surface distribution of ceramics, Charred House.

These excavations revealed that the circular concentration of rubble and stained soil were all that remained of a small surface structure, which was later designated Room 1. The stone alinement, which was the remains of an extension wall, was designated Feature 1. To examine the interior of the room, the inside perimeter of the stone circle was trenched by hand. Limits of excavation are shown in figure 3. No other subsurface excavation took place.

Architectural Remains

Limited investigation at Charred House revealed the remains of only two cultural units: a surface structure (Room 1) and an associated extension wall (Feature 1).

Room 1

Dimensions:

North-south diameter:	2.10 m
East-west diameter:	1.30 m
Depth of floor below base of wall:	.15 m

Room 1 is a small, roughly oval structure (fig. 7). Evidence recorded during the excavation of the room indicates that it had been constructed in the following manner. First, an oval pit was excavated 10-15 cm below the ground surface. Next, unshaped pieces of sandstone were placed on the ground surface around the perimeter of the pit. Most of these stones were placed horizontally and were only one course high. There was not enough stone around the structure to indicate that other courses were present originally. Therefore, it is postulated that this basal course of sandstone was the only masonry used in the structure and that the upper

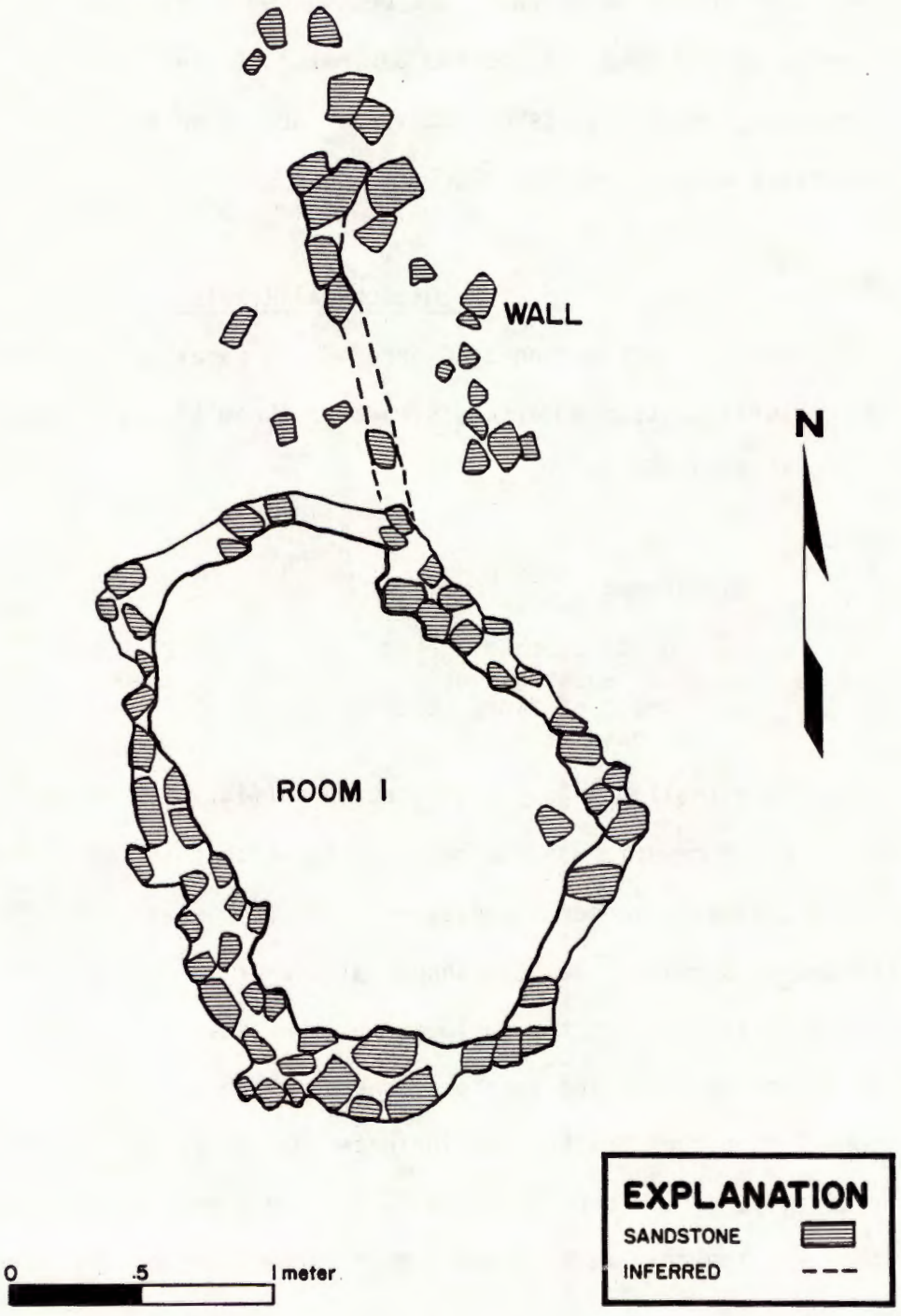

Figure 7. Room 1 and extension wall, Charred House.

portions of the walls consisted of a less permanent material, such as jacal. Charred twigs and reeds, and adobe casts of similar materials were recovered from the fill of the structure. These items might be remnants of a jacal wall or of a roof.

Floor (Surface 1). The floor of this room was not prepared and did not appear to be use compacted. No features were associated with the floor, and only one artifact (a mammal bone) was found on the floor.

Interpretation. The small size of this room and the lack of domestic features indicate that it was not used as a domicile. Artifacts found in and near the room indicate that some activities associated with resource processing and tool maintenance or manufacture might have occurred here (refer to the "Material Culture" discussion in this section). Adams (1978) has suggested that small jacal structures in the lower Piedra District were used for storage of wild plant foods and agricultural plant foods. They were used also to store tools associated with procurement of these foods. The similarity of Room 1 to Adams' jacal structures suggests that they were used for similar purposes. Therefore, Room 1 is believed to be a limited activity structure used for storage of wild and cultivated plant resources and of tools associated with their procurement.

Extension Wall (Feature 1)

This feature is the remnant of a wall that was connected to the northeast corner of Room 1 (fig. 7). This wall consists of a single course of unshaped pieces of sandstone, and it extends 2 m north of Room 1. Apparently stones comprising the southern portion of the wall were dragged by a plow and redeposited about 50 cm east of the wall. The larger stones at the northern end of the wall had plow scars on their upper surfaces but appeared to be in situ.

The exact purpose of this wall is not known; however, its location seems to have provided a sheltered area on the east side of Room 1 that was protected from dominant southwesterly winds. If the intended purpose of this wall was to provide a work area that was protected from the wind, then the wall probably was higher originally. Since there is little rubble around the wall, it is inferred that, like the walls of Room 1, the upper wall section was constructed of a less permanent material.

Material Culture

Ceramics

The ceramic collection recovered during testing operations is small, consisting of only 177 sherds (table 6). All of these sherds are from three provenience units: the modern ground surface, the fill of Room 1, and the general site. Items collected during blading operations were placed in the general site category because the specific provenience of these items is unknown.

Based on the characteristics of the total ceramic collection, a conservative conclusion is that the site was occupied sometime between A.D. 600 and 950. This date is based on the presence of Early Pueblo Gray, Chapin Gray, and Early Pueblo White sherds. However, the absence of certain diagnostic types helps to place the occupation date in a tighter time frame. The absence of Moccasin Gray indicates that occupation probably did not extend beyond the time that this type was introduced into the area at about A.D. 760. The absence of red wares indicates that the site was probably not occupied after their introduction at about A.D. 720 (Blinman 1982a). Therefore, a more bold appraisal is that the site was occupied sometime between A.D. 600 and 720.

Table 6. Ceramic summary, Charred House

Cultural category: Ware / Type	Modern ground surface N	%	Room 1 fill N	%	General site N	%	Site total N	%
Mesa Verde:								
Gray ware								
Chapin Gray	2	3.5	6	5.9			8	4.5
EP Gray	52	91.2	81	80.2	17	89.5	150	84.7
White ware								
EP White	3	5.3	14	13.9	2	10.5	19	10.7
Total ceramics	57	100.0	101	100.0	19	100.0	177	100.0
Vessel form:								
Jar	55	96.5	95	94.1	18	94.7	168	94.9
Bowl	1	1.7	6	5.9	1	5.3	8	4.5
Other	1	1.7					1	0.6

NOTE: EP - Early Pueblo.

Table 7. Flaked lithic tools, Charred House

	Surface collection N	%	Room 1 fill N	%	Other excavated units N	%	Site total N	%
Total tools:	2	100.0	3	100.0	3	100.0	8	100.0
Tool morpho-use								
Utilized flake	1	50.0	2	66.7			3	37.5
Core	1	50.0					1	12.5
Thin scraper			1	33.3	1	33.3	2	25.0
Projectile point					2	66.7	2	25.0
Grain size								
Fine					2	66.7	2	25.0
Very fine	1	50.0	1	33.3	1	33.3	3	37.5
Microscopic	1	50.0	2	66.7			3	37.5
Dorsal face evaluation								
Unmodified core	1	50.0					1	12.5
Unthinned item, with cortex			3	100.0	1	33.3	4	50.0
Unthinned item, no cortex	1	50.0			2	66.7	3	37.5
Ventral face evaluation								
Unmodified core	1	50.0					1	12.5
Unthinned item, no cortex	1	50.0	3	100.0	2	66.7	6	75.0
Primary thinning					1	33.3	1	12.5

Flaked Lithic Tools and Debitage

Eight flaked lithic tools were recovered from Charred House; this collection consists of three utilized flakes, one core, two thin scrapers, and two projectile points. The provenience and attributes of these tools are given in table 7.

All of these tools, except the projectile points, were expediently produced (i.e., not much work went into their production) and each retains some cortex. The projectile points, on the other hand, required much more input for their production.

A total of 62 pieces of flaked lithic debitage were recovered from the site and are summarized in table 8. The number of debitage items indicates that some flaked lithic tool production or maintenance took place at the site.

Table 8. Flaked lithic debitage, Charred House

	Surface collection		Room 1 fill		Other excavated units		Site total	
	N	%	N	%	N	%	N	%
Flakes/flake fragments:								
Grain size								
Medium	1	3.1					1	1.6
Fine	3	9.4	5	18.5			8	12.9
Very fine	21	65.6	17	63.0	2	66.7	40	64.5
Microscopic	7	21.9	5	18.5	1	33.3	13	21.0
Total flakes/ flake frags	32	100.0	27	100.0	3	100.0	62	100.0
Mean weight (grams)	15.3		83.5		...		29.7	
Items with cortex	8	25.0	8	29.6	1	33.3	17	27.4
Items with platform	10	31.3	11	40.7	3	100.0	18	29.0

NOTE: ... - Information not available.
frags - Fragments.

Nonflaked Lithic Tools

A total of seven nonflaked lithic tools was recovered from Charred House. Only one of these tools was found on the modern ground surface, the other six were found in the fill of Room 1 (table 9). All of these latter items had burned with the structure, and their location in the fill suggests that they might have been stored on the roof. Although the assemblage is small, the presence of manos and metates might indicate that resource processing was one of the activities performed at this site.

Table 9. Nonflaked lithic tools, Charred House

	Surface collection		Fill of Room 1		Site total	
	N	%	N	%	N	%
Total tools:	1	100.0	6	100.0	7	100.0
Tool morpho-use						
Generalized, unhafted			2	33.3	2	28.6
Hammerstone			1	16.7	1	14.2
Mano	1	100.0	1	16.7	2	28.6
Unspecified metates and metate fragments			2	33.3	2	28.6
Production evaluation						
Indeterminate			1	16.7	1	14.3
Natural (unmodified)	1	100.0	4	66.6	5	71.4
Minimally shaped			1	16.7	1	14.3
Item completeness						
Small fragment	1	100.0	1	16.7	2	28.6
Partial implement			3	50.0	3	42.8
Complete/nearly complete implement			2	33.3	2	28.6
Grain size						
Indeterminate			2	33.3	2	28.6
Medium	1	100.0			1	14.2
Fine			4	66.6	4	57.1

Faunal Remains

Three nonhuman bones were recovered during investigations at Charred House. All of these were from Room 1, two from the fill and one from the floor. All three of the bones were unworked and have been identified as belonging to the class Mammalia; further identification was not possible due to the fragmented condition of the bones.

Site Synthesis

Chronology

Since none of the charred wood remains found in Room 1 was suitable for tree-ring dating, the only material available for dating this site is the ceramic collection. The sherds recovered from this site indicate a possible date range of A.D. 600-950. However, the absence of red wares and later ceramics indicates that the site probably was not occupied after A.D. 720. Therefore, it is postulated that the site was occupied sometime between A.D. 600 and 720. According to the DAP phase scheme this date range is wholly within the Sagehen Phase (A.D. 600-850), and spans the Tres Bobos Subphase (A.D. 600-700) and the early part of the Sagehill Subphase (A.D. 700-780).

Integration of Temporal and Spatial Units

According to DAP temporal systematics, a limited use of the site, usually represented by single structures or features, is called an episode. The single structure at Charred House and its associated extension wall are believed to represent a single espisode. Since there is no evidence of any other use of the site it is believed that the total artifact collection at the site was deposited by the prehistoric people who used Room 1.

Summary

Limited investigation of Charred House revealed that there was only one small room at the site. The small size of this room and the lack of any other associated structures indicate that it probably was used for limited activities. The exact nature of these activities is not known, but the artifacts suggest that some resource processing and flaked lithic tool maintenance or manufacturing might have taken place. The room itself might have been used for storage since the lack of internal features suggests that it was not a domicile. Arable soils extend for several hundred meters around the site and it is possible that this room was used for the storage of foodstuffs obtained through horticulture. There are also wild food resources near the site, many of which were probably available prehistorically. Items of this nature also might have been stored in the room. Based on this evidence it is concluded that Charred House was a limited activity site used primarily for temporary storage of plant or animal resources and tools associated with their procurement, and onsite processing of these resources.

CANSADO CAMP (SITE 5MT2857)

Introduction

Cansado camp is a limited activity site situated on a low ridge line with shallow drainages on both sides. The site is located in the NW 1/4 of the NW 1/4, sec. 30, T38N, R15W. The Universal Transverse Mercator grid coordinates for this location are 415,6200 mN, 716,380 mE, zone 12.

The site was described in an early survey report (Kane 1977) as a small, concentrated artifact scatter with no apparent architectural features. At the time, it was thought that the site was either a small habitation or field house because of the presence of burned adobe on the surface; no adobe was found during field operations. The artifact collection from survey operations indicated a Basketmaker III and/or Pueblo I occupation.

Limited investigation of the site began on 7 September 1979 and was completed on 14 September 1979. A total of 24 person-hours was expended. No cultural features were observed during the investigation; therefore, the site is believed to be an area of limited activity.

Investigative Strategy

Magnetometer Survey

A magnetometer test survey of Cansado Camp was conducted prior to excavation over 100 m^2 of the densest artifact scatter (fig. 8). Although several anomalies were recorded, in general they did not show any of the classic characteristics of typical archaeological anomalies, indicating that it was unlikely that any cultural features would be discovered. This conjecture was verified by the blading operations.

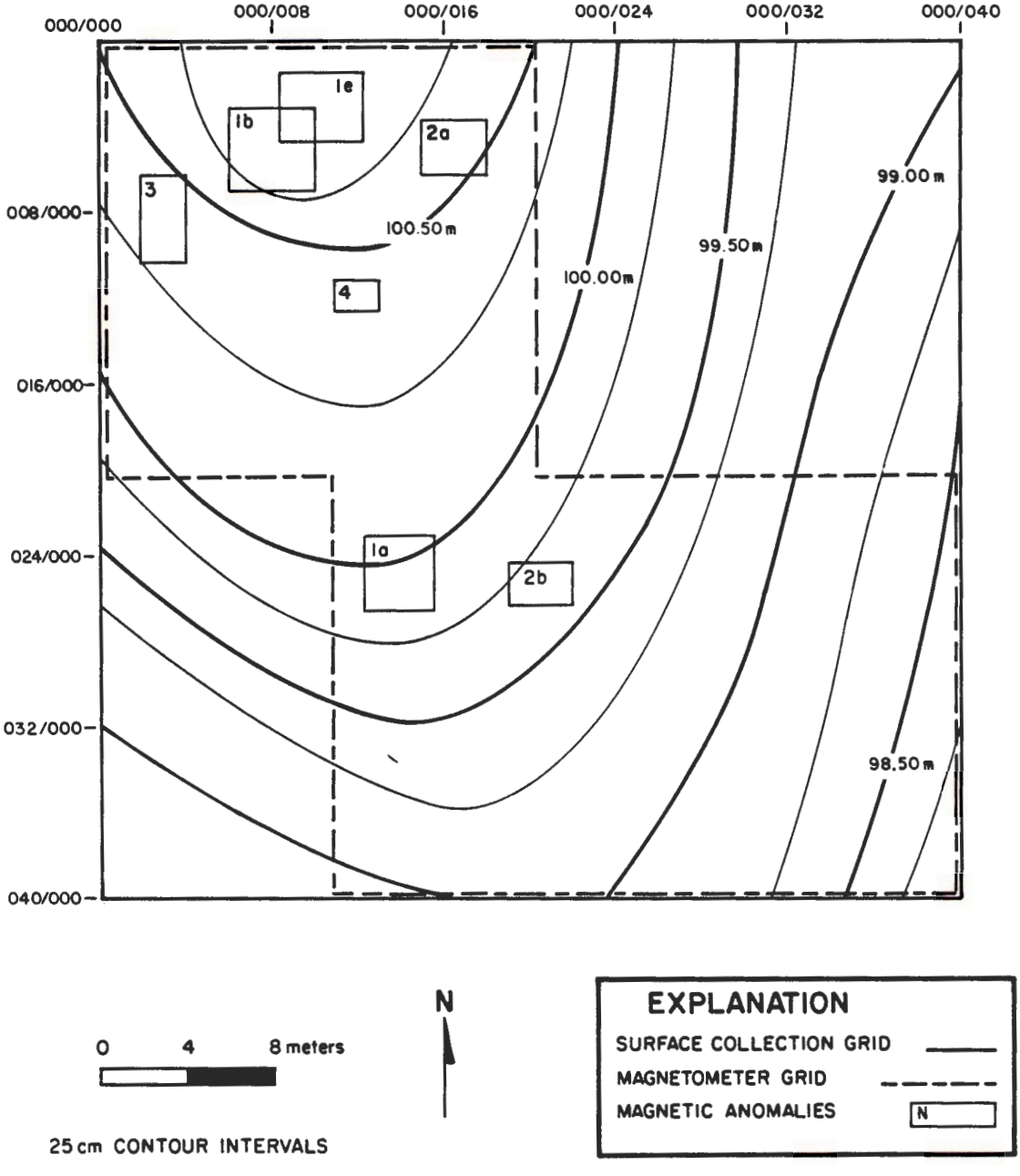

Figure 8. Topographic map with site sampling plan, Cansado Camp.

Surface Collection

Surface indications of prehistoric occupation at Cansado Camp were scant. Sherds and flakes were sparsely scattered on the crest of the ridge and down the east slope into one of the drainages. This artifact scatter covered an area of approximately 40 by 40 m. Depressions that would suggest the presence of subsurface structures were absent, and rubble or other indications of surface architectural features were virtually nonexistant.

A grid system consisting of 100 4- by 4-m squares was established over the entire surface scatter (fig. 8). Artifacts from alternate squares were collected, yielding a 50-percent surface collection.

After the surface collection was completed and a topographic map was made, a self-loading scraper was employed to remove the plow zone. About 30 cm of overburden was removed across the artifact scatter area, thereby enabling features and structures to be readily exposed. However, several careful examinations of the scraped surface failed to reveal any subsurface features or artifacts.

Material Culture

The systematic surface collection resulted in a sparse assemblage of artifacts consisting of 8 sherds (1 Moccasin Gray, 7 Early Pueblo Gray), 5 flaked lithic tools, 14 pieces of flaked lithic debitage, and 2 nonflaked lithic tools. Artifact frequencies for flaked and nonflaked lithic items are provided in tables 10, 11, and 12. None of the artifacts can be used as conclusive evidence for site function or for temporal placement. The small ceramic collection indicates only that the site was used between A.D. 600 and 900.

Table 10. Flaked lithic tools, Cansado Camp

	Site total N	%
Total tools:	5	100
Tool morpho-use		
Utilized flake	3	60
Core	1	20
Thick scraper	1	20
Grain size		
Very fine	3	60
Microscopic	2	40
Dorsal face evaluation		
Unmodified core	1	20
Unthinned item, with cortex	1	20
Unthinned item, no cortex	3	60
Ventral face evaluation		
Unmodified core	1	20
Unthinned item, no cortex	4	80

Table 11. Flaked lithic debitage, Cansado Camp

	Site total N	%
Flakes/flake fragments:		
Grain size		
Medium (coarse)	1	7.1
Fine	3	21.4
Very fine	8	57.1
Microscopic	2	14.3
Total flakes/flake frags	14	100.0
Items with cortex	2	14.3
Items with platform	7	50.0

NOTE: frags - Fragments.

Table 12. Nonflaked lithic tools, Cansado Camp

	Site total N	Site total %
Total tools:	2	100.0
Tool morpho-use		
Mano	1	50.0
Miscellaneous specialized	1	50.0
Production evaluation		
Natural (unmodified)	2	100.0
Item completeness		
Complete/nearly complete implement	2	100.0
Grain size		
Medium	2	100.0

The presence of a mano, a polishing stone, a uniface, and two utilized flakes seems to indicate that a variety of activities including food processing and ceramic manufacture might have occurred. However, the small size of the collection precludes any definite statements.

Summary

Since no cultural features were observed at Cansado Camp, it is believed to be a limited activity site of unknown function. The ceramics recovered from the site indicate that it was used sometime between A.D. 600 and 900. The proximity of Cansado Camp to other sites in the area, especially to Windy Wheat Hamlet (Brisbin 1982), suggests that it was used by the inhabitants of these nearby sites. These sites were occupied between A.D. 600 and 825; therefore, it is assumed that Cansado Camp also was used sometime during this period. A conjecture is that the site may represent the southern extremity of refuse materials discarded by

the inhabitants of Windy Wheat Hamlet. Dispersion of these materials as a result of historic cultivation and other postabandonment disturbances may explain the particular distribution of archaeological data.

LEE SIDE CAMP (SITE 5MT4513)

Introduction

Limited investigations at Lee Side Camp began on 10 September 1979 and were completed on 13 October 1979. A total of 40 person-hours was expended in these investigations. This site was named Lee Side Camp since the features at the site are located on the lee side of a ridge. Investigations at this site revealed that it was used for limited activities at three different times in the prehistoric past, from the Archaic period through the Anasazi periods. Evidence for the Archaic use of the site consists of five firepits. Both of the Anasazi episodes are represented by ceramic remains.

Location

Lee Side Camp was recorded on 27 July 1978 during survey operations conducted by the DAP (Dykeman et al. 1981). The site is located in the NW 1/4 of the NW 1/4, sec. 36, T38N, R16W, Montezuma County, Colorado. The Universal Transverse Mercator grid coordinates for the site location are 4,154,590 mN, 714,500 mE, zone 12.

Physiographically the site is located on the steep eastern side and crest of a south-trending ridge, 130 m north of the Sagehen Flats Marsh. The area surrounding the ridge is characterized by a series of ridges and drainages. Figure 9 shows the topographic setting of the immediate site area.

Investigative Strategy

The basic investigative strategy for the tested sites program is discussed in the "Introduction" section of this report. The following

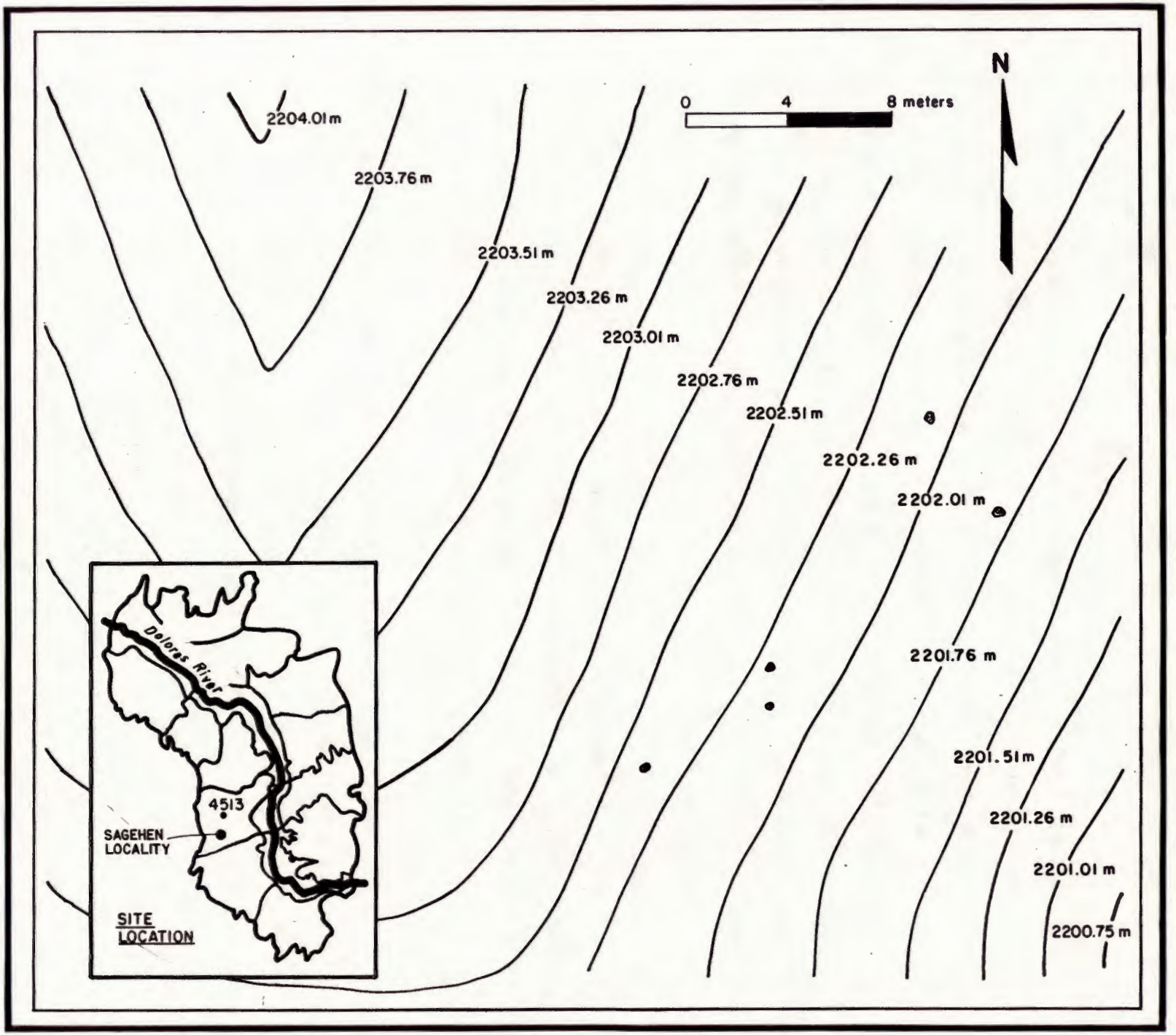

Figure 9. Topographic map of Lee Side Camp.

discussion includes site specific details concerning the magnetometer survey, the surface collection, and the subsurface excavations.

Magnetometer Survey

In August 1979 a magnetometer survey was conducted at Lee Side Camp. This survey was limited to a 20- by 20-m square; three magnetic anomalies were identified within this block (fig. 10). None of these anomalies appeared to be the result of archaeological phenomena, but they were investigated to verify this suspicion. Anomaly 1 was the strongest and had the best possibility of representing a cultural feature; however, no cultural features were located in this area. Anomaly 2 was found to be a large rodent burrow; no cultural features corresponded to anomaly 3.

In the northeast corner of the site the magnetometer survey recorded a piece of metal that might have affected the readings;[2] therefore, cultural features situated in this area might have been missed or misidentified by the magnetometer. However, the cultural features that were identified after the site was bladed were not located within this particular area.

Surface Collection

A grid system of 100 4- by 4-m squares was established over the limits of the site; the total area gridded was 1600 m^2. Artifacts from every other grid were collected; this resulted in a 50-percent surface collection. The artifact assemblage recovered from this operation is sparse; distributions of the artifacts are shown in figures 11, 12, and 13. These items are identified further in the "Material Culture" discussion of this section.

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[2]Robert J. Huggins, DAP, personal communication.

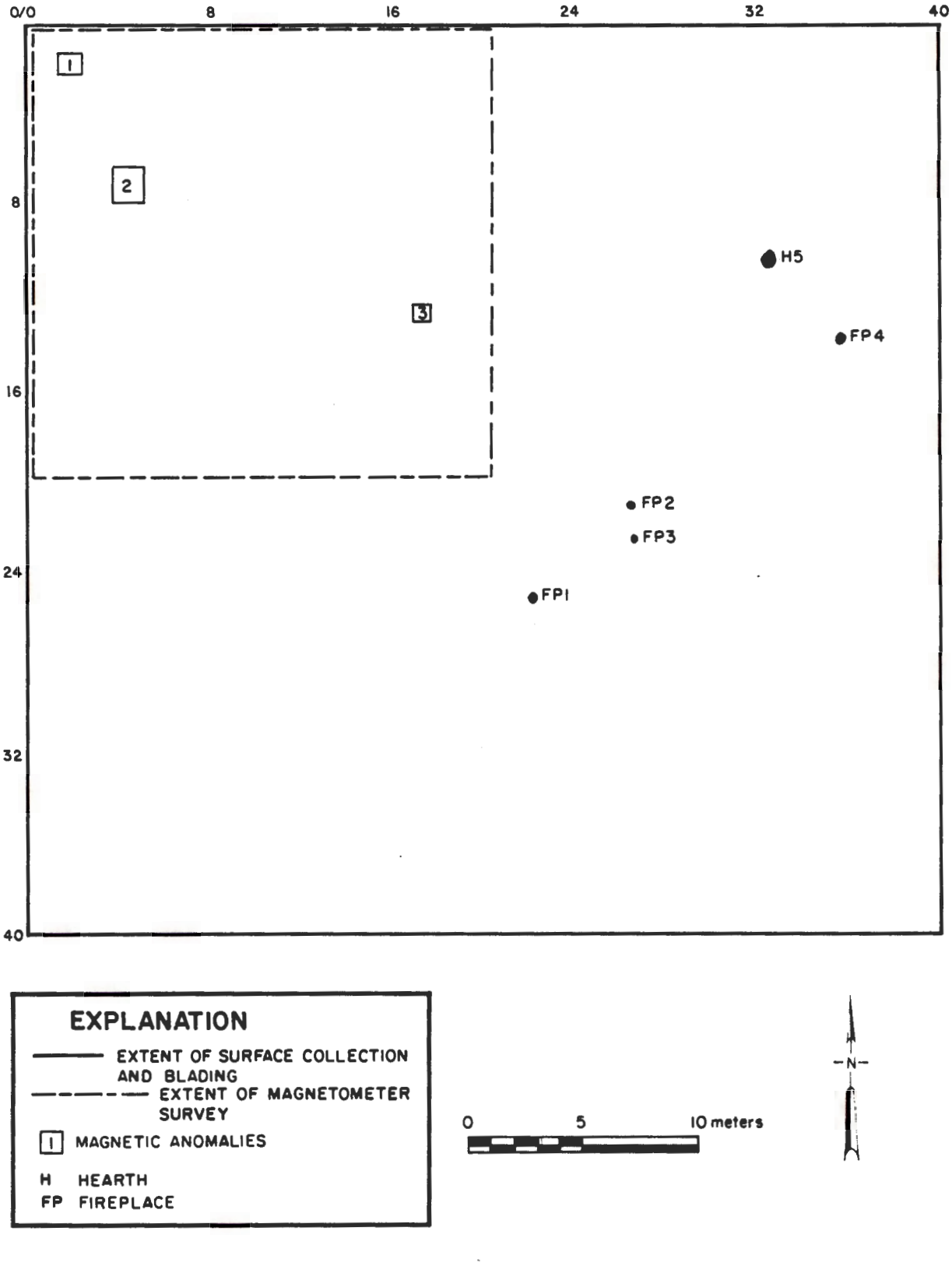

Figure 10. Site sampling plan, Lee Side Camp.

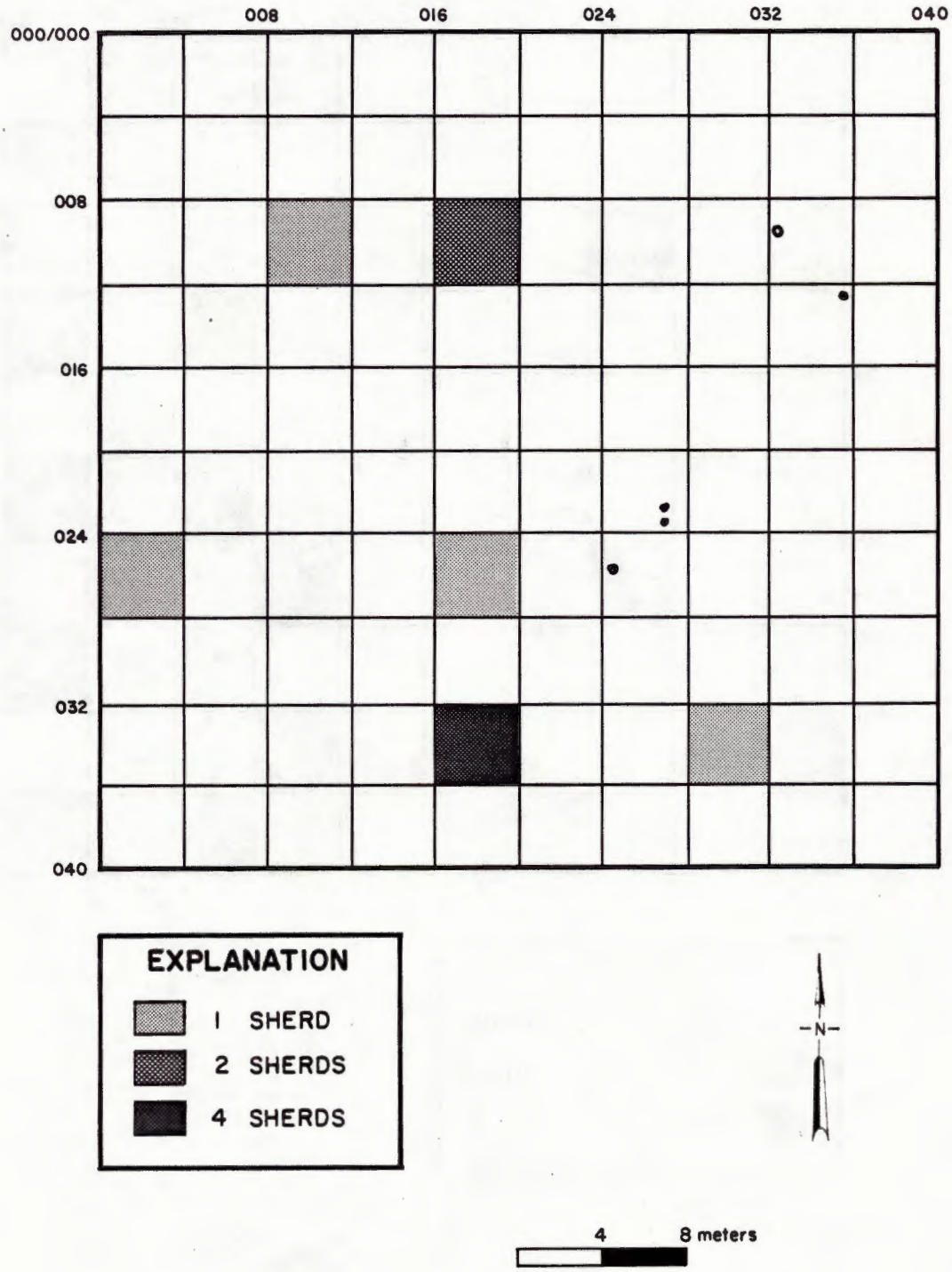

Figure 11. Surface distribution of ceramics, Lee Side Camp.

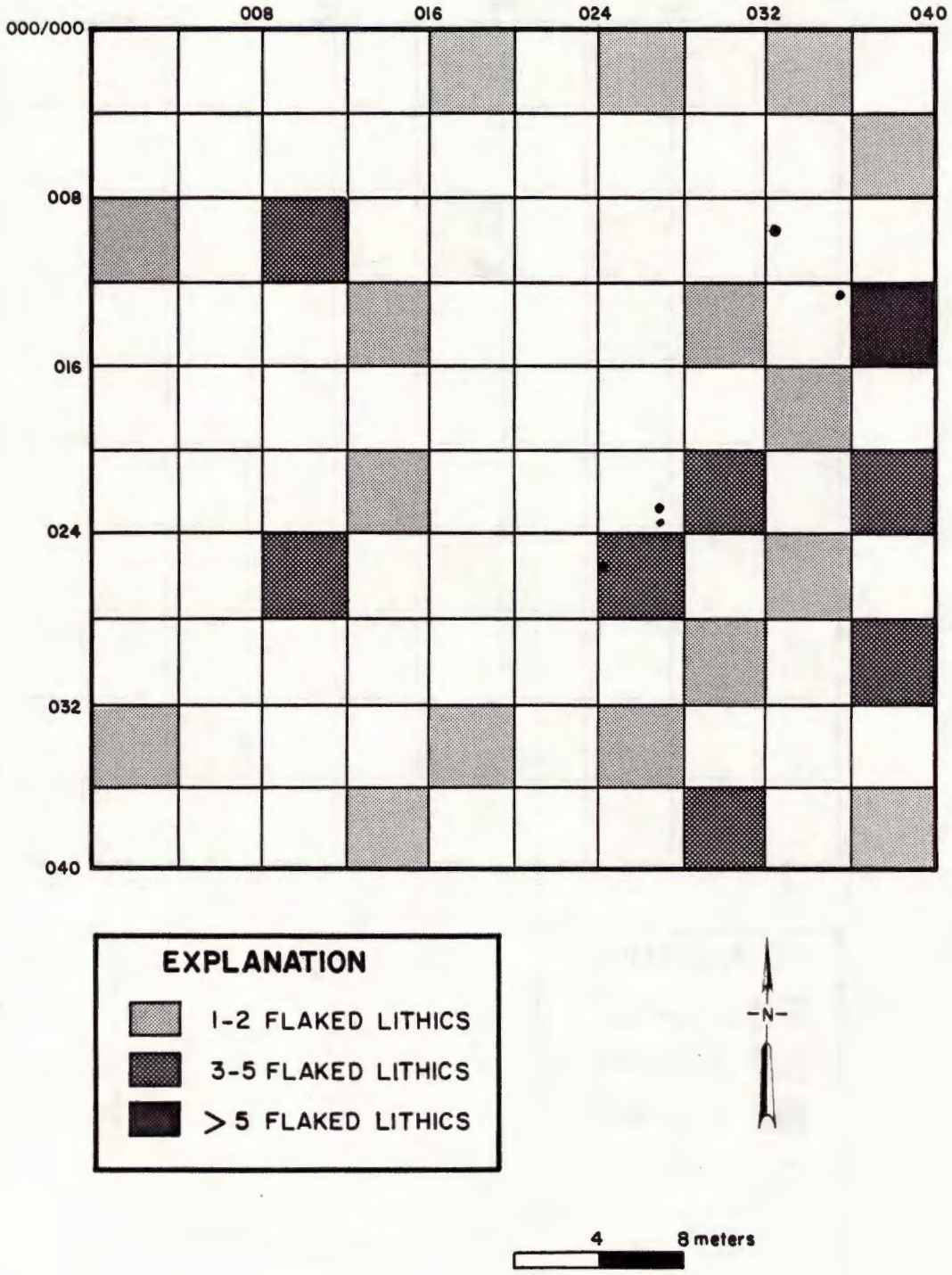

Figure 12. Surface distribution of flaked lithic items, Lee Side Camp.

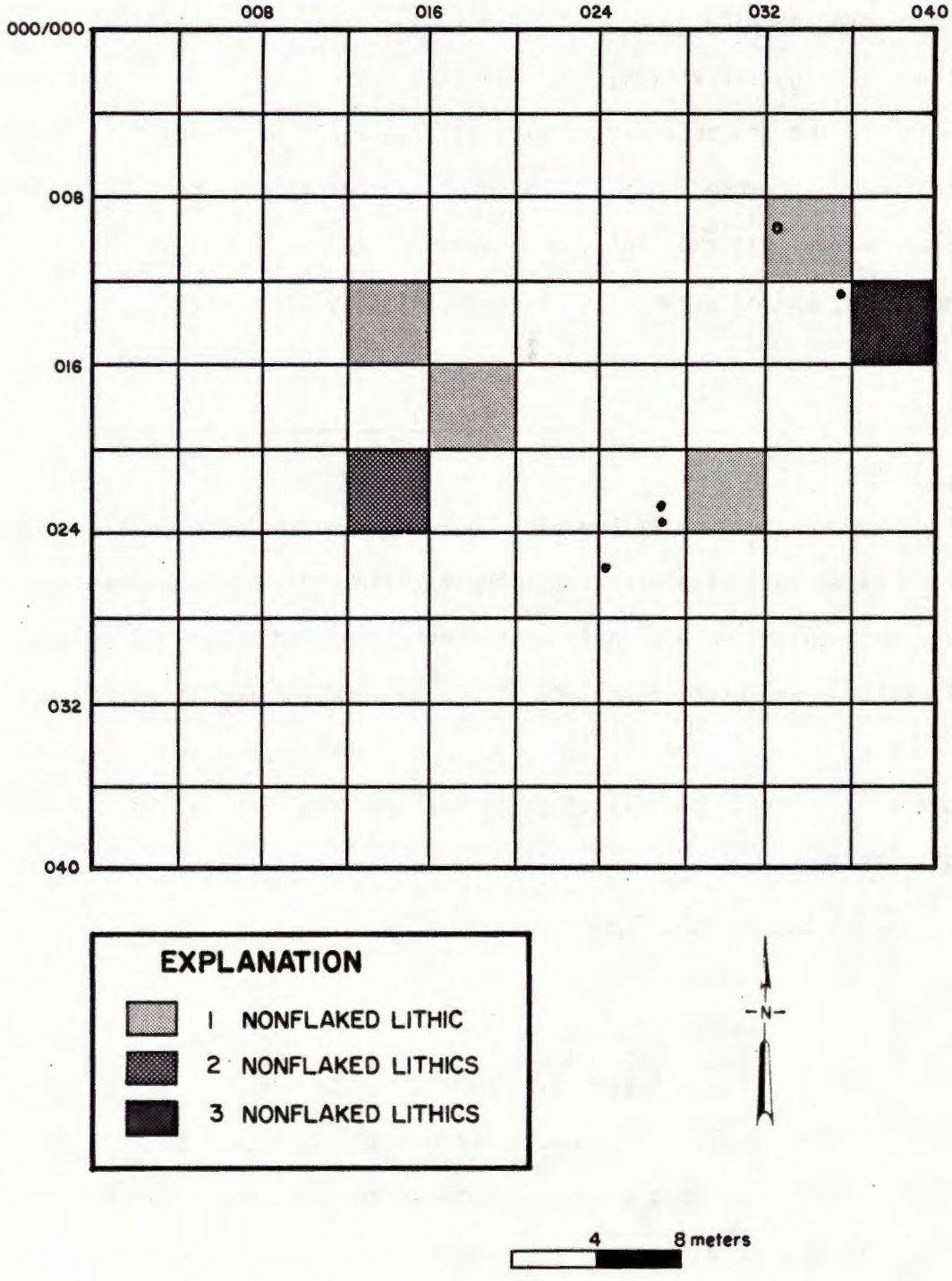

Figure 13. Surface distribution of nonflaked lithic items, Lee Side Camp.

Subsurface Investigations

After the surface collection was completed the entire site was bladed to remove the plow zone and to expose subsurface features. As a result of these blading activities, five features exhibiting evidence of burning were exposed and recorded. Initially, one-half of the fill of each feature was removed so that the internal stratigraphy could be examined. Each feature was then fully excavated and mapped. None of the fill was screened, and no other subsurface excavations were carried out.

Architectural Remains

Firepits

Limited testing at Lee Side Camp revealed that the only architectural remains at this site are five firepits (fig. 14). All of these firepits are located in the east half of the site. According to DAP terminology, firepits lined with stones are fireplaces and unlined firepits are hearths. Of the firepits observed at this site, four are fireplaces and one is a hearth. Details of these features are provided in the following discussion.

Fireplace (Feature 1).

Dimensions:

North-south diameter:	45 cm
East-west diameter:	45 cm
Depth (after blading):	5 cm

This firepit is the southernmost feature at the site. It is a shallow, basin-shaped pit lined with small pieces of sandstone. The fill of the pit consisted of a loose, silt loam that contained charcoal.

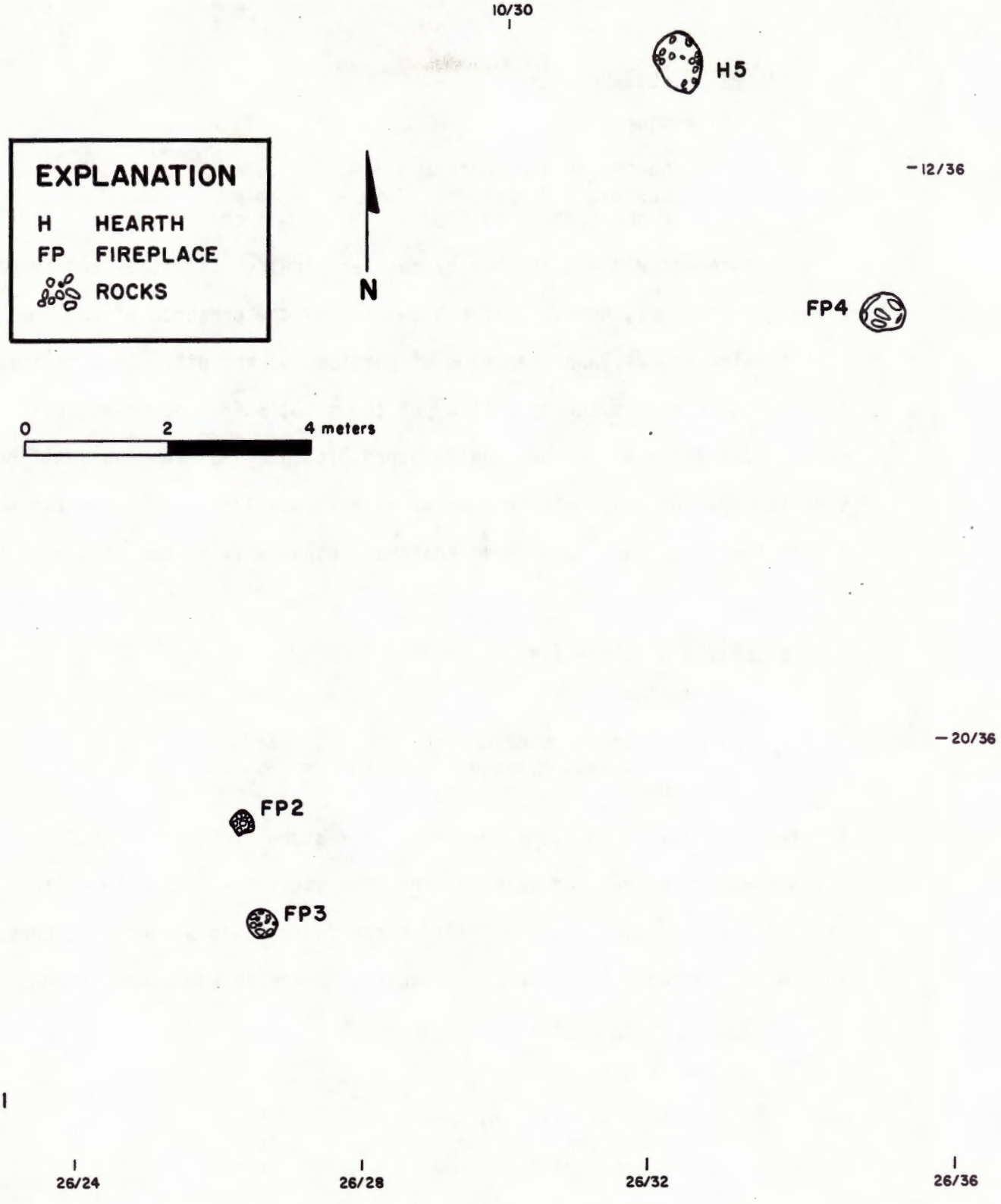

Figure 14. Plan map of firepits, Lee Side Camp.

Fireplace (Feature 2).

Dimensions:

North-south diameter:	35 cm
East-west diameter:	35 cm
Depth (after blading):	5 cm

This feature was badly disturbed by earlier plowing activities and by DAP blading operations; however, it was defined by the presence of charcoal, some in situ stones, and oxidation of portions of the pit. This feature is located in the southeast portion of the site, 5.45 m northeast of Feature 1. It is a shallow, basin-shaped pit that had been dug into the sterile soil and lined with pieces of sandstone. The fill of the pit was a silt loam that contained dense charcoal, especially at the bottom of the pit.

Fireplace (Feature 3).

Dimensions:

North-south diameter:	35 cm
East-west diameter:	35 cm
Depth (after blading):	5 cm

The feature is located 4.6 m northeast of Feature 1. It is a shallow basin-shaped pit that had been dug into the sterile soil and then lined with pieces of sandstone. The fill of the feature was slightly compacted loam with charcoal. There was also charcoal beneath the stone lining.

Fireplace (Feature 4).

Dimensions:

North-south diameter:	45 cm
East-west diameter:	45 cm
Depth (after blading):	5 cm

This fireplace is located in the northeastern portion of the site, 16.6 m northeast of Feature 1. Like the other fireplaces, it is a basin-shaped pit dug into the sterile soil and lined with pieces of sandstone. Heavy

charcoal was present below the stones, but only a small amount was present directly above them. The remaining fill was composed of loosely compacted loam.

Hearth (Feature 5).

Dimensions:

North-south diameter:	60 cm
East-west diameter:	60 cm
Depth (after blading):	10 cm

This hearth is the northernmost feature at the site; it is located 17.5 m northeast of Feature 1. Like the other features at the site it had been dug into sterile subsoil, but unlike the other features it was not lined with stones. Thirteen pieces of sandstone were found in the fill but they were not part of a lining. The fill was a silt loam with some charcoal.

Interpretations. All of the features investigated at Lee Side Camp are firepits that are similar in shape and construction and probably were used for similar activities associated with heat and fire. Specifics about these activities are not known since no artifacts were associated with any of the features. These firepits are quite similar to firepits found at other sites in the Escalante Sector that are believed to date to the Archaic period (cf. Southward 1981; Schlanger 1979; Brown 1981). Based on this similarity and on the lack of ceramics, these five firepits are believed to be Archaic.

Material Culture

All of the artifacts recovered from Lee Side Camp were found on the modern ground surface or during blading operations. Since the exact provenience of artifacts recovered during blading is not known, they were given a general site provenience. No artifacts were recovered from any of

the five firepits. A total of only 92 artifacts was found, making it difficult to assess the function of the site.

Ceramics

The ceramic collection associated with the site consists of gray ware and white ware body sherds from bowls and jars. Totals by provenience and type are given in table 13; ceramics collected during the initial survey are also included. The ceramic collection was distributed over the crest of the ridge at some distance from the firepits. No ceramics were collected from any of the 4- by 4-m units associated with the hearths; therefore, it is inferred that there is no relationship between the ceramic assemblage and the firepits. However, two separate temporal components are indicated by the ceramics.[3] The earliest component is represented by Early Pueblo Gray sherds and one Early Pueblo White sherd, which date to between A.D. 600 and 900. The later component is represented by Late Pueblo Gray sherds, Corrugated Body Sherds, and Late Pueblo White sherds, all of which date to between A.D. 910 and 1050.

Flaked Lithic Tools and Debitage

A total of 5 flaked lithic tools and 62 pieces of debitage was recovered from this site. Totals by provenience units are given in tables 14 and 15; items collected during the initial survey are included. The small size of the assemblage precludes any definitive statements about site function.

Nonflaked Lithic Tools

Nine nonflaked lithic tools were recovered from Lee Side Camp; all were recovered from modern ground surface (table 16). Although none of these tools was directly associated with the firepits, several of the tools were found on the modern ground surface in the vicinity of the

[3]Eric C. Blinman, UAP, personal communication.

pits. Most of the other tools were collected from the crest of the ridge where most of the ceramics were found. Based on this spatial relationship, it is speculated that most of the tools are temporally associated with the ceramics, but this remains conjectural.

Table 13. Ceramic summary, Lee Side Camp

Culture category: Ware / Type	Modern ground surface N	%	General site N	%	Site total N	%
Mesa Verde:						
Gray ware						
Early Pueblo Gray	8	57.1	1	50.0	9	56.2
Late Pueblo Gray	2	14.3			2	12.5
Corrugated body sherds	2	14.3			2	12.5
White ware						
Early Pueblo White	1	7.1			1	6.3
Late Pueblo White	1	7.1	1	50.0	2	12.5
Total ceramics	14	100.0	2	100.0	16	100.0
Vessel form:						
Bowl	1	7.1	1	50.0	14	87.5
Jar	13	92.9	1	50.0	2	12.5

Table 14. Flaked lithic tools, Lee Side Camp

	Modern ground surface N	%	General site N	%	Site total N	%
Total tools:	4	100.0	1	100.0	5	100.0
Tool morpho-use						
Utilized flake	2	50.0			2	40.0
Core	1	25.0			1	20.0
Biface	1	25.0	1	100.0	2	40.0
Grain size						
Very fine	2	50.0			2	40.0
Microscopic	2	50.0	1	100.0	3	60.0
Dorsal face evaluation						
Unmodified core	1	25.0			1	20.0
Unthinned item, with cortex	1	25.0			1	20.0
Unthinned item, no cortex	2	50.0	1	100.0	3	60.0
Ventral face evaluation						
Unmodified core	1	25.0			1	20.0
Unthinned item, with cortex	1	25.0			1	20.0
Unthinned item, no cortex	2	50.0	1	100.0	3	60.0

Table 15. Flaked lithic debitage, Lee Side Camp

	Modern ground surface		General site		Site total	
	N	%	N	%	N	%
Flakes/flake fragments:						
Grain size						
Fine	16	27.1	1	33.3	17	27.4
Very fine	29	49.2	2	66.7	31	50.0
Microscopic	14	23.7			14	22.6
Total flakes/flake fragments	59	100.0	3	100.0	62	100.0
Mean weight (grams)	7		3		7	
Items with cortex	19	32.2	0	0	19	30.6
Items with platform	16	27.1	1	33.3	17	27.4

Table 16. Nonflaked lithic tools, Lee Side Camp

	Site total	
	N	%
Total tools:	9	100.0
Tool morpho use		
Indeterminate	1	11.1
Hammerstone	2	22.2
Mano	6	66.6
Production evaluation		
Indeterminate	5	55.6
Natural (unmodified)	4	44.4
Item completeness		
Small fragment	5	55.6
Partial implement	1	11.1
Complete/nearly complete	3	33.3
Grain size		
Indeterminate	2	22.2
Coarse	1	11.1
Medium	6	66.7

Site Synthesis

Chronology

It is difficult to date the various occupations of this site since the total artifact collection is sparse and there were no materials that could yield precise, absolute dates. Analysis of the ceramic assemblage indicates that there are two Anasazi components. The firepits appear to represent another component that was not related to either of the Anasazi components. These pits are similar to firepits found at sites dating to the Archaic Tradition and therefore are tentatively assigned to this tradition. Since all of the components appear to represent limited use of the site rather than major occupations, they are considered to be episodes (refer to the "Introduction" section of this report for a definition of episode). Episode 1 is represented by the five firepits that appear to be Archaic. The Archaic Tradition in the Escalante Sector is not well defined but is believed to date to sometime between 2000 B.C. and A.D. 500. This period is termed the Great Cut Phase (Kane 1981a).

Episode 2 is represented by Early Pueblo Gray and Early Pueblo White sherds, which date to between A.D. 600 and 900. According to the DAP temporal scheme, these sherds could have been deposited during the Sagehen Phase (A.D. 600-850) or during the earlier part of the McPhee Phase (A.D. 850-975).

Episode 3 is represented by Late Pueblo Gray, Late Pueblo White, and Corrugated Body Sherds, which date to the period A.D. 910-1050. Hence, these sherds could have been deposited during the McPhee Phase or during the earlier part of the Sundial Phase (A.D. 1050-1200).

It is not possible to determine the episode with which the flaked and nonflaked lithic items are associated. The proximity of these items to

the ceramics seems to indicate that they belong to the Anasazi Tradition, but this interpretation is only tentative.

Summary

Lee Side Camp appears to have been used sporadically for limited activities from the Archaic period through the Anasazi period. The specifics of these activities are not known due to the paucity of cultural remains. However, the firepits indicate that activities associated with fire and heat took place in the vicinity of the pits. The manos and hammerstones indicate that some sort of resource processing might have taken place, and the flaked lithic debitage might be indicative of tool production activities. This site location might have been a desirable spot for a variety of activities due to its proximity to the Sagehen Flats Marsh; presently the marsh contains many exploitable resources including plants and waterfowl, and these resources might have attracted prehistoric hunters and gatherers. Unfortunately, it is not known if the marsh existed prehistorically. Other reasons for locating a site in this spot are unknown, but apparently this area was attractive to both Archaic and Anasazi people.

DESECHO CAMP (SITE 5MT4642)

Introduction

Desecho Camp (Site 5MT4642) is a limited activity locus situated at the western edge of a large hill in the Sagehen Flats Locality. The site is located in the NE 1/4 of the NW 1/4 of the SE 1/4 of the SW 1/4, sec. 19, T38N, R15W. The Universal Transverse Mercator grid coordinates for Desecho Camp are 4,156,660 mN, 717,480 mE, zone 12.

In the original survey report (Dykeman et al. 1981) Desecho Camp is described as a sparse lithic and ceramic scatter lacking cultural stains or depressions. No temporal designation was assigned to the site during survey operations.

Desecho Camp was investigated during the summer of 1979 as part of the DAP mitigation program. The site is located in one of the borrow pit areas from which dirt will be removed to build the McPhee Dam. Because all sites within this borrow area ultimately will be destroyed by construction activities, this testing program was established to carry out limited investigation on sites that could not be completely excavated. Limited investigations at this site began on 7 September 1979 and were completed on 18 September 1979. A total of 24 person-hours was expended.

Investigative Strategy

The basic methods used to investigate the tested sites are discussed in the "Introduction" section of this report. The following discussion provides site specific details about the surface collection and subsurface investigation. A magnetometer survey was not conducted at this site.

Surface Collection

Surface indications of prehistoric occupation at Desecho Camp were fairly promising. A variety of artifacts were found although there was not a large quantity, and there was evidence for structures, although it was limited to a sparse scatter of sandstone rubble. The artifact scatter covered an area of approximately 30 by 70 m.

Investigation of the site began with the establishment of a grid system of 4- by 4-m squares over an area measuring 40 by 48 m. Materials from every other square were collected, resulting in a 50 percent surface collection. Diagnostic artifacts were occasionally observed in squares not slated for collection; these artifacts were also collected to help identify activities that took place at the site. Figures 15 and 16 illustrate the surface distribution of nonflaked and flaked lithic artifacts. Since only five sherds were recovered, a map showing the surface distribution of ceramics is not included.

Subsurface Investigations

A self-loading scraper was used to remove the plow zone. About 30 cm of overburden were removed from an area of approximately 40 by 60 m. The area was then scraped by a grader, so any subsurface structures or features could be easily identified. Several close examinations of the entire bladed area failed to reveal any cultural materials, structures, or features.

Material Culture

The artifact assemblage from Desecho Camp is limited to those items collected during the surface collection and the original survey; no artifacts were recovered from subsurface contexts. The small size of the

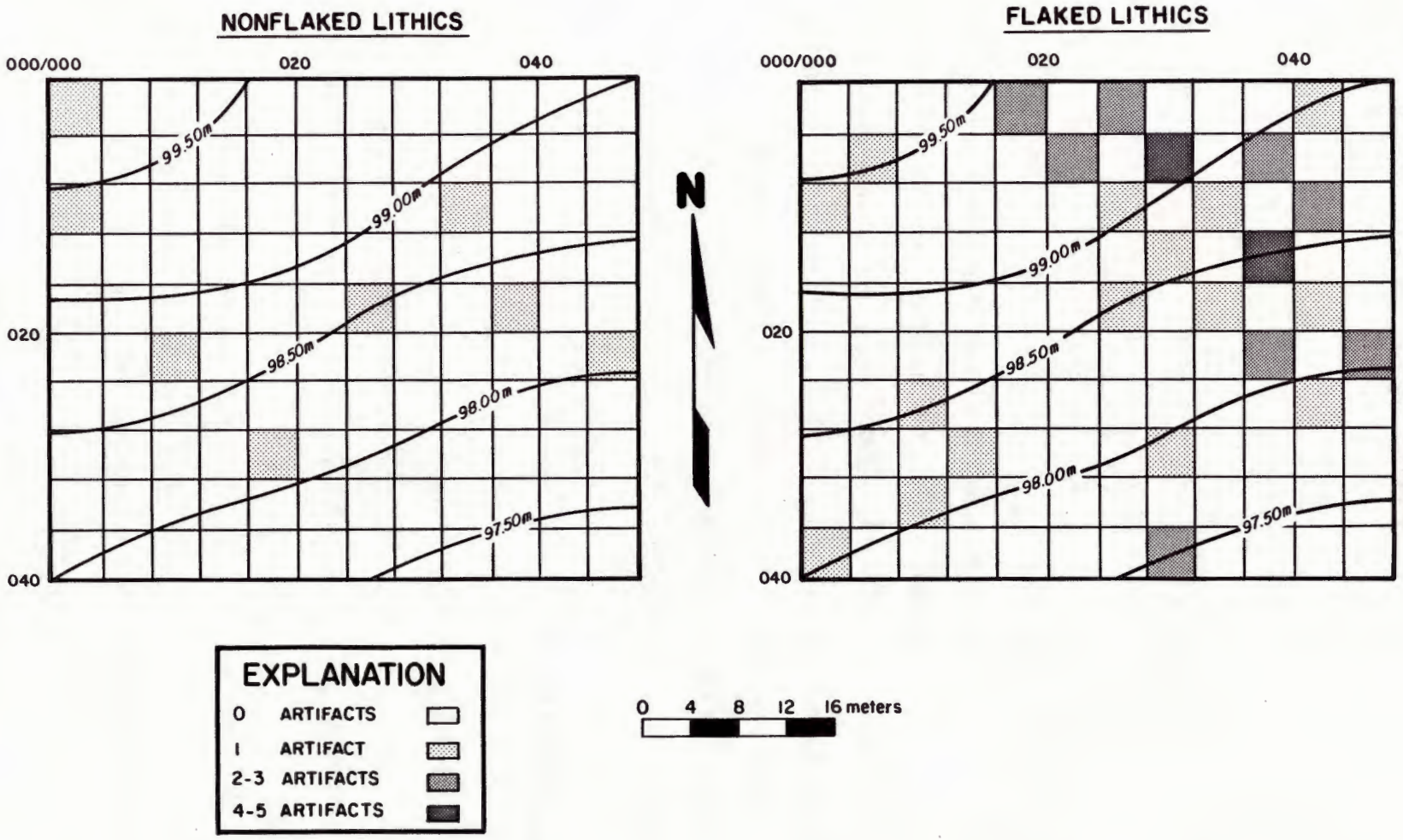

Figure 15. Surface distribution of nonflaked lithic items, Desecho Camp.

Figure 16. Surface distribution of flaked lithic items, Desecho Camp.

artifact assemblage precludes precise interpretation of the function of the site.

Ceramics

A total of five sherds was collected from the modern ground surface; three of these sherds are Early Pueblo Gray and two are Early Pueblo White. Based on the presence of these sherds the site possibly was used between A.D. 600 and 950.

Flaked Lithic Tools and Debitage

Twelve flaked lithic tools and 55 pieces of debitage were collected from Desecho Camp. The tools range from expediently produced items, such as utilized flakes, to highly stylized forms, such as projectile points. The variety of tools types suggests that various activities might have taken place at the site. The presence of debitage indicates that some tool manufacturing and/or maintenance might have been performed at the site. Totals and various attributes of these artifacts are shown in tables 17 and 18.

Nonflaked Lithic Tools

A total of nine nonflaked lithic tools was collected; totals and selected attributes of these tools are shown in table 19. The presence of manos and hammerstones indicates that some resource processing might have been performed at the site; however, metates are noticeably absent.

Faunal Remains

A single nonhuman bone was recovered from the surface during survey operations. This bone has been identified as being from a large mammal; more specific identification was not possible due to the fragmentary condition of the bone.

Table 17. Flaked lithic tools, Desecho Camp

	Site total N	%
Total tools:	11	100.0
Tool morpho-use		
Utilized flake	4	36.4
Core	2	18.2
Thin scraper	1	9.1
Biface	2	18.2
Projectile point	1	9.1
Specialized form	1	9.1
Grain size		
Medium	1	9.1
Fine	2	18.2
Very fine	6	54.5
Microscopic	2	18.2
Dorsal face evaluation		
Unmodified core	2	18.2
Unthinned item, with cortex	4	36.4
Unthinned item, no cortex	1	9.1
Preliminary shaping, no cortex	1	9.1
Primary thinning	1	9.1
Well shaped	2	18.2
Ventral face evaluation		
Unmodified core	2	18.2
Unthinned item, no cortex	6	54.5
Primary thinning	1	9.1
Well shaped	2	18.2

Table 18. Flaked lithic debitage, Desecho Camp

	Site total N	%
Flakes/flake fragments:		
Grain size		
Fine	5	9.0
Very fine	23	41.8
Microscopic	27	49.1
Total flakes/flake fragments	55	100.0
Items with cortex	20	36.4
Items with platform	23	41.8

Table 19. Nonflaked lithic tools, Desecho Camp

	Site total	
	N	%
Total tools:	9	100.0
Tool morpho-use		
Indeterminate	1	11.1
Hammerstone	2	22.2
Mano	4	44.4
Miscellaneous specialized	2	22.2
Production evaluation		
Natural (unshaped)	8	88.8
Minimally shaped	1	11.1
Item completeness		
Indeterminate	1	11.1
Small fragment	4	44.4
Complete/nearly complete	4	44.4
Grain size		
Indeterminate	3	33.3
Coarse	1	11.1
Medium	5	55.5

Summary

No cultural features or structures were observed at Desecho Camp; therefore, it is believed to have been a locus for limited activities. The exact nature of these activities is not known, but the artifact assemblage suggests that resource processing and tool manufacture or maintenance might have taken place. Ceramics recovered from the site suggest a site date of sometime between A.D. 600 and 950. However, there is probably a relationship between Desecho Camp and other sites in the vicinity. All of the excavated sites in the vicinity were occupied between A.D. 600 and 825 (cf. Brisbin 1982; Montgomery 1982). It is postulated that Desecho Camp was used by inhabitants of these sites and therefore dates to the same period.

ROADSIDE CAMP (SITE 5MT4649)

Introduction

Roadside Camp is a very small limited activity site located on the west side of a north-south trending ridge, approximately 7.4 km from Dolores, Colorado. Limited investigation of the site began on 17 September 1979 and ended on 11 October 1979. The site was visited again on 22 June 1980 to reexamine Feature 1. A total of 50 person-hours was expended investigating the site.

According to DAP spatial and temporal systematics, this site is located in the vicinity of the Milhoan Community Cluster,[4] which is in the Sagehen Flats Locality (fig. 17) of the Escalante Sector; the site represents one component of the Sagehen Phase (A.D. 600-850).

Roadside Camp is located in the SE 1/4, of the SE 1/4, sec. 24, T38N, R16W. The Universal Transverse Mercator grid coordinates for this location are 4,156,660 mN, 715,800 mE, zone 12.

This site was first recorded in 1978 by the DAP survey crew (Dykeman etal. 1981). At that time it was described as a light scatter of sherds and lithic items over an area measuring approximately 36 m north-south by 37 m east-west. Artifacts collected during the survey include an obsidian projectile point and a quartzite scraper. A cluster of burned bone fragments was recorded during the survey, but these items were not relocated during testing operations. The survey crew did not suggest any functional interpretation or temporal association for the site.

In the late summer of 1979 this site was evaluated for possible inclusion in the project testing and blading program. At that time the site

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[4]Allen E. Kane, DAP, personal communication.

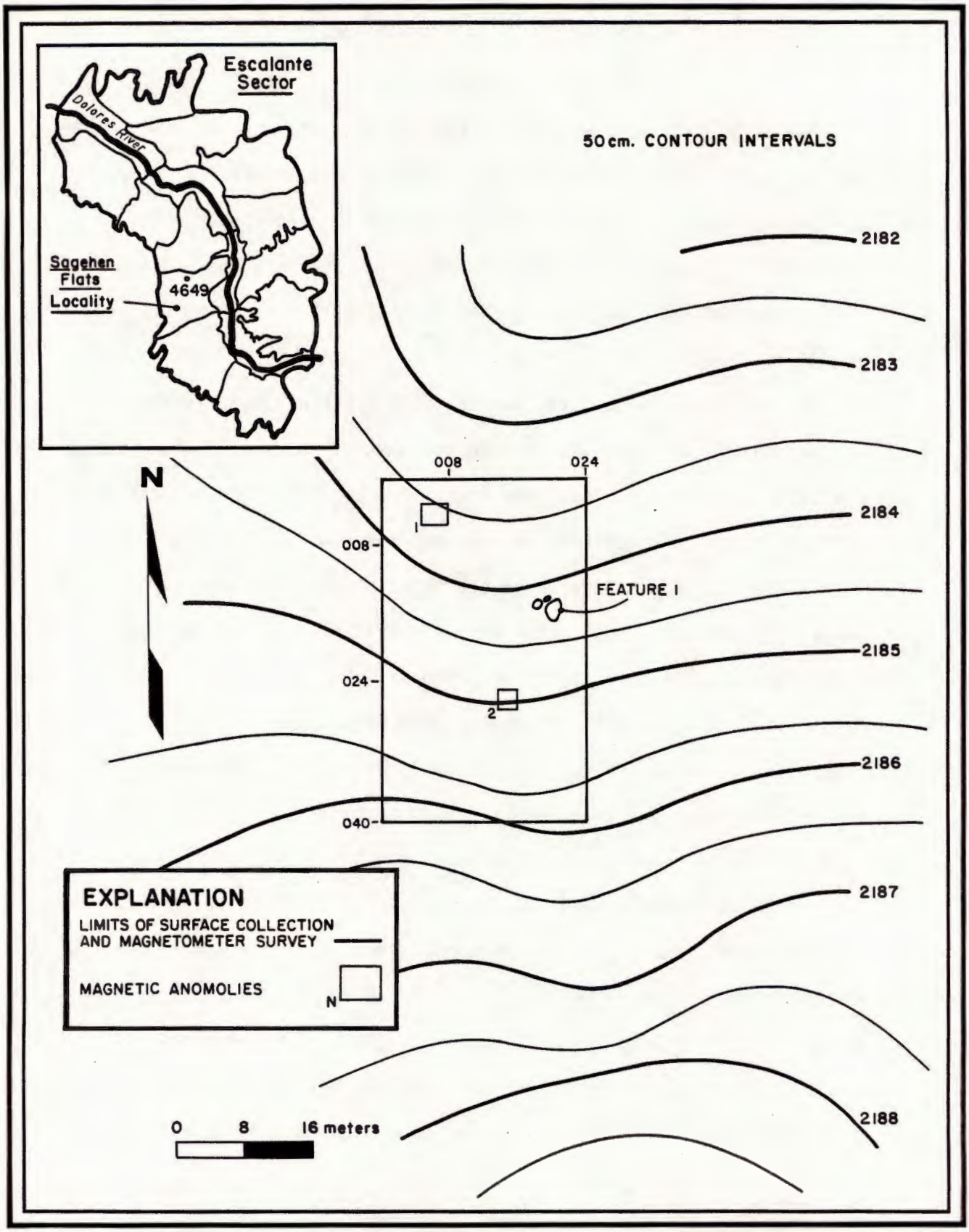

Figure 17. Topographic map with site sampling plan, Roadside Camp.

was believed to be a limited activity locus of unknown type, dating to either the Sagehen Phase or the McPhee Phase on the basis of ceramics. Since little was known about limited activity sites during these phases, this site was included in the testing program. Unfortunately, subsequent observations could not resolve the problems of chronology and specific site type.

Roadside Camp, as the name implies, is located on the east edge of a modern dirt road, which affords access to the somewhat remote mesa uplands west of the Dolores River. The site is separated from the road by a small drainage that eventually drains into the Sagehen Marsh. The north-south trending ridge east of the site blocks the view to the east, but the site commands a good view of the broad open area south and west.

Investigative Strategy

The primary rationale behind the testing of sites in the project area is that a significant amount of data can be recovered without total excavation. The goal is to obtain a representative sample of the artifact inventory and details about architectural characteristics. It is hoped that with these data some statements can be proposed concerning the age and primary function of the sites. It was under this premise that Roadside Camp was investigated. Site specific details about the surface collection, magnetometer survey, and subsurface excavations are given in the following discussion.

Magnetometer Survey

Prior to the testing of this site a magnetometer survey was conducted

over a 40- by 20-m area using a proton magnetometer. Three magnetic anomalies were recorded but apparently the geological setting of the site area has made intelligible magnetometer readings difficult. None of the anomalies corresponded with the single feature found at the site (for a detailed discussion concerning the use of the magnetometer refer to Huggins and Weymouth 1978).

Surface Collection

The site was initially gridded into 4- by 4-m units by the testing crew, and every other unit was canvassed for cultural material. The 50 percent surface collection resulted in the recovery of three ceramic items, three flaked lithic tools, and three pieces of flaked lithic debitage. Obviously, with so little material no distribution patterns could be ascertained.

Subsurface Investigations

Blading of the site exposed a large area of dark soil associated with an amorphous pile of sandstone fragments. This feature (Feature 1) was subsequently investigated by hand excavation.

Excavation Units

Only one feature was observed during the blading operations conducted at the site. All evidence recorded for the feature indicates that the feature is not the result of prehistoric cultural activity. Nevertheless, the basic characteristics of the feature are discussed below.

Feature 1

Dimensions:

North-south diameter:	2.25 m
East-west diameter:	4.00 m
Depth (approximate):	0.05 m

This feature consists of a cluster of small sandstone rocks partially surrounding an area of very dark soil. East of these rocks are several large sandstone rocks lying on soil that is slightly less dark, yet darker than the adjacent sterile soil. There is no discernable pattern to any of the rocks, and they are not the remnants of a structure. The areas of dark soil appear to be the result of in situ burning; however, it does not appear to be burning that took place within a pit or other contained area. The boundaries of the burning were very difficult to define, especially to the east. The burning seems to have taken place across a fairly wide-spread area. The texture of this burned soil is the same as the surrounding natural soil, so it is believed to be the same type of soil that was burned in place. These soil characteristics, coupled with the fact that there were no artifacts associated with the feature, indicate that the feature did not result from prehistoric cultural activities, but is possibly the result of modern clearing practices. On other parts of the site there were several small burned areas that appeared to be recent sagebrush burns, and it is known that large portions of the Sagehen Flats area were cleared by chaining and burning (Duranceau 1980).

Material Culture

The artifact inventory recovered from Roadside Camp is extremely limited and consists of items collected from the modern ground surface only; no artifacts were recovered during subsurface investigations. The sparse assemblage consists of three Early Pueblo Gray sherds, one core, two used, unworked flakes, and three pieces of debitage (tables 20 and 21 present the flaked lithic tool and debitage data for this site). The

utilized flakes and the core are made from quartzite. A fragment of a metate was noted during blading operations, but the item was not collected.

Table 20. Flaked lithic tools, Roadside Camp

	Site total N	Site total %
Total tools:	3	100.0
Tool morpho-use		
Utilized flake	2	66.7
Core	1	33.3
Grain size		
Fine	3	100.0
Dorsal face evaluation		
Unmodified core	1	33.3
Unthinned item, with cortex	1	33.3
Unthinned item, no cortex	1	33.3
Ventral face evaluation		
Unmodified core	1	33.3
Unthinned item, no cortex	2	66.7

Table 21. Flaked lithic debitage, Roadside Camp

	Site total N	Site total %
Flakes/flake fragments:		
Grain size		
Very fine	3	100.0
Total flakes/flake fragments	3	100.0
Items with cortex	2	66.7
Items with platform	0	0.0

The ceramics can be used to date the site only to the early part of the Anasazi occupation of the Escalante Sector, A.D. 600-900. All three sherds are from jars, and none is temporally diagnostic of a narrower time frame.

Summary

Based on all available evidence, it is concluded that Roadside Camp was a locus of limited activity. The nature of that activity could not be determined, but the presence of a metate fragment indicates that resource processing might have taken place.

The single feature noted at the site is apparently the result of modern clearing practices and not related to the prehistoric use of the site.

The site can be placed in the broad time frame of A.D. 600-900 based on the presence of Early Pueblo Gray sherds.

LONE PINE HAMLET (SITE 5MT2162)

Introduction

Lone Pine Hamlet was initially recorded in September 1972 by a University of Colorado survey team (Breternitz and Martin 1973). Limited investigations at the site began on 29 October 1979 and were completed on 13 November 1979. A total of 142 person-hours was expended. An irrigation canal, the Lone Pine Lateral, is located near this site, hence the name Lone Pine Hamlet.

Investigations at this site revealed a pithouse with an antechamber that probably had been occupied between A.D. 690 and 700. At some time around A.D. 700 the antechamber burned and was remodeled, and a surface structure was added. This remodeling at the site is believed to represent a second occupation. The site was ultimately abandoned sometime before A.D. 720.

Location

Lone Pine Hamlet is located in an area of low rolling hills in the extreme western portion of the Sagehen Flats Locality (fig. 18). A drainage system comprised of deep arroyos is located in the general site vicinity. The site is located on flatlands on the eastern side of the easternmost arroyo in the drainage system. More specifically the site is located in Montezuma County, Colorado in the NW 1/4 of the NW 1/4, sec. 35, T38N, R16W. Universal Transverse Mercator coordinates for the site location are 4,154,580 mN, 713,060 mE, zone 12.

Figure 18 shows the general topography in the immediate site vicinity. The elevation of the site is 2121 m above sea level.

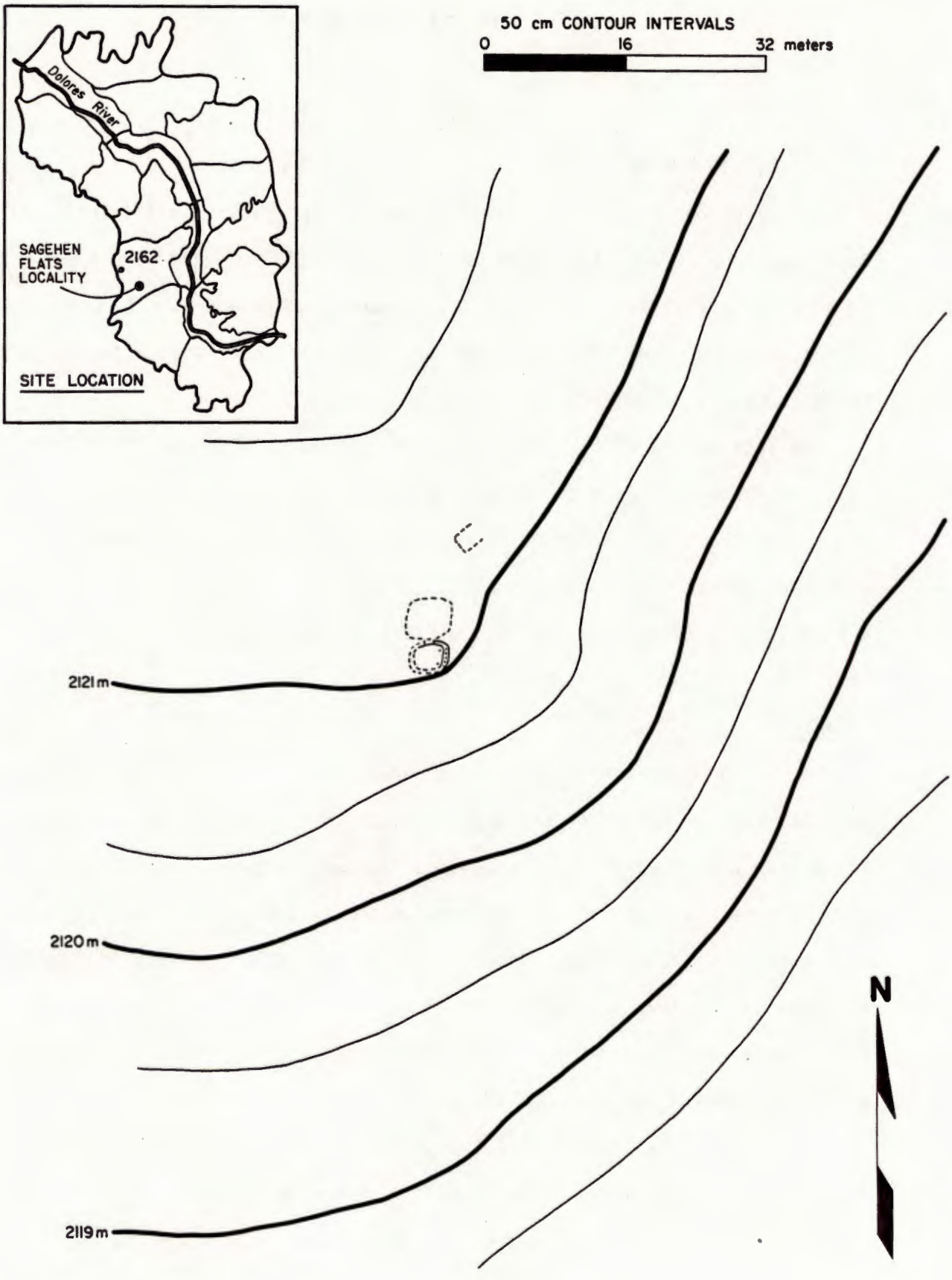

Figure 18. Topographic map of Lone Pine Hamlet.

Investigative Strategy

The basic methods used to investigate this site have been described in the "Introduction" section to this report. Site specific details concerning the magnetometer survey, surface collection, and subsurface excavations are given in the following discussions.

Magnetometer Survey

A magnetometer survey was conducted at Lone Pine Hamlet during the 1979 field season. The survey was conducted within two adjacent 20- by 20-m blocks, resulting in a total survey area of 800 m^2. The results of this survey were used to help locate subsurface cultural features.

Four magnetic anomalies were identified by the magnetometer survey. All four were recommended for testing; however, it was difficult to differentiate between potential prehistoric remains and recent disturbances. Metal objects and recent camp fires have disturbed the magnetic field and rendered the survey results difficult to interpret.

Anomaly 1 was a large anomaly similar in shape and magnitude to anomalies associated with pitstructures at other sites. This anomaly was investigated with auger tests and a backhoe trench. Results of these investigations revealed that the anomaly corresponded to a pithouse with an antechamber (Pithouse 1).

Anomaly 2 was similar to anomaly 1 but had a lesser magnetic magnitude. Because of its similarity to anomaly 1, this anomaly was also believed to indicate the presence of a pitstructure. However, investigation of this anomaly revealed that it corresponded to a surface structure (Room 1).

Anomaly 3 was believed to represent a hearth; surface observation of this area revealed the remains of a modern hearth. Anomaly 4 was also

believed to be a hearth due to its similarity to anomaly 3. However, this area was not tested due to time constraints. It is possible that this anomaly represents another firepit associated with recent activities at the site. Figure 19 shows the location of all the magnetic anomalies and the cultural units with which they are associated (the modern hearth is not shown).

Surface Collection

In order to conduct a 50-percent surface collection, a grid of 4- by 4-m squares was established over the limits of the site; the total area gridded was 784 m^2. The artifact assemblage recovered during surface collection was sparse, possibly due to recent disturbances. This assemblage included 41 flaked lithic items and 39 ceramic sherds. The surface distribution of these assemblages is shown in figures 20 and 22. Further details concerning these items are provided in the "Material Culture" discussion of this section.

Subsurface Investigations

Upon completion of preliminary site operations, including the surface collection and the construction of a contour map, a grader was used to remove the plow zone. During and after the blading operations the surface was examined for stains representing features and structures; two such stains were observed. The smaller stain represented the remains of a surface structure, and the larger stain was believed to be a pitstructure. Extensive augering in this area confirmed this suspicion. These auger tests also revealed that the antechamber had burned and might contain charred logs suitable for tree-ring dating. These stains corresponded to magnetometer anomalies 1 and 2, which have been previously described.

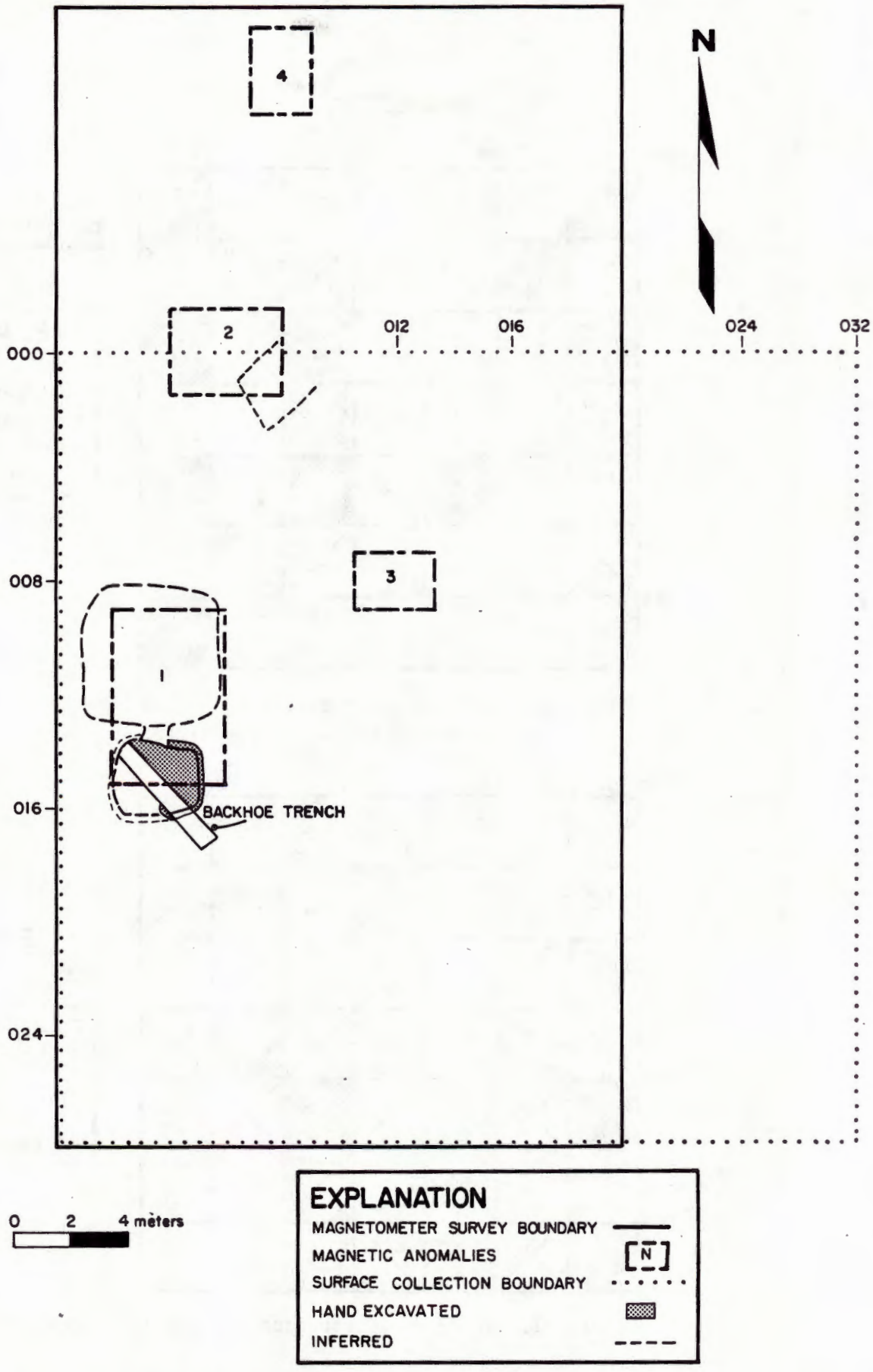

Figure 19. Site sampling plan, Lone Pine Hamlet.

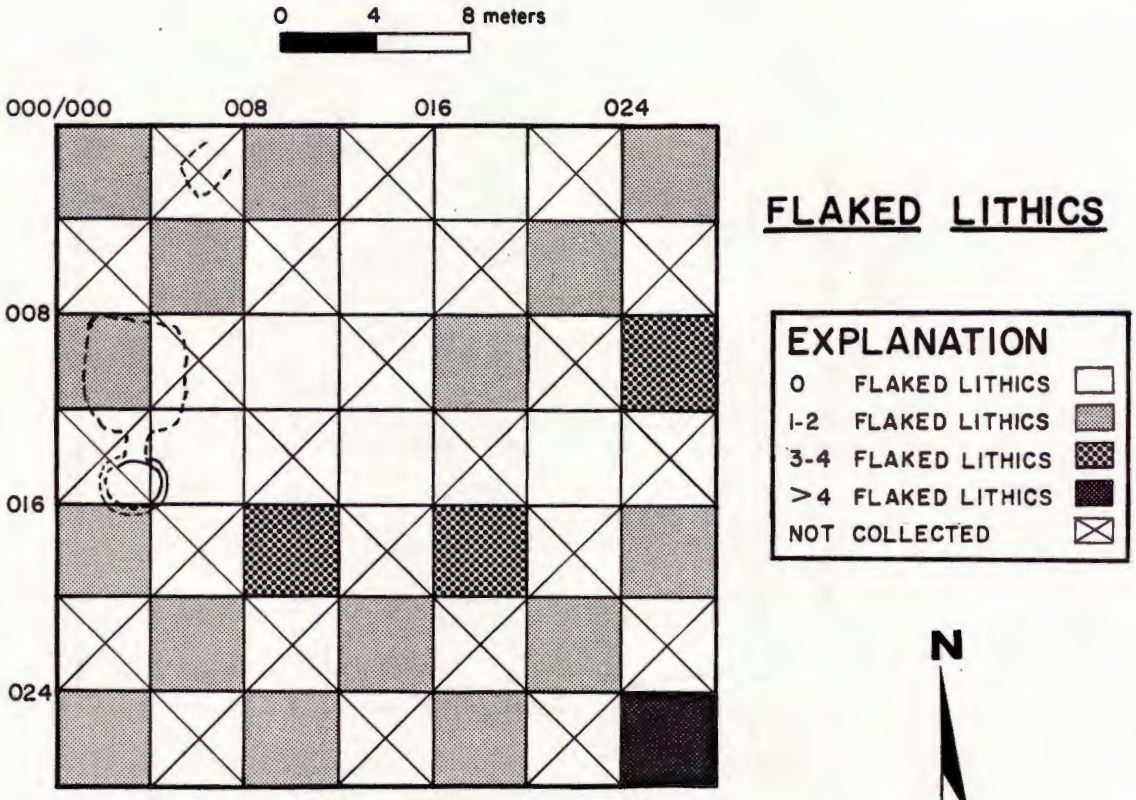

Figure 20. Surface distribution of flaked lithic items, Lone Pine Hamlet.

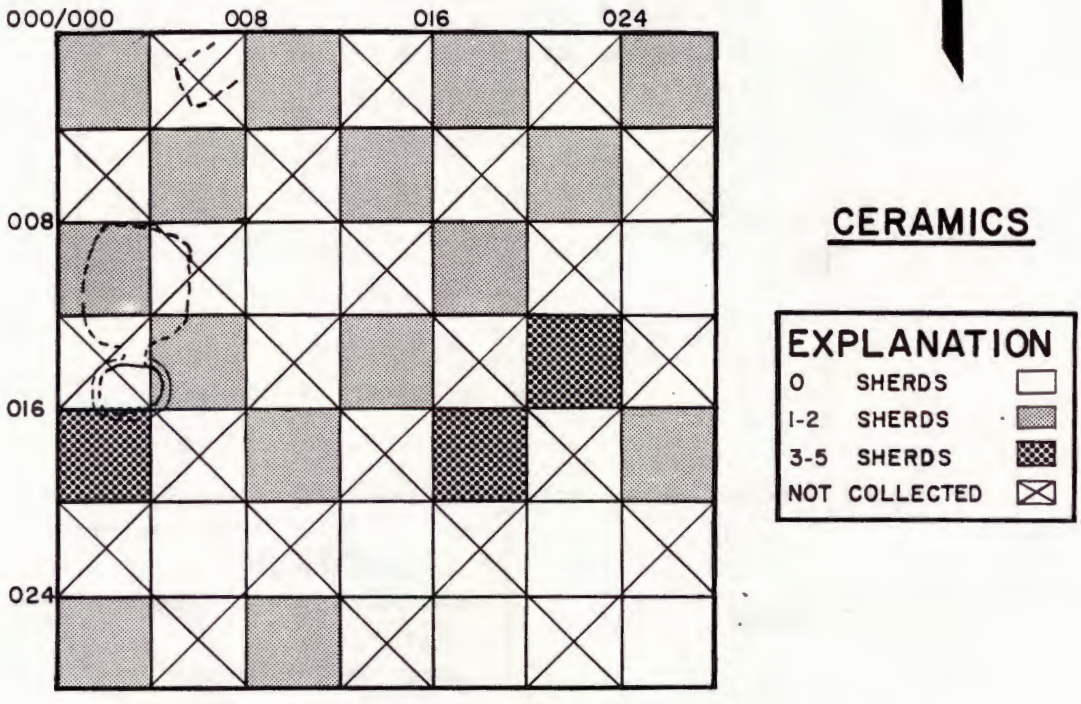

Figure 21. Surface distribution of ceramics, Lone Pine Hamlet.

To further examine the deposits in the antechamber, a backhoe was used to cut a trench diagonally across the antechamber from northwest to southeast (fig. 22). This trench was limited in depth to about 10 cm above the floor so that surface contexts would not be damaged; remaining fill was removed by hand. The northeast profile (fig. 23) of the trench showed an extensive zone of burned roof materials. In order to remove some of the larger logs for tree-ring samples, it was necessary to enlarge the area of excavation. The northeast half of the chamber was excavated by hand to the upper limits of the roof materials; also a small portion in the southwest half of the chamber was excavated (fig. 19). Eight tree-ring samples were removed from the roof stratum, and the remaining fill was excavated to the floor of the chamber. Several features were located in this portion of the antechamber and these features were excavated. No other subsurface excavations were conducted at the site.

Auger testing in the main chamber revealed that it did not burn extensively and, therefore, was not likely to yield materials suitable for dating. The surface structure was defined by limited shovel scraping but no further excavation was conducted.

Architectural Remains

Limited investigations at Lone Pine Hamlet located a pitstructure with an antechamber, Pithouse 1, and a surface structure, Room 1 (fig. 24). These structures and their associated features are presented in the following discussion.

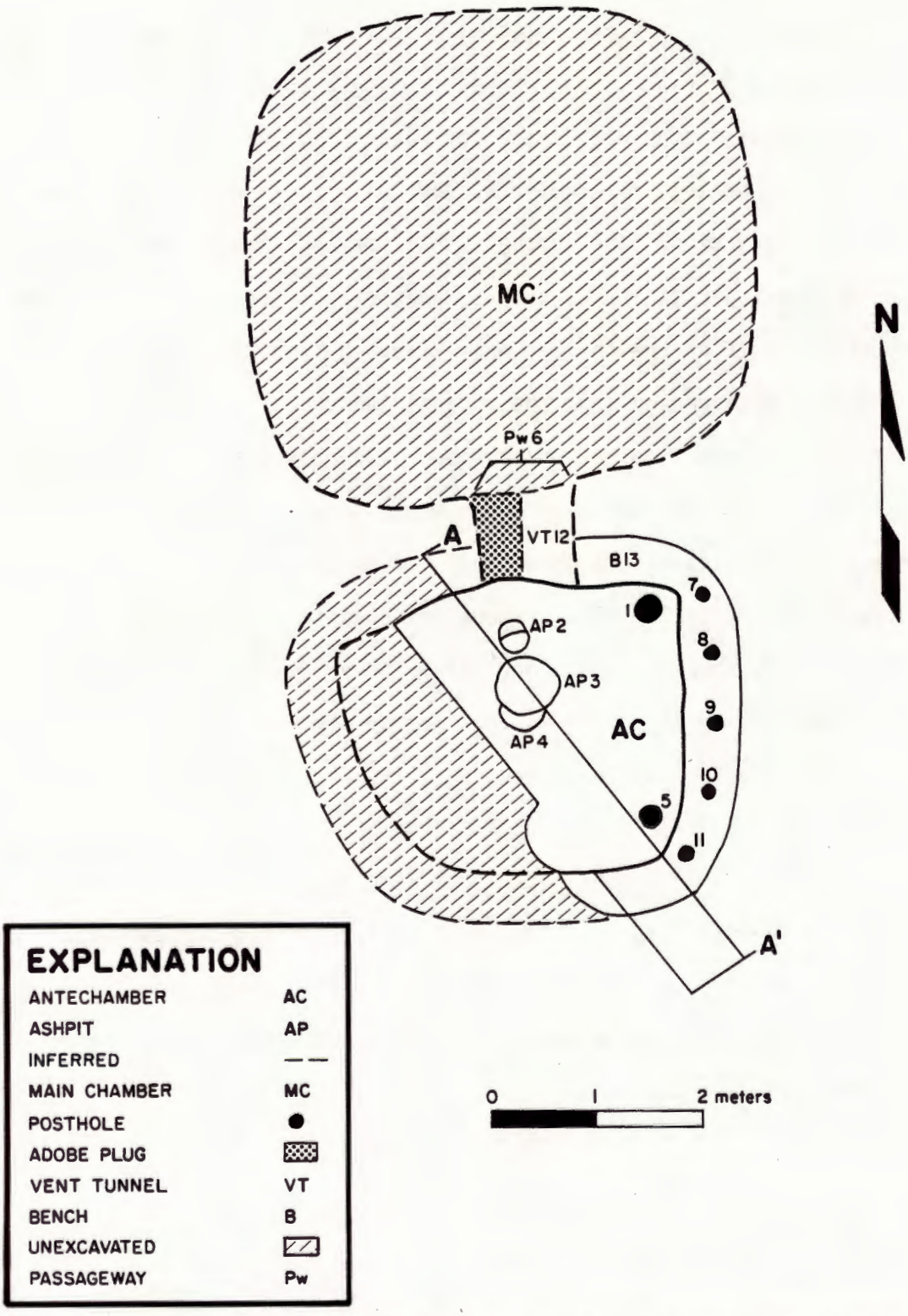

Figure 22. Plan map of Pithouse 1, Lone Pine Hamlet. See figure 23 for architectural profile.

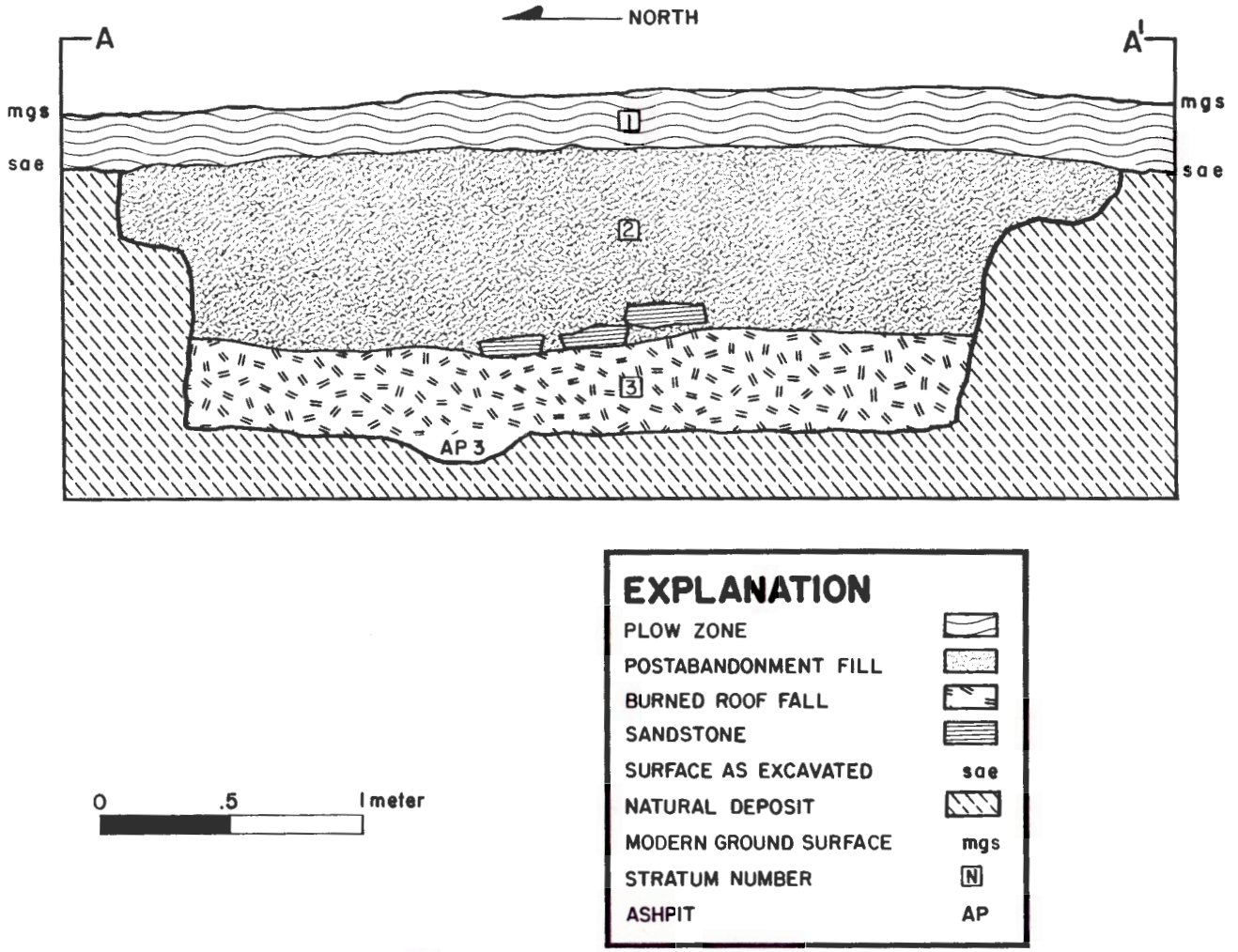

Figure 23. Stratigraphic profile of antechamber, Pithouse 1, Lone Pine Hamlet. See figure 22 for location of profile.

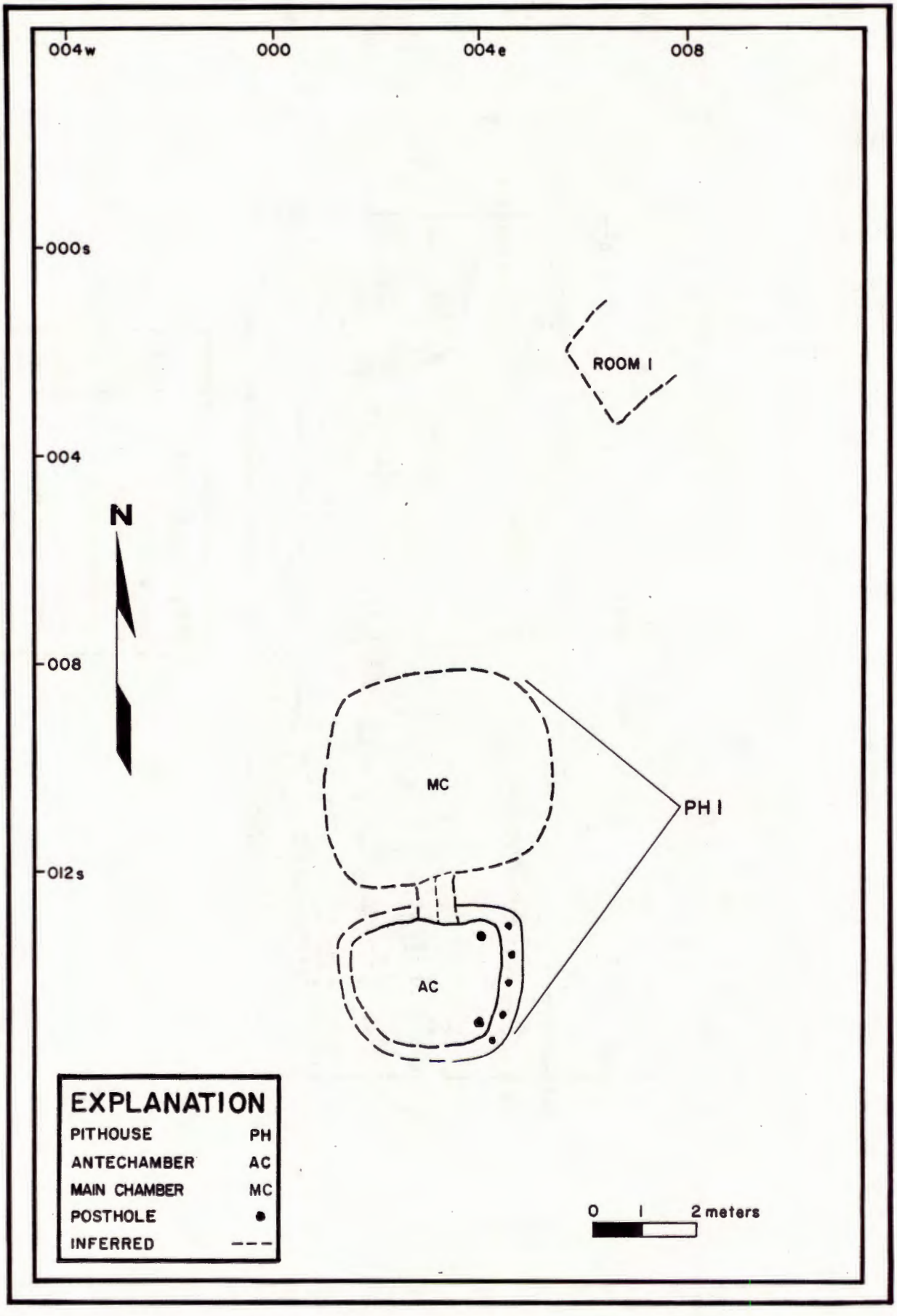

Figure 24. Spatial relationship of major cultural units, Lone Pine Hamlet.

Pithouse 1

Main chamber.

Dimensions (approximate):

North-south diameter:	4.40 m
East-west diameter:	4.80 m
Average depth:	1.02 m

Since investigation of the main chamber was limited to auger testing no details about this part of the pithouse are available; therefore, the above dimensions are approximate. An inferred plan view of this structure is shown in figure 22.

Antechamber.

Dimensions:

North-south diameter including bench (inferred):	3.35 m
East-west diameter including bench (inferred):	3.50 m
Average depth:	1.10 m

A D-shaped antechamber with an encircling bench or shelf is located south of the main chamber. This structure is connected to the main chamber by a narrow passageway.

Stratigraphy: The fill sequence revealed in the northeast profile (fig. 23) of the backhoe trench shows that the roof of the antechamber burned and collapsed onto the floor. After this event, the resultant depression was filled with a mixed deposit of trash and wind- and water-deposited sediments. The trash apparently was associated with the continued occupation of the main chamber.

Passageway (Feature 6): At the north end of the antechamber is a narrow passageway that connected it with the main chamber. After the antechamber burned, the passageway was apparently remodeled into a ventilator tunnel. This was accomplished by reducing the size of the passageway with an adobe plug. This plug was placed on the west side

of the passageway and reduced its size almost by half (fig. 22). The original passageway measured 87 cm wide; the modified tunnel measures 36 cm wide. A ventilator shaft was probably associated with this tunnel, but it was not observed during excavation. This was due in part to the nature of the deposits; i.e., it is easier to observe a vent shaft that had been dug through native deposits than one that had been dug through cultural deposits. Another alternative is that the old antechamber was used as the vent shaft.

Bench (Feature 13): On the east, west, and south sides of the antechamber there is a narrow bench or shelf. This feature is located about 70 cm above the floor of the chamber. Due to limited excavation, precise limits of this feature are not known; however, it appears to have been approximately 20 cm wide. Five postholes on the east portion of the bench (fig. 22) were recorded. These features (Features 7 through 11) range in diameter from 8 cm to 15 cm and they contained fragments of burned posts. Other construction details are not known because these features were not excavated. It is assumed that the posts in these holes were part of the antechamber superstructure.

Floor: During testing operations, over half of the antechamber floor was exposed and five features (three ash pits and two postholes) associated with this floor were examined.

Posthole (Feature 1):

Dimensions:

Length:	17 cm
Width:	17 cm
Depth:	36 cm

Feature 1 is located in the northeast corner of the antechamber; this feature is cylindrical in profile and circular in plan. The posthole

probably held one of the main support posts for the antechamber roof. However, during excavation it was determined by examining the composition of the fill of the posthole that this feature was not in use at the time the chamber burned. The fill was a brown sediment which contained no burned or decomposed wood or any other cultural materials. It was unlike the fill covering the floor of the chamber, which contained much cultural material, charcoal, and burned adobe. Therefore, it seems that the post was removed from this posthole prior to the burning of the antechamber. Whether the brown fill in the posthole resulted from intentional or natural filling is not clear.

Posthole (Feature 5):

Dimensions:

Length:	18 cm
Width:	18 cm
Depth:	40 cm

Feature 5 is located in the southeast corner of the antechamber; it is cylindrical in profile and circular in plan. Like Feature 1, this posthole probably held one of the main support posts for the antechamber roof, and the post had been removed prior to the burning of the rest of the antechamber roof. The fill in this posthole was a brown sediment which lacked any burned or decomposed wood or other cultural materials.

Ash pit (Feature 2):

Dimensions:

Length of original pit:	30 cm
Width of original pit:	30 cm
Depth of original pit:	22 cm
Length of modified pit:	15 cm
Width of modified pit:	30 cm
Depth of modified pit:	22 cm

Feature 2 is located 25 cm south of the passageway. Originally this feature was a round pit that was apparently used as a repository for ash. At some unknown point in time the northern part of the pit was capped with adobe and the ash was left in this portion of the pit. The ash was removed from the southern part of the pit, and it was filled with a light, sandy deposit. This remodeling changed the function of the pit; however, this secondary function is unknown.

Ash pit (Feature 3):

Dimensions:

Length:	55 cm
Width:	55 cm
Depth:	16 cm

This feature, located near the center of the antechamber, is round in plan and basin shaped in profile. Because the feature was filled with ash and the walls of the feature were not oxidized, it is believed to have been used as a repository for ashes.

Ash pit (Feature 4):

Dimensions:

Length:	32 cm
Width:	32 cm
Depth:	9 cm

Adjacent to the south side of Feature 3 is a small pit tentatively defined as another ash pit. It could not be determined if this pit actually served as an ash pit or if the presence of ash was due to rodent disturbances. Evidence of rodent activity was observed in Feature 3 and Feature 4, and this activity might have resulted in transferal of ash from Feature 3 into Feature 4. It also appears that Feature 3 is intrusive into Feature 4; however, the latter feature was not capped or altered in any way that would indicate that it was not used after Feature 3 was constructed. Therefore, both pits might have been used simultaneously.

Interpretations. Based on the amount of data recorded during the limited testing of Pithouse 1, the following use history of the structure can be inferred. The original pitstructure at the site consisted of a main chamber and an antechamber that were connected with a passageway. At some point in time the main roof support beams were removed from the antechamber and the remaining superstructure burned. Sometime after the burning, the passageway to the antechamber was reduced to a narrow tunnel and it is assumed that this tunnel was connected to a vent shaft. This remodeling indicates that the main chamber was used after the antechamber burned. However, it is not clear if habitation of the main chamber continued immediately or after a period of abandonment. Most of the evidence points to a hiatus between occupations.

The most convincing evidence for noncontinuous occupations is based on the deposits found in the antechamber. Most of the excavated portion of the antechamber contained burned roof materials that had not been disturbed. It seems likely that if occupation of the main chamber continued immediately following the fire and the passageway was remodeled at that time, then the occupants would have cleaned out the antechamber in order to engage in remodeling activities. It also seems likely that if the vent shaft was constructed at this time it would have been a substantial (e.g., rocklined) structure since there were no stable deposits in the antechamber (except roof fall) through which a suitable shaft could be dug. Alternatively, the inhabitants might have chosen to leave the burned roof debris in the antechamber and to fill the remaining pit with a mixed deposit of cultural and natural materials. This would result in a deposit of suitable depth into which a shaft could be dug. However, no evidence of such a vent shaft was found. There is also the possibility that the

inhabitants chose to leave the roof fall in the antechamber and use the remaining pit for the vent shaft. If this was the case, then the mixed deposit above the roof fall must have been deposited by natural processes after the structure was finally abandoned.

There is not enough evidence to say definitely which of these alternatives is the most likely; perhaps the answer would have been found if the main chamber had been excavated. Nevertheless, it is clear that the antechamber as originally constructed belongs to the earlier element at the site, and the vent tunnel belongs to the later element.

Room 1

Due to the limited nature of the investigations, few details about this structure are available. It is located approximately 6 m northeast of Pithouse 1 and is roughly rectangular (fig. 24). The limits of the room are based on the limits of the stain observed after blading and shovel-scraping operations. This stain is a result of the dark, humic fill within the room. The north edge of the room could not be located; the definition of the other edges remains tentative. The approximate width of the structure is 2 m; the length is unknown.

Material Culture

The amount of cultural material recovered from Lone Pine Hamlet is small, and interpretations based on the assemblage are limited in scope. However, some of the artifacts can be used to answer general questions and to help date the occupation of the site.

Ceramics

The ceramic collection recovered from Lone Pine Hamlet consists of 498 sherds that were classified into four types. Two of these types,

Chapin Gray and Chapin Black-on-white, are temporally diagnostic types. The other two, Early Pueblo Gray and Early Pueblo White, are grouped types, which consist of body sherds that cannot be identified as belonging to more definitive types. However, enough is known about temper and other characteristics of the grouped types that a general date for their production is estimated to be between A.D. 600 and 900. Sherd totals and associated provenience units are given in table 22.

The presence of Chapin Gray and Chapin Black-on-white suggests a site occupation date of A.D. 600-750.[5] The absence of Moccasin Gray, Piedra Black-on-white, and Abajo Red-on-orange also supports this occupation date since these types start occurring in the area at around A.D. 720 and later (Blinman 1982).

Two reconstructable ceramic vessels were recovered from the floor of the antechamber. Vessel 1 (fig. 25) has an unusual shape and can be described as bilobed or double cupped. Between the lobes are perforated lugs that suggest the item was suspended. Since this item does not have a typical vessel form, type identification is difficult; therefore it is simply called a gray ware vessel. Vessel 2 is a small Chapin Gray seed jar; this item is illustrated in figure 25.

Flaked Lithic Artifacts

Thirteen flaked lithic tools and 92 flaked lithic debitage items were recovered from Lone Pine Hamlet (tables 23 and 24). Three of the tools and 26 debitage items were recovered from the floor of the antechamber; the remainder were recovered from the surface collection and from excavated fill.

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[5]William A. Lucius, DAP, personal communication.

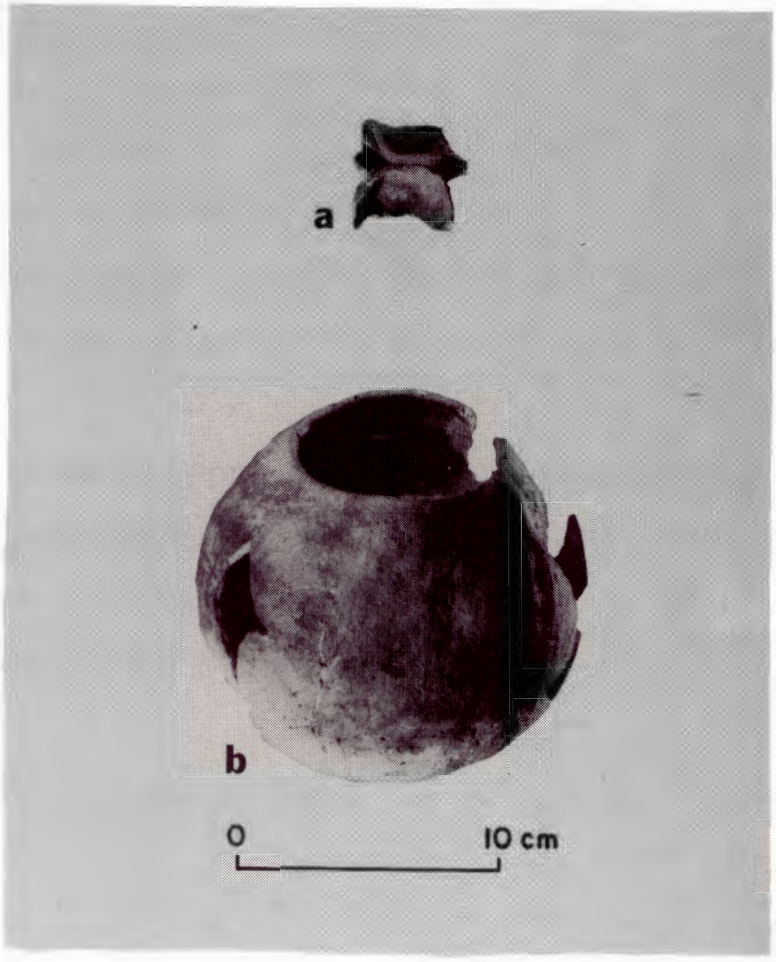


Figure 25. Vessels from Pithouse 1, Lone Pine Hamlet: (a) vessel 1; (b) vessel 2 (DAP 130502).

Five morpho-use forms are recognized in the lithic tool collection. Totals for each form are shown in table 23. These totals indicate that the proportion of well-shaped items is higher than the proportion of utilized flakes. Phagan (1981a) has shown that these proportions are characteristic of the earlier phases of the DAP temporal sequence. Another characteristic of early sites is high proportions of very fine grained and microscopic-grained raw materials (Phagan 1981a). The Lone Pine Hamlet assemblage has high proportions of these materials.

Table 22. Ceramic summary, Lone Pine Hamlet

Culture category: Ware / Type	Surface collection		Antechamber fill		Antechamber surface		Total antechamber		Other excavated units		Site total	
	N	%	N	%	N	%	N	%	N	%	N	%
Mesa Verde:												
Gray ware												
Chapin Gray	1	2.6	8	4.2	47	18.4	55	12.3			56	11.2
Early Pueblo Gray	34	87.2	168	88.4	172	67.2	340	76.2	9	69.2	383	76.9
White ware												
Chapin Black-on-white	1	2.6							1	7.7	2	0.4
Early Pueblo White	3	7.7	14	7.4	37	14.5	51	11.4	3	23.1	57	11.4
Total ceramics	39	100.0	190	100.0	256	100.0	446	100.0	13	100.0	498	100.0
Vessel form:												
Bowl	1	2.6	11	5.8	19	7.4	30	6.7	4	30.8	35	7.0
Jar	37	94.9	173	91.1	237	92.6	410	91.9	9	69.2	456	91.6
Other	1	2.6	6	3.1			6	1.3			7	1.4

Nonflaked Lithic Tools

The 20 nonflaked lithic tools (table 25) demonstrate a technological profile that is broadly typical of the Anasazi in the Escalante Sector (Phagan 1981a). The slightly low proportion of well-shaped or stylized items and the slightly high proportion of tools made from unmodified nodules and cobbles are characteristic of the early part of the Anasazi sequence (Phagan 1981a).

Table 23. Flaked lithic tools, Lone Pine Hamlet

	Surface collection N	%	Antechamber fill N	%	Antechamber surface N	%	Site total N	%
Total tools:	4	100.0	6	100.0	3	100.0	13	100.0
Tool morpho-use								
Utilized flake	1	25.0	1	16.7	1	33.3	3	23.1
Core	2	50.0	1	16.7	1	33.3	4	30.8
Chopper, scraper plane			1	16.7	1	33.3	2	15.4
Biface	1	25.0	1	16.7			2	15.4
Projectile point			2	33.3			2	15.4
Grain size								
Fine					1	33.3	1	7.7
Very fine			3	50.0	2	66.6	5	38.5
Microscopic	4	100.0	3	50.0			7	53.8
Dorsal face evaluation								
Unmodified core	2	50.0	1	16.7	1	33.3	4	30.8
Unthinned item, with cortex			2	33.3			2	15.4
Unthinned item, no cortex	2	50.0			2	66.6	4	30.8
Well shaped			3	50.0			3	23.1
Ventral face evaluation								
Unmodified core	2	50.0	1	16.7	1	33.3	4	30.8
Unthinned item, no cortex	2	50.0	2	33.3	2	66.6	6	46.1
Well shaped			3	50.0			3	23.1

Table 24. Flaked lithic debitage, Lone Pine Hamlet

	Surface collection N	%	Antechamber fill N	%	Antechamber surface N	%	Site total N	%
Flakes/flake fragments:								
Grain size								
Medium	1	2.7	1	3.4	2	7.7	4	4.3
Fine	11	29.7	7	24.1	15	57.7	33	35.9
Very fine	17	45.9	19	65.5	9	34.6	45	48.9
Microscopic	8	21.6	2	6.9			10	10.9
Total flakes/ flake fragments	37	100.0	29	100.0	26	100.0	92	100.0
Mean weight (grams)	10.5		21.7		8.4		13.43	
Items with cortex	11	29.7	6	20.7	7	26.9	24	26.1
Items with platform	7	18.9	13	44.8	8	30.8	28	30.4

Faunal Remains

A total of 18 nonhuman bones was collected from Lone Pine Hamlet; all of these are from the fill of the antechamber. Nine bones were recovered from fill deposited after the structure burned; the other 9 bones were recovered from the roof fall zone, 10 cm above the floor. Table 26 presents the remains recovered from each of these proveniences. Only one of the bones, identified as jackrabbit (Lepus sp.), is worked and is classified as an ornament. The small collection of bone does not allow for any cultural interpretations.

Table 25. Nonflaked lithic tools, Lone Pine Hamlet

	Antechamber fill		Antechamber floor		Site total	
	N	%	N	%	N	%
Tool morpho-use						
Generalized, unhafted			1	8.3	1	5.0
Hammerstone			1	8.3	1	5.0
Mano	5	62.5	4	33.3	9	45.0
Unspecified and fragmentary metate	2	25.0	6	50.0	8	40.0
Miscellaneous specialized	1	12.5			1	5.0
Production evaluation						
Indeterminate	2	25.0	2	16.6	4	20.0
Natural (unshaped)	3	37.5	5	41.7	8	40.0
Minimally shaped	2	25.0	5	41.7	7	35.0
Well shaped	1	12.5			1	5.0
Item completeness						
Small fragment	2	25.0	1	8.3	3	15.0
Partial implement	6	75.0	5	41.7	11	55.0
Complete/nearly complete			6	50.0	6	30.0
Grain size						
Indeterminate	3	37.5	7	58.3	10	50.0
Medium	3	37.5	1	8.3	4	20.0
Fine	2	25.0	4	33.3	6	30.0

Table 26. Faunal remains, Lone Pine Hamlet

	Fill above roof fall		Roof fall	
Identification	Elements	MNI*	Elements	MNI*
Mammalia	5		4	
Sylvilagus sp.	2	1		
Lepus sp.	†1	1		
Canis familiari	1	1	5	1

*Minimum number of individuals.
†Worked bone.

Tree-ring Samples

Eight tree-ring samples were recovered from the roof fall in the antechamber, but only three of these were suitable for analysis. The results of tree-ring analysis are shown in table 27. Unfortunately, all of the outside dates are noncutting dates.

Table 27. Tree-ring analysis results, Lone Pine Hamlet

Sample No.*	Species	Inside date	Outside date
2	Juniper	289±p	634+vv
4	Douglas-fir	635p	691vv
1	Douglas-fir	628p	692vv

*No dates were obtained for dendrochronological samples 3, 5, 6, 7, and 8.

NOTE: The following tree-ring symbols were provided by the Laboratory of Tree-ring Research, University of Arizona, Tucson:

p - Pith ring present
±p - Pith ring present but due to the difficult nature of the ring series near the center of the specimen, an exact date cannot be assigned to it. The date is obtained by counting back from the earliest dated ring.
vv - There is no way of estimating how far the last ring is from the true outside.
\+ - One or more rings may be missing near the end of the ring series, of which the presence or absence cannot be determined because the specimen does not extend far enough to provide an adequate check.

Site Synthesis

Chronology

Most of the data recovered from Lone Pine Hamlet indicates that the site was occupied early in the Anasazi sequence. According to the ceramic assemblage the site was occupied sometime between A.D 600 and 720. Architectural style, i.e., a pithouse with an antechamber, also indicates an early date that ranges between A.D. 600 and 700 (Hewitt et al. 1981). However, ventilator systems began to appear in the sector between A.D. 700 and 760; thus the postulated remodeling of the antechamber into a ventilator shaft might date to sometime after A.D. 700.

The tree-ring sample dates fall within the A.D. 600-700 range. While these dates do not necessarily represent the year in which the trees were cut, the other dating evidence would suggest that these dates are probably reasonable. The two dates in the A.D. 690's might be fairly close to the true cutting dates. If so, initial construction may have taken place during the A.D. 690's and the subsequent occupation may have commenced sometome between A.D. 700 and 710. According to the DAP temporal scheme, the earlier occupation represents the Tres Bobos Subphase (A.D. 600-700) of the Sagehen Phase (A.D. 600-850). Based on ceramic and architectural evidence, second use of the pithouse may have occurred between A.D. 700 and 720, which places the second occupation in the Sagehill Subphase (A.D. 700-780) of the Sagehen Phase.

Integration of Spatial and Temporal Units

Although the architectural and artifactual evidence indicate that the site was occupied between A.D. 690 and 720, remodeling within the antechamber indicates that there were two periods of use, or two elements. Presently, there is not enough data to determine definitely if the two

elements occurred consecutively or were separated by a hiatus. Each of these elements and their associated features are discussed below.

Element 1. Element 1 is represented by the original pithouse and its antechamber. When the antechamber burned and the roof collapsed, occupation of the antechamber ceased. Therefore, all features in the antechamber also belong to Element 1. All of the features and structures belonging to Element 1 also belong to Household Cluster 5; this cluster is the space used by the members of the household who originally occupied the pithouse. Household cluster numbers were assigned on a project-wide basis.

Element 2. Element 2 is represented by the remodeled passageway. Current evidence indicates that the passageway between the main chamber and the antechamber was reduced in size. It is believed that this remodeled tunnel was meant to accomodate a ventilator shaft. However, a shaft was not observed during excavation, possibly due to the nature of the deposits. It is possible that the main chamber was also remodeled during this element, but lack of excavation precludes such inferences.

Kane (n.d.) indicates that rectangular surface structures are usually associated with pithouses having ventilators rather than with pithouses having antechambers. On this basis alone, Room 1 is assigned to Element 2.

Room 1 and the second use of the pithouse belong to Household Cluster 24. This cluster is the space used by the members of the household who occupied the pithouse after the antechamber burned and the passageway was remodeled.

Summary

Architectural remains at Lone Pine Hamlet consist of a single room and a pithouse. It is believed that the pithouse, including the antechamber, was originally built sometime between A.D. 690 and 700. This structure was occupied by members of Household Cluster 5 until the antechamber burned. Sometime after this event the antechamber passageway was remodeled and Room 1 was built. The remodeled pithouse was then occupied by members of Household Cluster 24. It is not known how much time elapsed between the two occupations. It is possible that occupation was actually continuous and that the same household occupied the site during both elements. If there was a hiatus between occupations it was probably short. Ceramic evidence suggests that the second occupation had to occur before A.D. 720. Also, logic suggests that if too much time elapsed between occupations the pithouse probably would not have been suitable for habitation. In conclusion, it appears that the original pithouse was built and occupied between A.D. 690 and 700. A short time later the antechamber burned, the passageway was remodeled, and a surface structure was built. Eventually, the site was abandoned before A.D. 720.

RUSTY RIDGE HAMLET (SITE 5MT2848)

Introduction

Rusty Ridge Hamlet was initially recorded in November 1976 by a University of Colorado survey team (Kane 1977). Limited investigations of the site began on 11 September 1979. Work continued that year until 5 November. The site was visited again in June 1980 for the collection of additional tree-ring samples. Analysis of these samples provided dates from Pithouse 2 that were inconsistent with architectural dating. Therefore, during late February 1981 the site was revisited to record architectural details more thoroughly. A total of approximately 400 person-hours was expended on examination of the site.

Investigations revealed that the site had been occupied at two different times. The first occupation dates to sometime between A.D. 680 and 720; architectural remains of this occupation include Pithouse 2, Surface Structures 2 and 3, and some outside pits. The site was abandoned for a period of time before the second occupation began. Remains of this occupation include Pithouse 1, Surface Structure 1, and some outside pits. This occupation is believed to date to sometime between A.D. 784 and 815.

Location

Rusty Ridge Hamlet is located near the center of the Sagehen Flats Locality (fig. 1). This area is characterized by low ridges and intermittent drainages. The site is located on one of these ridges about 300 m west of a large drainage; at the time of excavation the ridge was under cultivation. Figure 26 shows the topography in the immediate site vicinity. A more specific description of the site location is given by

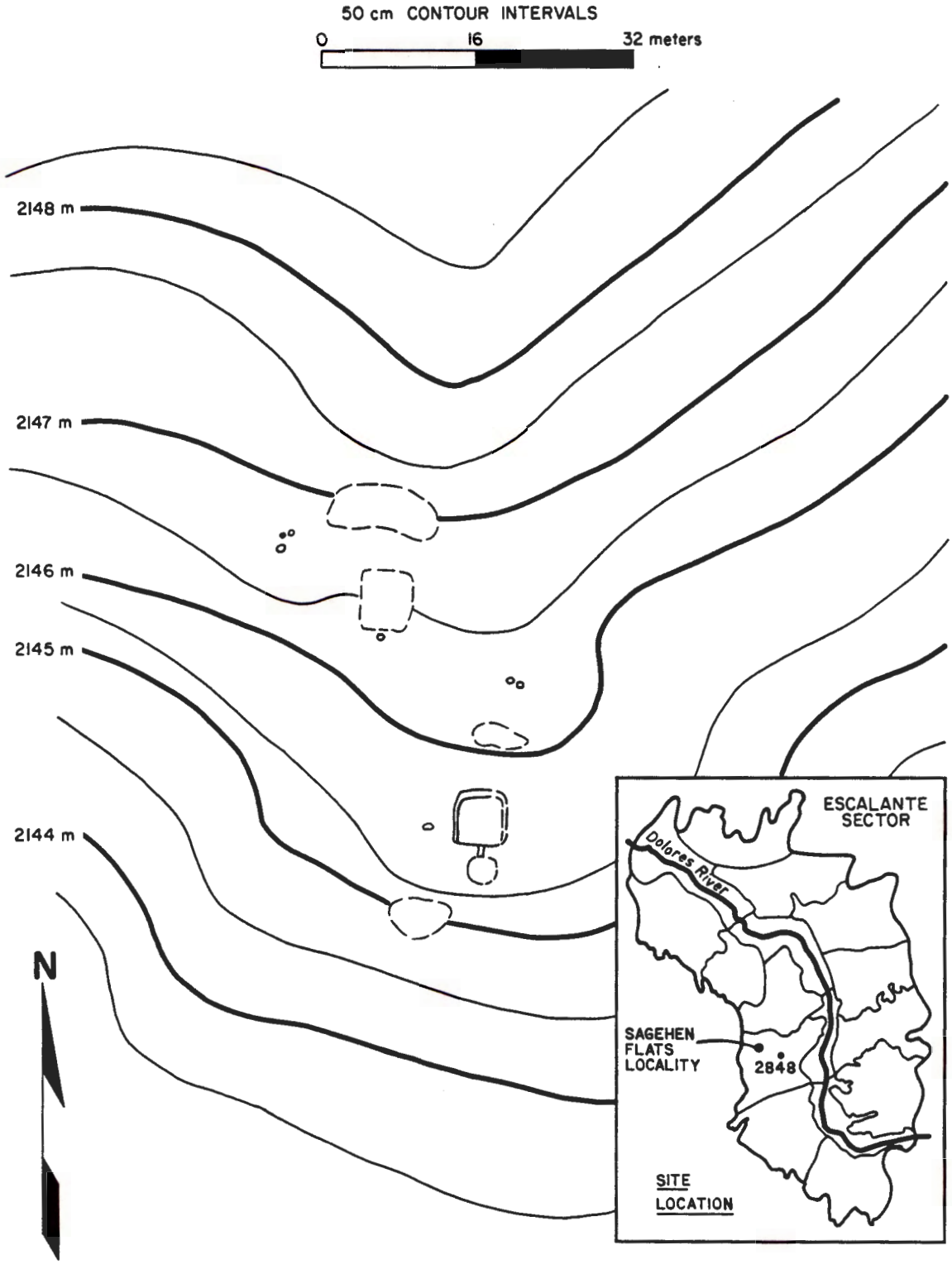


Figure 26. Topographic map of Rusty Ridge Hamlet.

the Universal Transverse Mercator coordinates; these are 4,155,080 mN, 715,230 mE, zone 12. These coordinates place the site in the NW 1/4 of the SE 1/4, sec. 25, T38N, R16W, Montezuma County, Colorado.

Investigative Strategy

The basic methods used to investigate this site have been described in the "Introduction" section. Site specific details concerning the magnetometer survey, surface collection, and subsurface excavations are included in the following discussions.

Magnetometer Survey

A magnetometer survey was conducted at Rusty Ridge Hamlet during the 1978 field season. The survey was conducted within four adjacent 20- by 20-m grid blocks, resulting in a total survey area of 1600 m^2. The results of the survey were used to help locate subsurface cultural features.

As a result of the magnetometer survey, five magnetic anomalies were identified. Figure 27 shows the location of the anomalies and the cultural units with which they are associated.

Anomaly 1 was large and covered several square meters. Initial impressions (prior to excavation) suggested that the feature corresponding to this anomaly was likely to have a rectangular outline and a layer of intensely burned material at a depth of approximately 1.4 m. A region south of the rectangle was believed to correspond to a burned antechamber. A small lobe extending west of the anomaly was believed to represent a hearth. Investigations in the area of anomaly 1 revealed that the source of this anomaly is Pithouse 1. Limited excavation of this structure showed that it had burned and that a layer of roof fall was

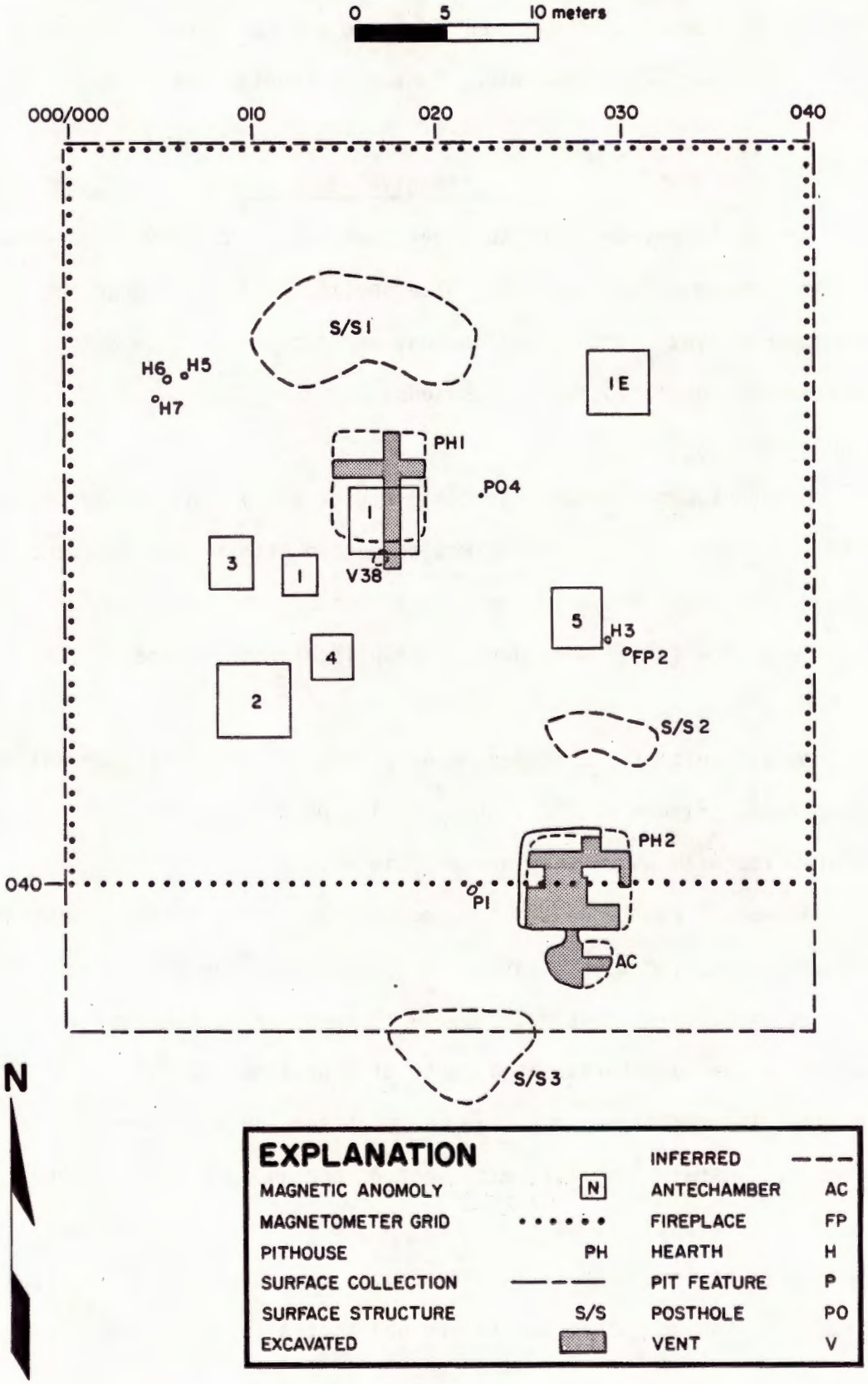


Figure 27. Site sampling plan, Rusty Ridge Hamlet.

located at a depth of 1 to 1.5 m below the present ground surface. This pitnouse had a large vent system attached to the south side. No features were observed on the west side of the pithouse.

The source of anomaly 2 was believed to be a feature containing soft fill such as would be found in a borrow area or an unburned pitstructure. This area was bladed, but no indications of a cultural feature were identified.

Anomaly 3 was believed to indicate an area of high ash content or of localized burning. Blading in this area did not reveal any cultural features.

Anomaly 4 was similar to anomaly 3 and was believed to correspond to a hearth. No cultural features were observed in this area after it was bladed.

Anomaly 5 was believed to be a potential activity area. Investigations in this area revealed a hearth and a fireplace.

Anomaly 1e was a rather confusing anomaly and was suspected to correspond with geological rather than archaeological phenomena. Blading of this area did not reveal any cultural features, and time did not allow for determining whether or not the anomaly was the result of geologic effects.

At the southern edge of the magnetometer map was the northern tip of an anomaly that was similar to the northern tip of anomaly 1; it was found to correspond to the northern limit of Pithouse 2. It is suspected that if the magnetometer grid had extended further south it would have recorded the full extent of this anomaly, and it would resemble anomaly 1 in size, shape, and magnetic readings.

Surface Collection

In order to make a 50-percent surface collection, a grid of 120 4- by

4-m squares was established over the limits of the site. Site limits were difficult to define since modern plowing activities seemed to have scattered debris over a large area. Therefore, a total area of 1920 m^2 was gridded, and artifacts from every other grid square were collected. Figures 28, 29, and 30 show surface distributions of ceramics, flaked lithic items, and nonflaked lithic items. In general, the artifacts are scattered over most of the site area except for some clustering in the vicinity of Surface Structure 1 and west of Pithouse 2. Items recovered during surface collection activities are discussed in more detail in the "Material Culture" discussion of this section.

Subsurface Investigations

Once the surface artifacts of the site area were collected and a contour map was drawn, the entire site area was bladed. This was done to remove the plow zone and to enable the excavators to record stains representing features and structures. Fourteen stains and three rubble areas were exposed as a result of these operations. Because the rubble concentrations were located within the plow zone, blading of these areas ceased prior to reaching the base of the plow zone in order to prevent further damage and to allow mapping of the rubble. The stains were further investigated to determine their origin. Larger stains were tested with an auger to determine subsurface dimensions and character of fill. Smaller stains were tested by removing one-half of the fill by hand. If the stains were determined to be cultural they were recorded and mapped. Nine of the 14 stains were of cultural origin. Figure 31 illustrates the location of the cultural units identified.

Auger testing revealed that both pithouses had burned, and it was hoped that charred roof beams suitable for obtaining tree-ring samples

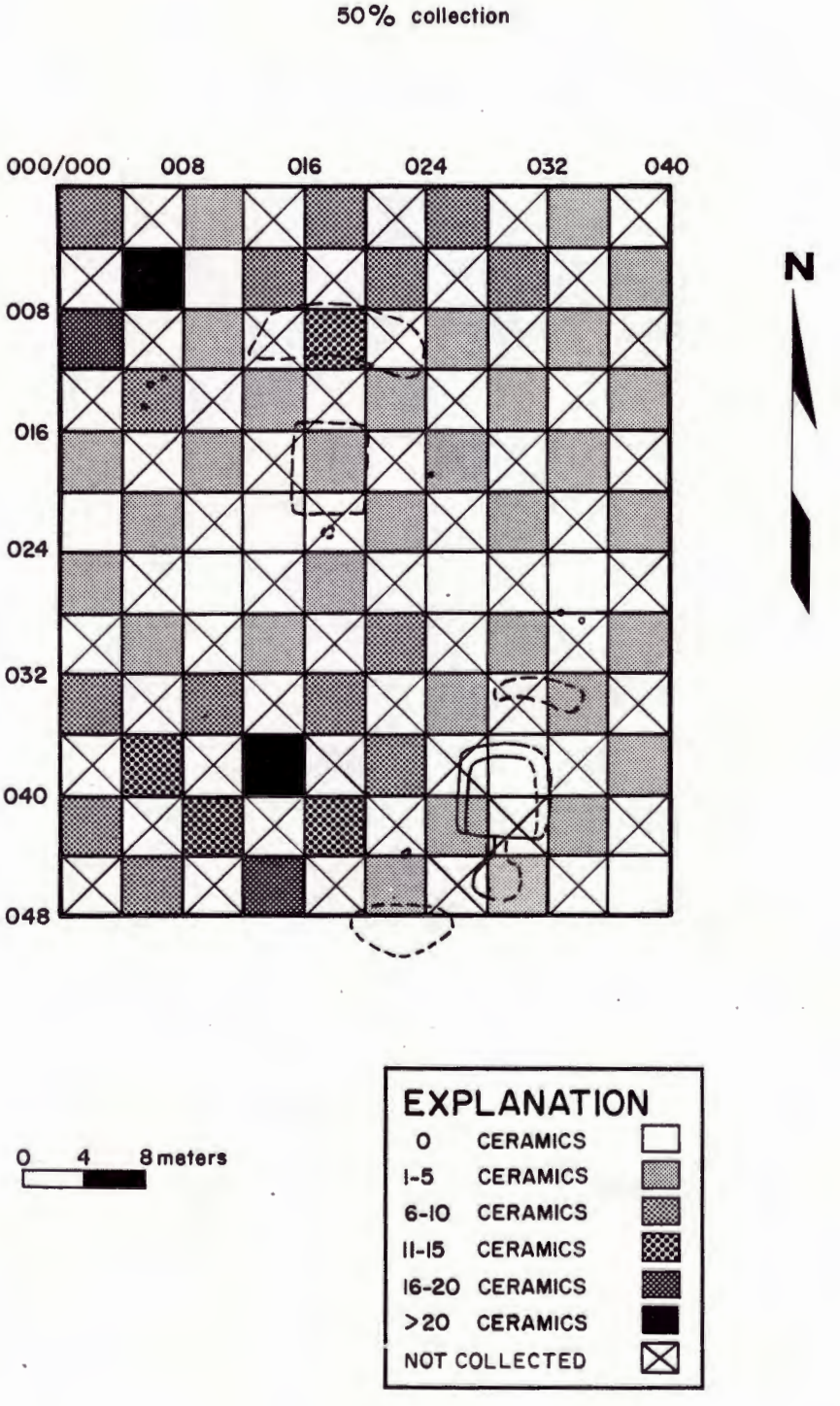


Figure 28. Surface distribution of ceramics, Rusty Ridge Hamlet.

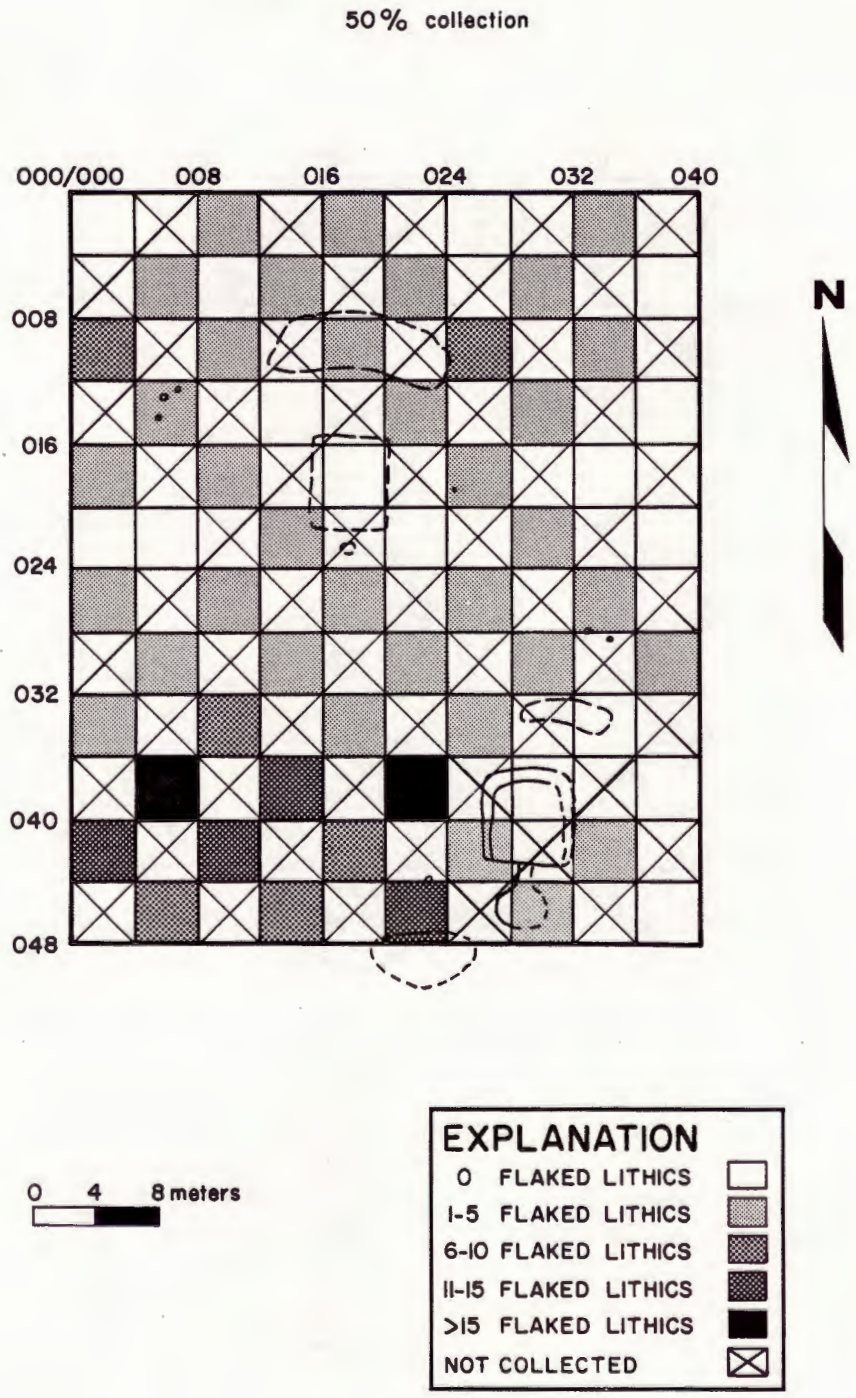


Figure 29. Surface distribution of flaked lithic items, Rusty Ridge Hamlet.

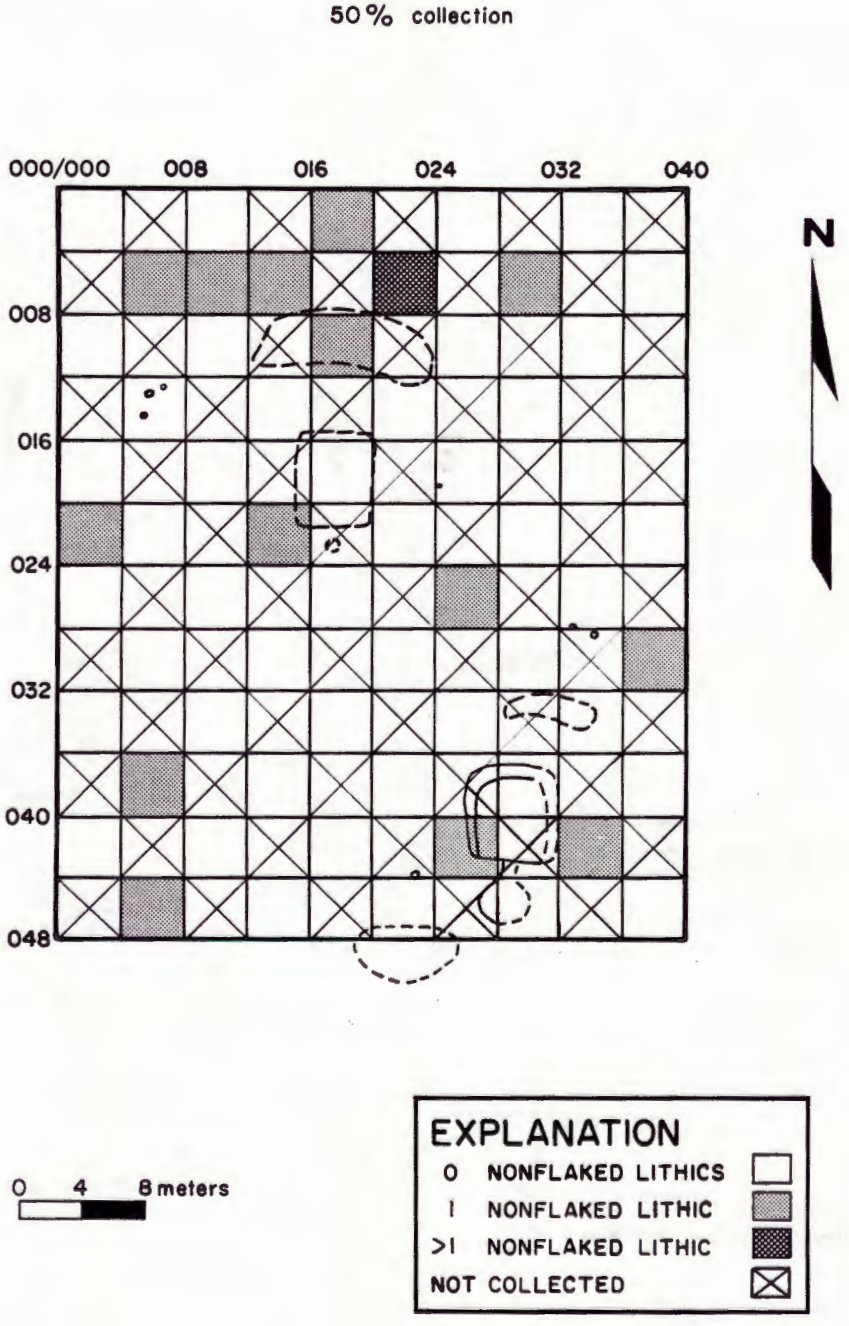


Figure 30. Surface distribution of nonflaked lithic items, Rusty Ridge Hamlet.

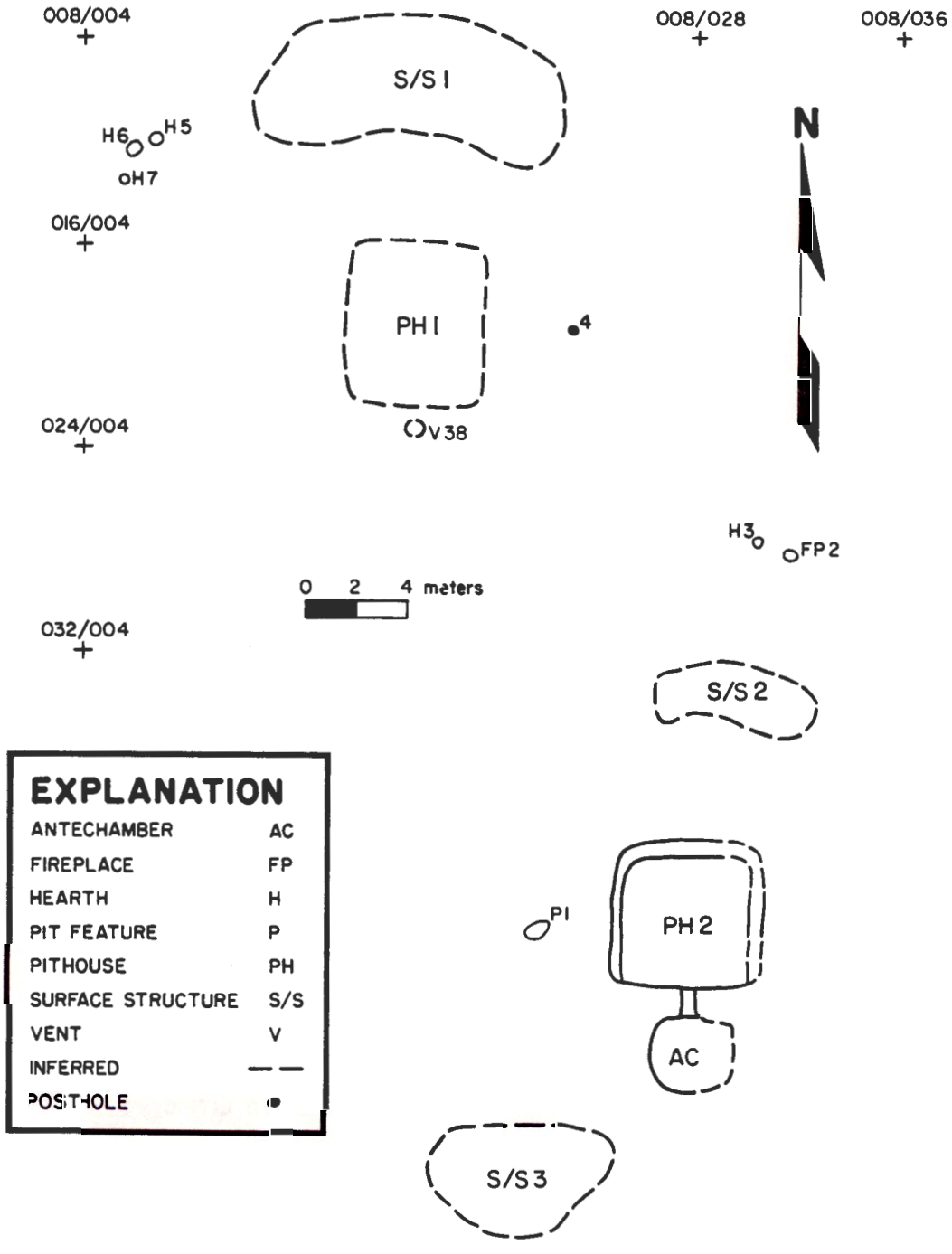


Figure 31. Spatial relationship of major cultural units, Rusty Ridge Hamlet.

would be recovered. Therefore, further testing of these structures was warranted. Two backhoe trenches were dug across each pithouse: one east-west and one north-south. These trenches also helped reveal the location of internal features such as central hearths, benches, antechambers, ventilator systems, and wingwalls. Sections of the north, south, east, and west walls of the structures were also revealed in the trenches.

After the trenches were dug in Pithouse 1, the roof stratum was sufficiently exposed to allow collection of tree-ring samples. The plan of the structure was then mapped, and profile maps of the trenches were made. Exposed portions of features were fully excavated and an archaeo-magnetic sample was collected from the hearth. No further investigations were made at this structure.

After reviewing the preliminary results of the 1979 testing of Pithouse 2 (i.e., the two test trenches), it was decided that further excavation would be valuable in answering questions about architectural details and for collecting additional tree-ring samples. Therefore, 1980 excavations in the main chamber were conducted in the southeast quarter behind the wingwall, and along the north wall. The western half of the antechamber was excavated and a trench from the hearth to the east wall also was excavated. Excavated areas are shown in figure 27. Most features exposed in the pitstructure were fully excavated.

After limited blading and mapping, the surface structures were augered to determine depth and character of fill. Due to the disturbed nature of these structures it was decided that additional time expenditure was not warranted given the limited quantity of data that could be recovered, so no further investigation of these structures was conducted.

Architectural Remains

Investigations at Rusty Ridge Hamlet located two pithouses, three surface structures, and seven outside features. The latter include one pit, four firepits, one hearth, and one posthole.

Pithouse 1

Dimensions:

North-south diameter:	6.75 m
East-west diameter:	5.70 m
Floor area:	31.55 m^2
Depth (measured from base of plow zone to floor):	1.20-1.45 m

Limited excavation of this structure indicated that it is a rectangular, symmetrical pit (fig. 32) with slightly undercut walls. In those areas where the walls were exposed, they were covered with a thick coat of plaster. The plaster and the sterile soil behind the plaster were highly oxidized due to the fire that destroyed the structure.

Features typically associated with Anasazi pitstructures are present in Pithouse 1. These include a central hearth, wingwalls, and a deflector.

South of the main chamber is a ventilator shaft that was partially exposed in the north-south backhoe trench. It is assumed that this shaft was connected to the main chamber with a tunnel, but the trench did not cut far enough west to expose this feature.

Stratigraphy. The stratigraphic sequence of Pithouse 1 (fig. 33), as exposed in the backhoe trenches, shows that the structure burned, causing the roof to collapse and fall to the floor. This roof fall zone contained charred wood and adobe casts of beams and smaller roofing materials. The zone varied in thickness from 12-55 cm. This roof fall event obviously postdated or occurred simultaneously with the abandonment of the

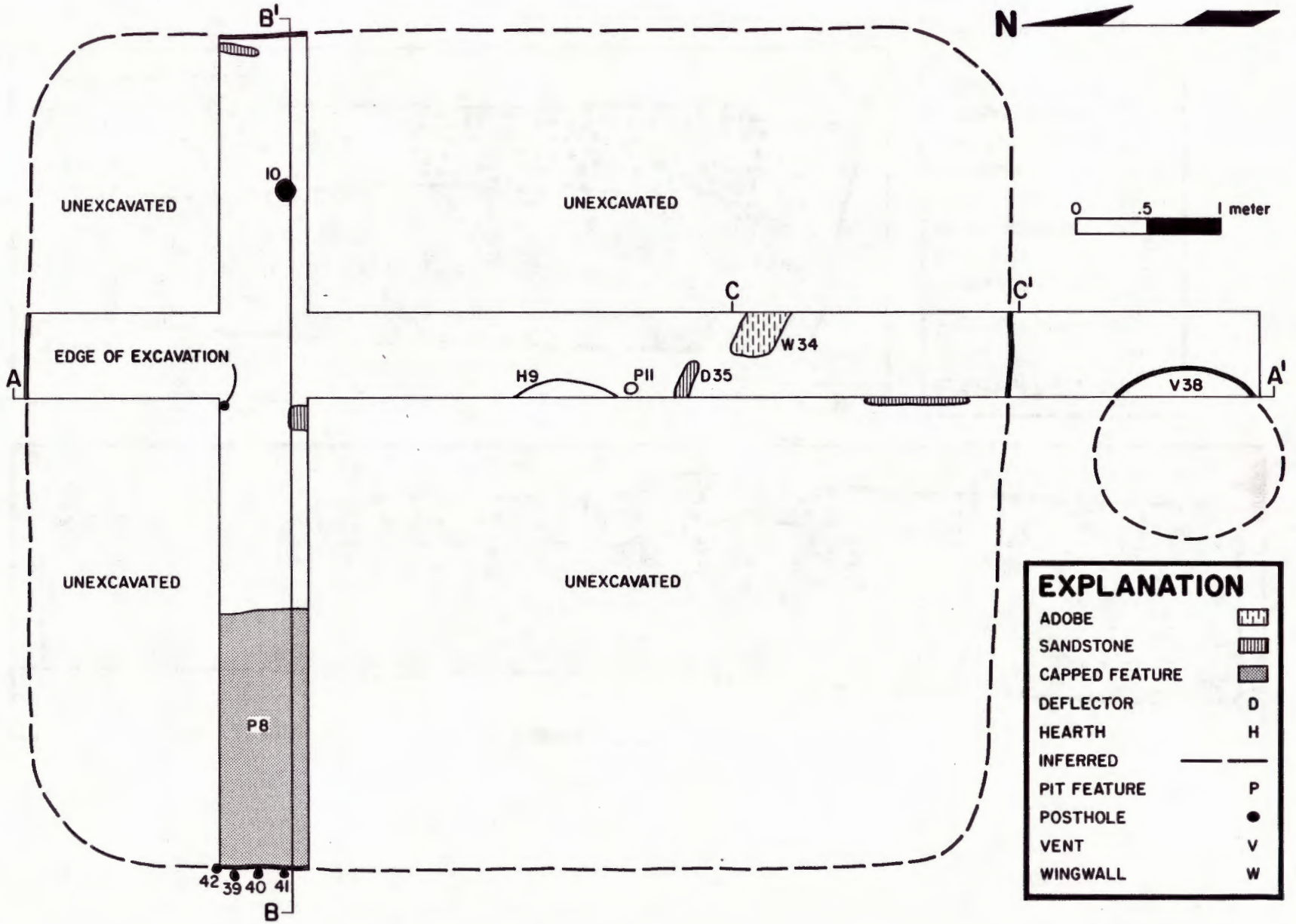


Figure 32. Plan map of Pithouse 1, Rusty Ridge Hamlet. See figure 33 for profiles A and B; see figure 34 for profile C.

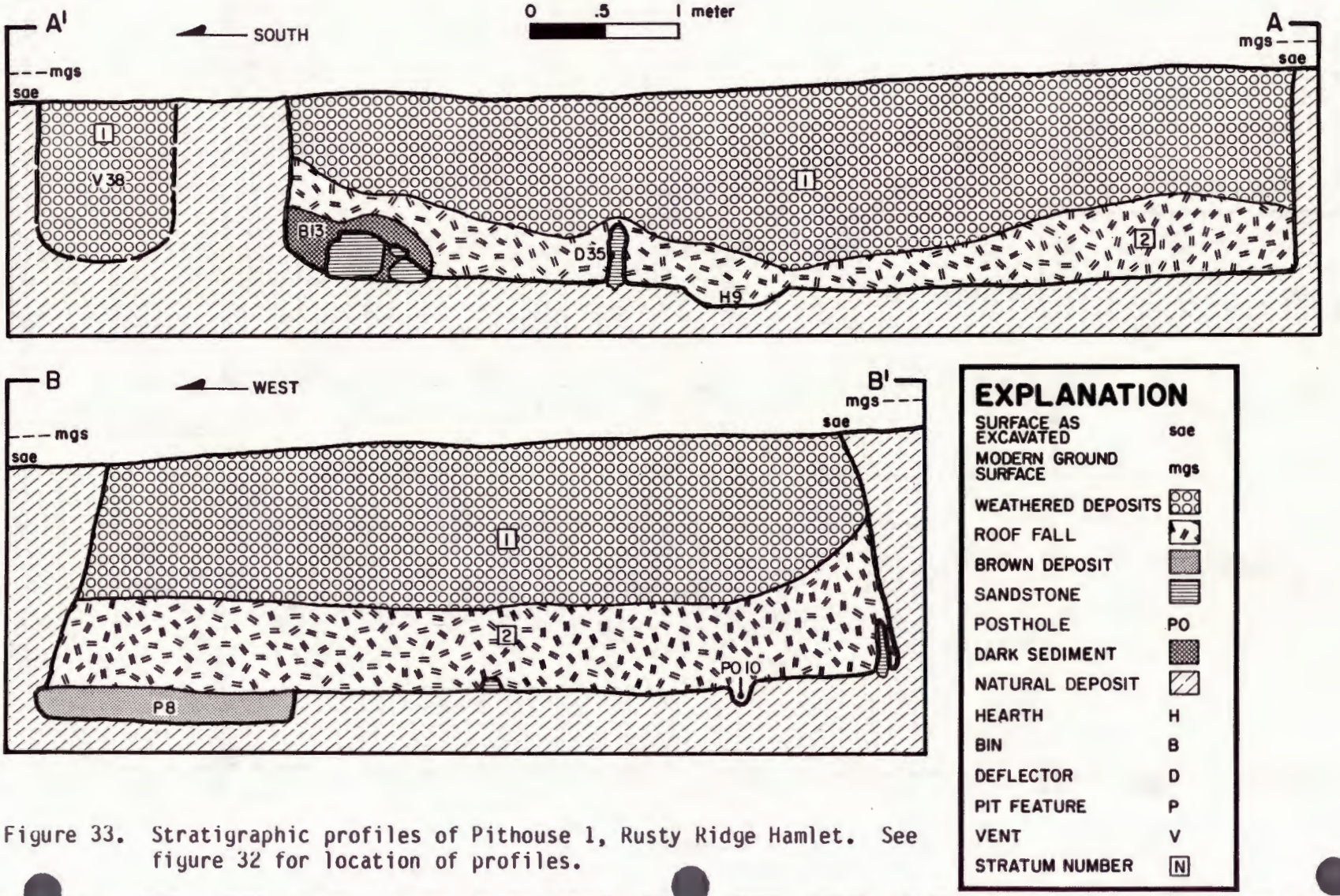


Figure 33. Stratigraphic profiles of Pithouse 1, Rusty Ridge Hamlet. See figure 32 for location of profiles.

structure. The basin that remained after the roof collapsed then filled with natural deposits until it was level with the ground surface.

Floor (Surface 1). The floor of Pithouse 1 was compact and dark gray from use. It appears to have been a prepared surface created by placing a thin layer of clay on top of the subsoil. This surface was level and the wall-floor juncture was perpendicular. The fire that destroyed the structure also oxidized the floor and, consequently, it is well preserved. Several features are associated with the floor and these are described in the following discussion. Two reconstructable vessels were recovered from the floor; these are described in the "Material Culture" discussion of this section. One of these vessels (vessel 2) contained several charred ears of corn. A bone awl was associated with the vessel and the corn.

Central hearth (Feature 9):

Dimensions:

Length:	80 cm
Width:	80 cm
Depth:	20 cm

Located near the center of the pithouse is a hearth that is circular in plan view and basin shaped in profile. This feature was formed by placing a clay lining inside a pit that was dug into the sterile soil below the floor. This clay lining extended outside the pit, forming a raised rim around the circumference of the hearth. The fill of the hearth consisted of several layers of ash with one layer of yellow sand near the top. An archaeomagnetic sample (sample 3) was collected from the east rim of the hearth. Three dates were obtained from the analysis of this sample and are presented in the "Chronology" discussion of this section. Appendix A contains a detailed discussion of these samples.

Deflector (Feature 35): An upright slab covered with adobe is located 40 cm south of the hearth. This feature caused air coming in from the vent shaft to be deflected around the hearth. This deflector stands to a maximum height of 39 cm and is 12 cm wide.

Posthole (Feature 10): A single posthole was identified during the testing of Pithouse 1; it is circular in plan and cylindrical in profile. Maximum diameter is 7 cm, maximum depth is 20 cm. Due to its small size this posthole is not considered to be one of the main roof support post sockets; it might have served as an ancillary support post socket. The feature was completely filled with yellow sand indicating that the post was removed prior to the conflagration of the superstructure. It appears that the sand was intentionally placed in the posthole after the post was removed. This might have been done because the post was rotting and was no longer functional. The resulting hole was probably filled with sand to make it level with the rest of the floor.

Pit (Feature 11): A small pit is located 10 cm southeast of the central hearth. This feature is circular in plan view and basin shaped in profile; it measures 9 cm in diameter and 4 cm in depth. The feature was filled with yellow sand that contained three sherds and one nonhuman bone. The function of this pit is unknown.

Pit (Feature 8): A large pit is located in the northwest corner of the main chamber. This pit was observed at the west end of the east-west test trench; the east-west diameter of the pit is 1.85 m. Since it extended across the width of the trench and no further excavation took place, the north-south diameter is not known. This pit was dug into the floor of the pithouse and extended about 10 cm beyond the west wall. Due to the undercut formed by this pit, a support of jacal-type construction

was added to the wall to prevent it from collapsing. This construction consisted of four vertical posts (Features 39 through 42) about 3 cm in diameter, which extended 38 cm above the floor. All four posts were charred, presumably by the fire that destroyed the structure. In front of the posts was a layer of adobe. Between the adobe and the posts were two charred horizontal withes. These withes were spaced about 15 cm apart and probably helped to hold the adobe in place.

At some point in time, prior to the burning of the pithouse, Feature 8 was sealed with a brown deposit. This deposit extended to the top of the pit making it level with the floor. The original function of this pit and why it was abandoned are not known.

Wingwall (Feature 34): Only a small portion of the east wingwall was exposed in the north-south backhoe trench. Unfortunately the top part of the wingwall was removed during trenching operations so the original height of the wall is not known. This wall was constructed of vertical sandstone slabs set into the floor of the pithouse about 1 m southeast of the central hearth. These slabs averaged 4 cm in thickness and were covered with adobe. Adobe found on the floor near the wingwall also might have originally coated the slabs; this was a common practice in the Escalante Sector (cf. Brisbin 1982).

Bin (Feature 13): Located in the west profile of the north-south backhoe trench were two vertical sandstone slabs. Further investigation revealed that these slabs are part of the western wall of a bin. The northern wall of the bin is the eastern wingwall and the east and south walls of the bin are the walls of the pithouse. Two crushed vessels and several nonflaked lithic tools were found in the fill of the bin. Burned materials from the roof were also found in the fill, indicating that the

bin was in use when the structure burned. Figure 34 depicts the bin in profile. Similar bins have been found in other pitstructures in the Escalante Sector and are believed to have been used for storage (cf. Montgomery 1982).

Vent Shaft (Feature 38): The ventilating system of Pithouse 1 consisted of a vertical shaft that had been excavated into the sterile soil. This shaft was probably connected to the interior of the structure by a horizontal tunnel; however, the north-south trench did not extend far enough west to expose the tunnel. The north-south diameter of the ventilator shaft is 95 cm, and it extends 1.10 m below the base of the plow zone.

Interpretations. Studies of temporal trends of architectural styles in the Escalante Sector indicate that Pithouse 1 dates to sometime between A.D. 700 and 760 (Hewitt et al. 1981; Kane 1981c). The primary architectural attributes that place it in this time range are the presence of a vent shaft, the absence of an antechamber, and the absence of a bench.

There are no indications that this pithouse was remodeled in any way during its occupation. When this pithouse burned and was abandoned, the entire site appears to have been abandoned as well.

Based on the size of the pithouse and the presence of domestic features such as the hearth, the storage bin, and manos, it is believed that this structure was a domicile occupied by a single household. Studies carried out by Birkedal (1976) indicate that the household might have been a nuclear family.

Pithouse 2

Pithouse 2 consists of a main chamber with a bench, and an antechamber. The two chambers are connected by a narrow tunnel. Figure 35 shows

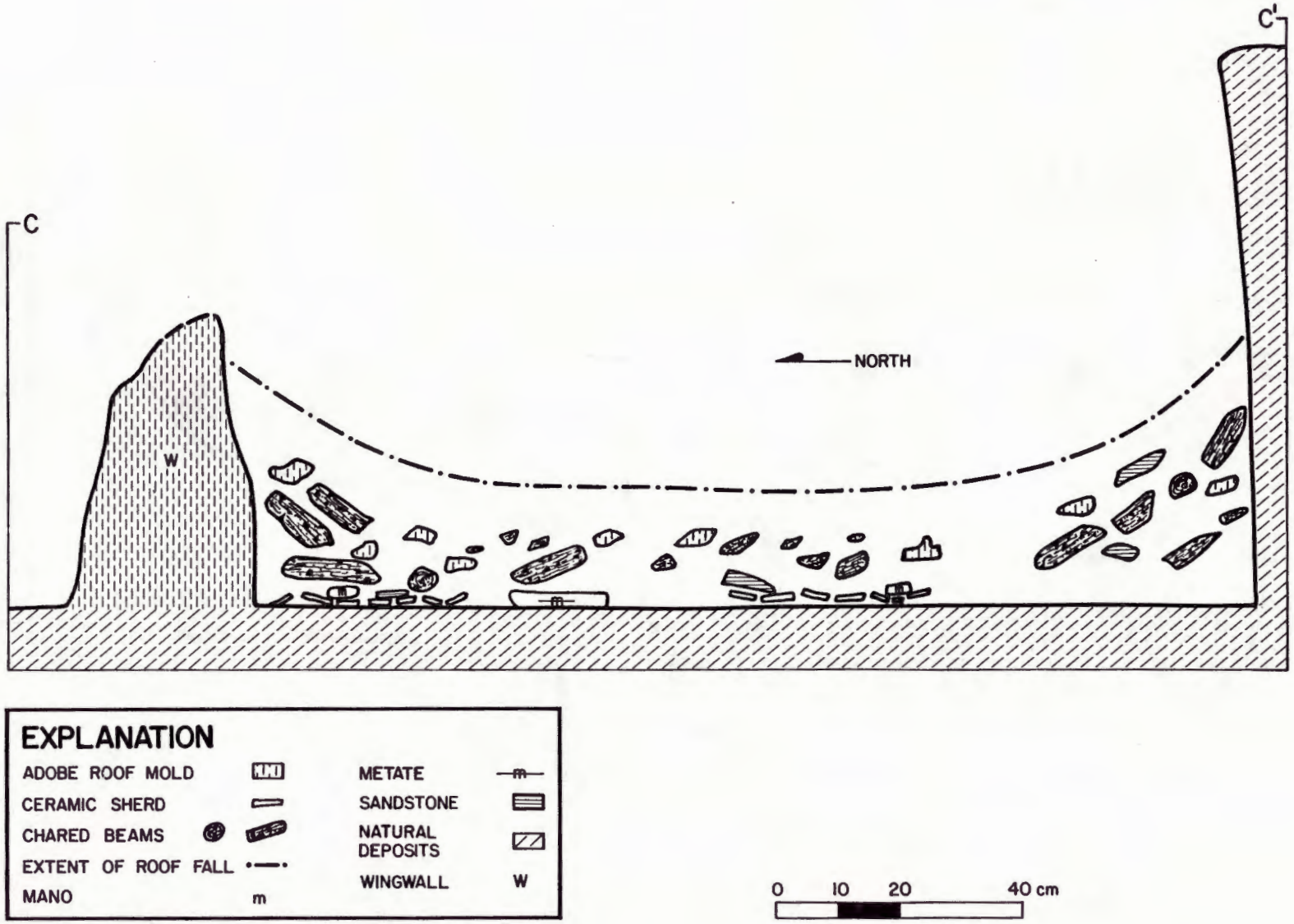
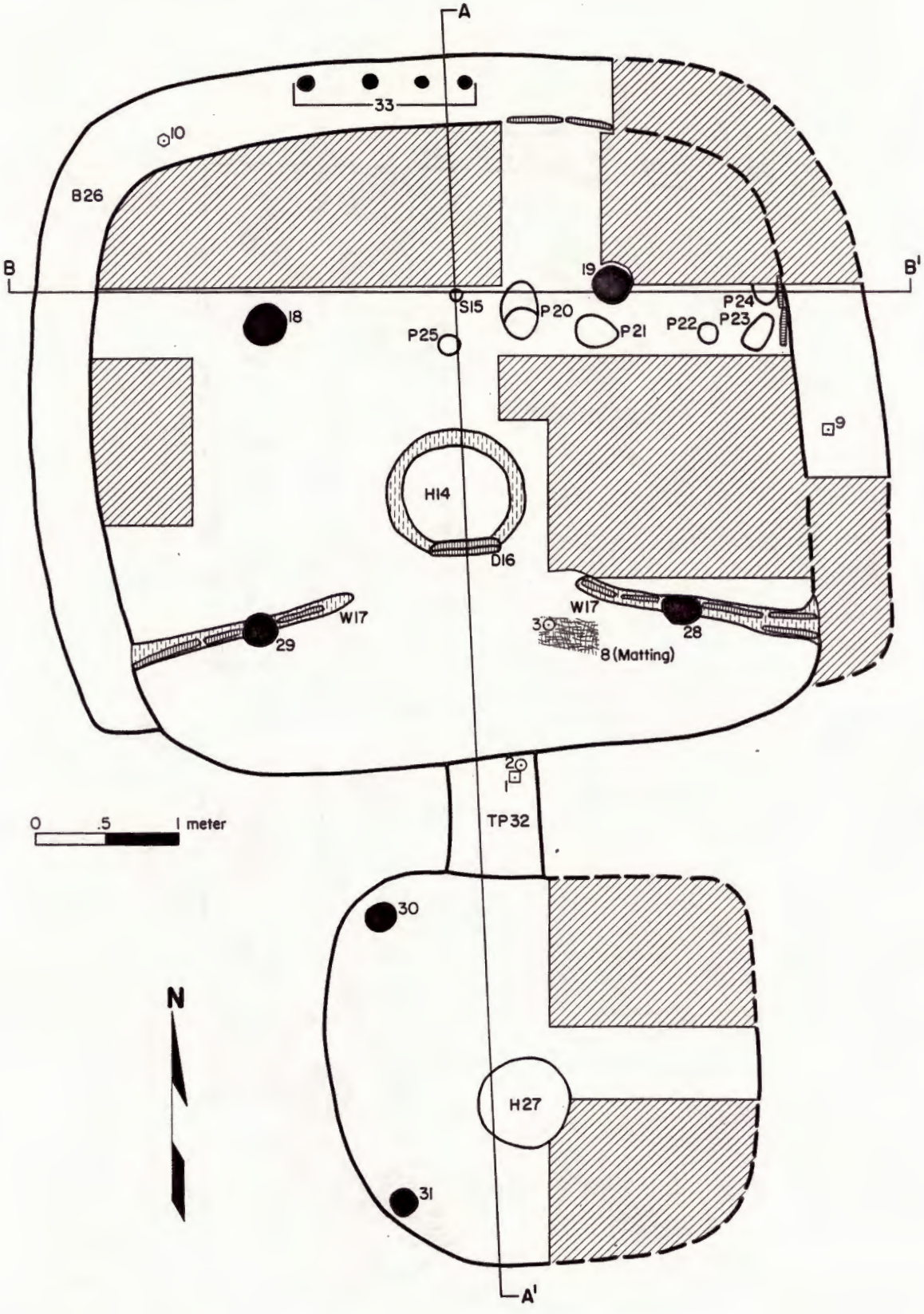


Figure 34. Profile of bin (Feature 13) in Pithouse 1, Rusty Ridge Hamlet. See figure 32 for location of profile.



EXPLANATION			
ADOBE		UNEXCAVATED	
BENCH	B	NONHUMAN BONE	⊙
CERAMIC	⊡	PIT FEATURE	P
DEFLECTOR	D	POSTHOLE	●
HEARTH	H	SANDSTONE	
INFERRED	— —	SIPAPU	S
NONFLAKED LITHIC	⊙	TUNNEL PASSAGE	TP
		WINGWALL	W

Figure 35. Plan map of Pithouse 2, Rusty Ridge Hamlet. See figure 36 for profiles.

the plan view of this structure; figure 36 shows the architectural profiles.

Main chamber.

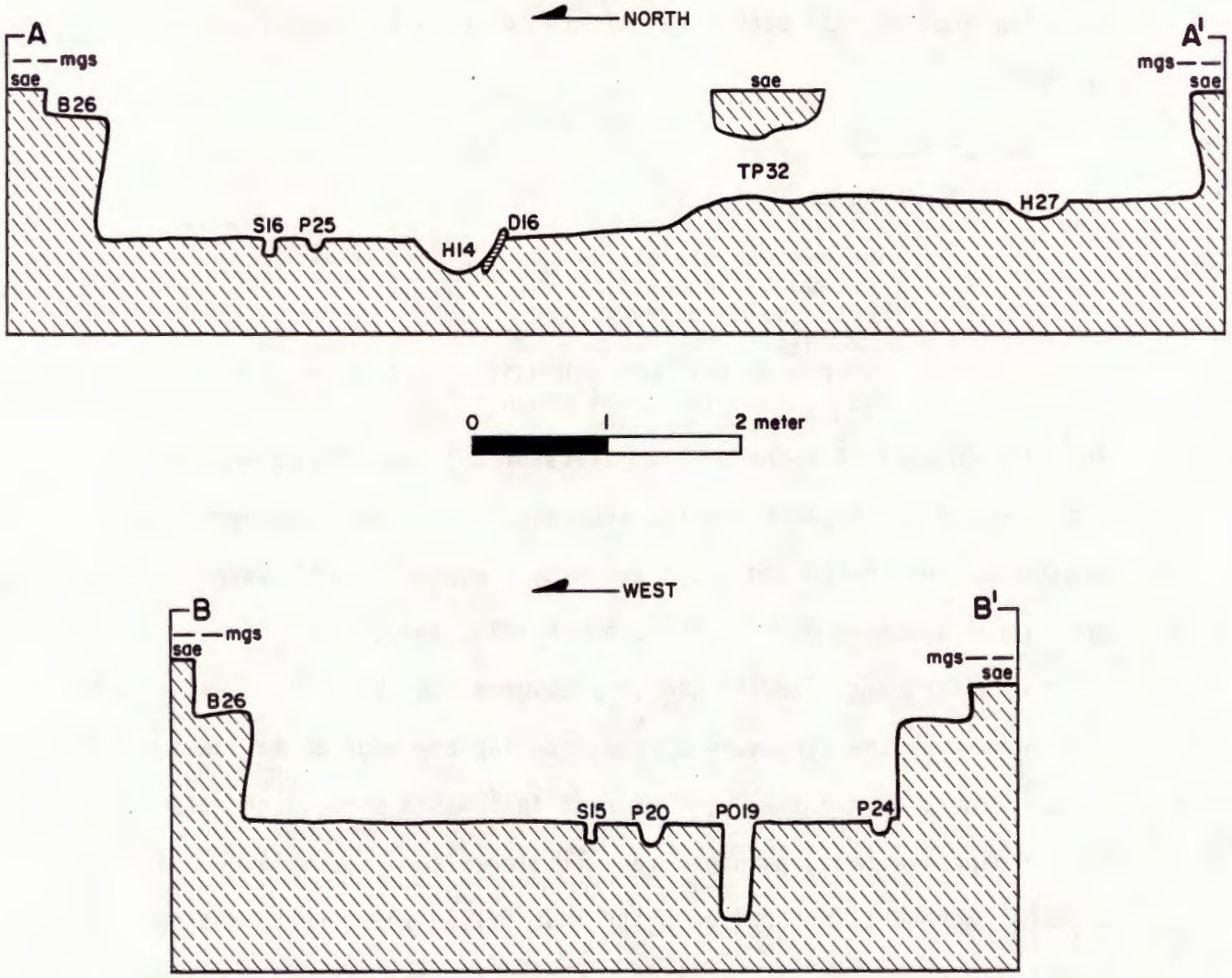
Dimensions:

North-south diameter:	5.00 m
East-west diameter:	5.92 m
Depth (below base of plow zone):	1.10 m
Floor area (excluding bench):	21.47 m^2
Floor area (including bench):	27.80 m^2

The main chamber of Pithouse 2 consists of a large, subrectangular pit with a bench on the east, north, and west sides. This chamber is subdivided into north and south rooms by a wingwall that extends partially across the southern part of the chamber (fig. 35).

Stratigraphy: The stratigraphy observed in the fill of Pithouse 2 indicates that the structure burned, causing the roof to collapse and fall to the floor. Above the layer of roof fall was a stratum of alluvial and eolian deposits that contained very little cultural material. This stratum represents natural deposits that filled the structure after the roof collapsed. The last stratum observed in the pithouse contained large quantities of artifacts, i.e., trash. This trash is believed to have been deposited by the inhabitants of Pithouse 1.

Floor (Surface 1): The floor of this pithouse was not prepared in any way but was compacted from use. Several artifacts were found in direct contact with the floor. Each of these artifacts was assigned a PL (point location) number so that their exact location on the floor could be recorded. These artifacts are listed in table 28. Unfortunately the exact locations of PL's 4 through 7 were not recorded on the plan map; therefore these PL numbers are not depicted in figure 35.



EXPLANATION

BENCH	B
TUNNEL PASSAGE	TP
DEFLECTOR	D
HEARTH	H
NATURAL DEPOSIT	
PIT FEATURE	P
POSTHOLE	PO
SANDSTONE	
SIPAPU	S
MODERN GROUND SURFACE	mgs
SURFACE AS EXCAVATED	sae

Figure 36. Architectural profiles of Pithouse 2, Rusty Ridge Hamlet. See figure 35 for location of profiles.

Of particular interest is PL 8, which is the remains of a large twined object and a coiled basket. Due to the burned and disarticulated condition of the twined item it is not possible to determine its original form. The twining has closely spaced yucca wefts with widely spaced cordage warps. The fragments of coiled basketry were also in poor condition, and it is not possible to determine what kind of coiling or what type of basket is represented. Plant species used in the construction of these items are presented in the "Material Culture" discussion of this section.

Table 28. Point-located artifacts, Floor 1, Pitstructure 2, Rusty Ridge Hamlet

PL No.	Material class	Item description
1	Ceramic	Chapin Gray jar sherd (1) Early Pueblo Gray jar sherds (9)
2	Nonflaked lithic	Hammerstone
3	Nonflaked lithic	Two-hand mano
4	Flaked lithic	Side-notched projectile point
5	Flaked lithic	Debitage
6	Nonflaked lithic	Minimally altered item
7	Flaked lithic	Used core
8	Vegetal	Twined textile object, coiled basket

Wingwall (Feature 17):

Dimensions:

West wingwall	
length:	175 cm
width:	10-30 cm
maximum height:	75 cm
East wingwall	
length:	180 cm
width:	10-35 cm
maximum height:	75 cm

The wingwall is actually two separate partitions; each section originates at the pithouse wall and extends toward the center of the chamber, angling north toward the deflector (fig. 35). The wingwalls were constructed of vertical sandstone slabs set into the floor of the pithouse. These slabs

were then covered with a thick layer of adobe. The two southern main support posts (Features 28 and 29) were incorporated into the wingwall.

Central hearth (Feature 14):

Dimensions:

North-south diameter:	95 cm
East-west diameter:	100 cm
Depth:	22 cm

This hearth is located in the center of the main chamber. It is oval in plan and basin shaped in profile. This feature was constructed by digging a pit into the native soil below the floor and then adding a raised adobe rim at floor level. A slab used as a deflector (Feature 16) was placed in the south end of the hearth. The fill of the hearth was a mixture of postabandonment deposits and cultural refuse which indicates that ash and charcoal, usually found in hearths, had been removed before the pithouse burned.

Deflector (Feature 16):

Dimensions:

Length:	47.0 cm
Width:	3.5 cm
Depth (below floor):	26.0 cm
Height:	30.0 cm

The deflector is a sandstone slab that was set into the southern end of the central hearth. This slab was set at an angle of approximately 65° to the floor; the top of the slab sloped away from the hearth.

Sipapu (Feature 15):

Dimensions:

North-south diameter:	9 cm
East-west diameter:	9 cm
Depth:	12 cm

Located approximtely 1 m north of the hearth and in a north-south alinement with the hearth, deflector, and tunnel entry way, is a small cylindrical hole. The location is similar to that described for sipapus and shares similarities in size and shape to others in the Mesa Verde Region (Bullard 1962). For these reasons it is believed that this small hole is a sipapu. This feature was filled with a mixed deposit of postabandonment and cultural material, suggesting that the feature was open at the time the pithouse was destroyed.

Pits (Feature 20):

Dimensions:

North-south diameter:	40 cm
East-west diameter:	27 cm
Depth (north half):	5 cm
Depth (south half):	15 cm

Two superimposed pits are located approximately 80 cm northeast of the central hearth. Both pits were dug into the subsoil below the floor; neither of the pits were lined with clay or stones. Debris in the pits indicates that both were empty at the time the structure collapsed. The function of these pits is unknown.

Pit (Feature 21):

Dimensions:

Length:	30.0 cm
Width:	23.0 cm
Depth:	32.0 cm

This pit feature, located in the northeast quarter of the main chamber, is oval in plan view and cylindrical in profile. The fill of the pit consisted of clean sand, which suggests that the pit had been filled and was not in use at the time of abandonment. Due to the location and size of the pit, it might have functioned as a posthole at one time.

Pit (Feature 22):

Dimensions:

North-south diameter:	14 cm
East-west diameter:	14 cm
Depth:	5 cm

Feature 22 is a shallow, round pit located about 50 cm east of Feature 21. Based on size, shape, and location, it is inferred that this feature was used as a vessel support or pot rest. Fill in the pit consisted of debris that resulted from the burning of the pithouse.

Pit (Feature 23):

Dimensions:

Length:	26 cm
Width:	17 cm
Depth:	12 cm

Feature 23 is a shallow, elongated pit located near the east wall of the main chamber; its function could not be determined. The feature contained roof fall, indicating that it was empty at the time of abandonment.

Pit (Feature 24):

Dimensions:

Length (existing):	15 cm
Width:	18 cm
Depth:	11 cm

Another shallow, elongated pit is located a few centimeters north of Feature 23. Only a portion of the pit was exposed during testing operations so the total length is not known. The fill of the pit consisted of roof fall, indicating that the feature was open at the time of abandonment. The function of this feature is not known.

Pit (Feature 25):

Dimensions:

North-south diameter:	13 cm
East-west diameter:	17 cm
Depth:	10 cm

Feature 25 is an oval pit located between the sipapu and the hearth. This pit has a basin-shaped profile and might have served as a pot rest. The feature was empty at the time of abandonment, as indicated by the roof fall in the fill of the pit.

Main support postholes (Features 18, 19, 28, 29): Four postholes were identified as the main support post sockets for the roof of the main chamber. Features 28 and 29 are located in the east and west wingwalls, respectively. These holes also extend into the soil beneath the floor. Features 18 and 19 are located in the northwest and northeast corners of the main chamber, respectively. All four of the holes contained remnants of charred posts. The posts in Features 28 and 29 were identified as juniper.[6] Dimensions and shapes of these features are summarized in table 29.

Table 29. Main support posthole summary, Pithouse 2, Rusty Ridge Hamlet

Feature No.	Type	Plan	Profile	Dimensions		
				length (cm)	width (cm)	depth (cm)
18	Posthole	Round	Cylindrical	30	30	65
19	Posthole	Round	Cylindrical	28	28	70
28	Posthole	Oval	Unknown*	26	20	†50
29	Posthole	Oval	Unknown*	25	23	†50

* Not fully excavated.
† Inferred.

Other pits (Features 36 and 37): Two additional pit features were observed on the floor of the main chamber. However, as these features were not excavated, no details about them are available.

Bench (Feature 26). A narrow earthen shelf was left along the east, west, and north walls of the main chamber, creating a bench. The surface

[6]Bruce F. Benz, DAP, personal communication.

of this bench is located approximately 75 cm above the floor of the chamber and ranges in width from 47 to 57 cm. During the excavation of the pithouse, numerous sandstone slabs were found that were either leaning against the bench or embedded into the floor directly in front of the bench. These slabs appeared to be more numerous along the north and east portions of the bench, but the purpose of these slabs is unknown.

Four postholes (Feature 33) are located on the northern portion of the bench. All of these holes contained charred remains of wood. Each hole is believed to be a socket into which the base of leaner posts were placed. These leaner posts were part of the sides of the roof. The postholes range from 10-12 cm in diameter and up to 5 cm in depth. In other areas on the bench, similar depressions with charred wood were observed; however, due to time restraints these depressions were not investigated.

Two clusters of artifacts were point located on the bench surface (fig. 35). PL 9 consists of a cluster of 14 sherds from an Early Pueblo Gray jar; PL 10 is a charred antler from a deer or an elk.

Roof: Evidence recorded during the excavation of the main chamber indicates that the roof of this structure was supported by four large posts. Stringer posts probably extended from the top of one main support post to the top of another, creating a square framework. Leaner posts anchored in the bench apparently leaned in to meet these stringers, forming the sloped sides of the roof. Impressions found in the burned adobe fragments found in the roof fall indicate that a covering over the basic framework probably was composed of smaller beams, posts, and brush. A thick layer of adobe served to seal the roof.

Antechamber.

Dimensions:

North-south diameter:	2.80 m
East-west diameter:	3.10 m
Depth (below base of plow zone):	1.00 m
Floor area:	7.70 m^2

The antechamber of Pithouse 2 is located south of the main chamber (fig. 35); it is connected to the main chamber by a tunnel passageway. The antechamber was dug into sterile soil and there was no apparent treatment of the walls. The floor was level and compacted, probably through use. The partial excavation of this chamber exposed three features that had been dug into the floor.

Stratigraphy: A layer of debris on the floor of the antechamber is believed to be roof fall material. This layer consisted of orange clay loam and charcoal, but the charcoal was not in the form of large logs as was the case in the main chamber. This, and the lack of oxidation of the floor and walls, indicate that the antechamber did not burn as severely as did the main chamber. Postabandonment sediments were observed above the roof fall.

Central hearth (Feature 27):

Dimensions:

North-south diameter:	64 cm
East-west diameter:	60 cm
Depth:	12 cm

Located near the center of the antechamber is a hearth that is basin shaped in profile and round in plan. This feature was dug into the floor of the antechamber and lined with clay. The fill within the hearth consisted of three distinct strata. The uppermost stratum was very similar to the fill covering the floor of the antechamber and is believed

to be roof fall. This stratum was composed of orange clay and charcoal. The next stratum was a layer of gray ash with some charcoal and pieces of orange clay, possibly from the strata above. The lowest stratum consisted of a homogeneous layer of orange soil. This soil might have been used to alter the depth of the hearth. Oxidation of the hearth walls and bottom indicate that the hearth was used prior to the placement of the orange soil. A pile of ash similar to the ash in the hearth was found on the antechamber floor north of the hearth. The ash pile might represent the periodic removal of ash from the hearth to allow for continual use of the latter.

Northwest main support posthole (Feature 30):

Dimensions:

North-south diameter:	23 cm
East-west diameter:	27 cm
Depth:	27 cm

This posthole is cylindrical in profile and oval in plan. It had been dug into the soil beneath the floor of the antechamber and is believed to have held a main support post for the roof of the structure. The fill in the posthole was brown and contained pieces of charcoal.

Southwest main support posthole (Feature 31):

Dimensions:

North-south diameter:	25 cm
East-west diameter:	20 cm
Depth:	58 cm

This feature is also oval in plan and cylindrical in profile, and had been dug into the soil below the floor. This feature contained brown sand and fragments of decomposed wood. The wood is believed to be the remains of a main support post. Although the entire chamber was not excavated, it is believed that other postholes are located in the northeast and southeast corners, forming a four-post support system.

Tunnel passageway (Feature 32):

Dimensions:

Length:	95 cm
Width:	80 cm
Height:	45 cm

A tunnel passageway connects the antechamber to the main chamber. This tunnel is 5 cm above the antechamber floor and 20 cm above the main chamber floor.

Interpretations. Observed architectural attributes for this pithouse indicate that it is very similar to other pithouses that date between A.D. 600 and 700 (Hewitt et al. 1981). The primary attributes of these pithouses that distinguish them from later pitstructures are the presence of a bench and the presence of an antechamber. Therefore, it appears that Pithouse 2 was occupied before Pithouse 1. This is verified by the trash found in the upper levels of Pithouse 2 fill. This trash was probably deposited by the inhabitants of Pithouse 1.

Based on the size of the pithouse and the presence of domestic features such as hearths and manos, it is believed that this structure was a domicile occupied by a single household. Birkedal (1976) has shown that pithouses dating to this period were probably occupied by nuclear families.

Surface Structures

Since none of the three surface structures was excavated, few details about them are available. Each of the structures is a rubble mound and might actually consist of the remains of several rooms (fig. 31). Dimensions for these structures based on the extent of the rubble are given in table 30.

Table 30. Surface structure dimensions, Rusty Ridge Hamlet

Surface structure No.	North-south diameter (m)	East-west diameter (m)
1	2.4	6.2
2	4.6	12.0
3	4.4	7.0

Ancillary Features

Blading of the surface around the pithouses and surface structures revealed seven features: four hearths, one fireplace, one posthole, and one pit feature. Although blading is an expedient method for exposing features, the features are often truncated in the process, therefore original depths of these features are not known and those given are existing dimensions.

Pit (Feature 1).

Dimensions:

Length:	120 cm
Width:	80 cm
Depth:	15 cm

This pit is located about 3 m west of Pithouse 2; it is oval in plan and basin shaped in profile. The fill consisted of a dark, silty soil which contained many charcoal flecks. Ceramics, flaked lithic items, and nonhuman bone were also found in the fill. Oxidation of the pit walls was minimal; however, the presence of the charcoal and some oxidation suggest that the pit functioned as a firepit.

Fireplace (Feature 2).

Dimensions:

North-south diameter:	20 cm
East-west diameter:	20 cm
Depth:	5 cm

Feature 2 is located approximately 4 m north of Surface Structure 2. This feature consists of a basin-shaped pit lined on all sides with small, tabular pieces of sandstone. The fill of the fireplace was a very dark deposit containing a large amount of charcoal. No artifacts were observed in the fill.

Hearth (Feature 3).

Dimensions:

North-south diameter:	40.0 cm
East-west diameter:	40.0 cm
Depth:	11.5 cm

This hearth is located about 1 m west of Feature 2; it is circular in plan and basin shaped in profile. The fill of this feature was a dark, silty sediment containing charcoal flecks and small pieces of adobe. The bottom 7 cm contained a mixture of burned clay with charcoal flecks; no cultural materials were found in the fill. Because the amount of oxidation on the pit walls indicated intensive burning, an archaeomagnetic sample (sample 1) was collected from the feature; results are presented in the "Material Culture" discussion of this section and in appendix A.

Posthole (Feature 4).

Dimensions:

North-south diameter:	20 cm
East-west diameter:	20 cm
Depth:	35 cm

This feature is a cylindrical hole dug into sterile soil and is located about 4 m east of Pithouse 1. The lower 15 cm of the hole contained very hard, mottled, burned clay; the upper 10 cm was filled with a dark brown, silty deposit with charcoal flecks. This feature is believed to be a posthole based on its size and shape; its location is problematic as there are no defined structures in the vicinity.

Hearth (Feature 5).

Dimensions:

North-south diameter:	50 cm
East-west diameter:	50 cm
Depth:	10 cm

This feature is located about 4 m west of Surface Structure 1. It is a basin-shaped pit that contained burned, silty soil with charcoal flecks and pieces of burned clay. Because of the burned deposits it is believed that this feature was used as a hearth.

Hearth (Feature 6).

Dimensions:

North-south diameter:	40 cm
East-west diameter:	40 cm
Depth:	6 cm

This feature is located approximatey 1 m west of Feature 5 and is very similar to it. This hearth is a basin-shaped, unlined pit that contained dark, silty, burned deposits with charcoal flecks throughout.

Hearth (Feature 7). This feature is located about 1 m southwest of Feature 6 and is very similar to Features 5 and 6. It is an unlined basin-shaped pit that is believed to have been used as a hearth. It was not excavated, so depth and details about the fill are not available. This feature measured 35 cm in diameter.

Human burial (Feature 12). Also included in the archaeological record from Rusty Ridge Hamlet is an intrusive human burial (Burial 10). The individual was buried in the fill of Pithouse 1, which indicates that this individual was interred after the site was abandoned as a habitation unit. The number of years that passed between the time of site abandonment and the time of interment could not be determined, but it might not have been very long. Although the individual was buried in a pit, this

pit did not appear to have been dug through the upper levels of fill in the pithouse, indicating that the pitstructure was not completely filled when the burial took place.

The burial pit was oval in plan and cylindrical in profile. Although the burial was disturbed during backhoe operations, it was determined that the body had been placed in the pit in a tightly flexed position; no burial goods were discovered. Lambdoidal deformation was present on the cranium. The dental record indicates that the individual was 20-30 years old at the time of death. See appendix B for further discussion of the remains.

Material Culture

Ceramics

The ceramic collection from Rusty Ridge Hamlet indicates that occupation of the site occurred between A.D. 600 and 860 (Blinman 1982a). This date range is equivalent to the Sagehen Phase; however, it represents two separate occupations. Table 31 lists types of ceramics recovered from major provenience units. Certain diagnostic types, such as Moccasin Gray and Bluff Black-on-red, are found in Pithouse 1 but not in Pithouse 2. Bluff Black-on-red does not appear in the Escalante Sector until about A.D. 740, and Moccasin Gray appears around A.D. 760 (Blinman 1982a). The presence of these ceramic types in Pithouse 1 indicates that this structure was probably occupied after A.D. 740. The absence of these ceramic types in Pithouse 2 indicates that it was probably occupied before A.D. 740; additionally the absence of Abajo Red-on-orange in this structure indicates that it probably was occupied before A.D. 720. Later gray ware sherds, such as Mancos Gray which was manufactured after A.D. 860, are

Table 31. Ceramic summary, Rusty Ridge Hamlet

Culture category: Ware Type	Modern ground surface		Surstr 1		Surstr 2		Pithouse 1 main chbr floor and features	
	N	%	N	%	N	%	N	%
Mesa Verde:								
Gray ware								
Chapin Gray	18	4.6	1	5.6			14	4.3
Moccasin Gray	4	1.0					3	0.9
Early Pueblo Gray	345	88.7	17	94.4	2	100.0	297	92.2
White ware								
Early Pueblo White	3	.8						
Red ware								
Abajo Red-on-Orange								
Bluff Black-on-red							8	2.5
Early Pueblo Red	17	4.4						
Trade ware								
Cibola	2	.5						
Total ceramics	389	100.0	18	100.0	2	100.0	322	100.0
Vessel form:								
Bowl	11	2.8						
Jar	378	97.2	18	100.0	2	100.0	314	97.5
Other							8	2.5

NOTES: Main chbr - Main chamber.
Surstr - Surface Structure.

Table 31. Ceramic summary, Rusty Ridge Hamlet--Continued

Culture category: Ware / Type	Pithouse 1 main chbr roof fall N	%	Pithouse 1 main chbr noncultural fill N	%	Pithouse 1 total N	%	Pithouse 2 main chbr floor and features N	%
Mesa Verde:								
Gray ware								
Chapin Gray	3	4.8	7	2.8	24	3.8	1	5.6
Moccasin Gray					3	0.5		
Early Pueblo Gray	60	95.2	234	95.1	591	93.7	17	94.4
White ware								
Early Pueblo White								
Red ware								
Abajo Red-on-orange								
Bluff Black-on-red			4	1.6	12	1.9		
Early Pueblo Red			1	0.4	1	0.2		
Trade ware								
Cibola								
Total ceramics	63	100.0	246	100.0	631	100.0	18	100.0
Vessel form:								
Bowl			1	0.4	1	0.2		
Jar	63	100.0	241	97.9	618	97.9	18	100.0
Other			4	1.6	12	1.9		

Table 31. Ceramic summary, Rusty Ridge Hamlet--Continued

Culture category: Ware / Type	Pithouse 2 main chbr fill N	%	Pithouse 2 total N	%	Other excavated units N	%	Site total N	%
Mesa Verde:								
Gray ware								
Chapin Gray	5	13.9	6	11.1	16	18.4	65	5.5
Moccasin Gray					1	1.1	8	0.7
Early Pueblo Gray	27	75.0	44	81.5	57	65.5	1056	89.4
White ware								
Early Pueblo White	3	8.3	3	5.5	6	6.9	12	1.0
Red ware								
Abajo Red-on-orange					1	1.1	1	<0.1
Bluff Black-on-red							12	1.0
Early Pueblo Red	1	2.8	1	1.9	6	6.9	25	2.1
Trade ware								
Cibola							2	0.2
Total ceramics	36	100.0	54	100.0	87	100.0	1181	100.0
Vessel form:								
Bowl	3	8.3	3	5.5	9	10.3	24	2.0
Jar	32	88.8	50	92.6	78	89.7	1144	96.9
Other	1	2.7	1	1.9			13	1.1

lacking from the site, indicating the likelihood that it was completely abandoned prior to that date.

Of the total number of sherds in the ceramic collection (1181), only two sherds could be identified as having been manufactured outside of the Mesa Verde region. These have been tentatively identified as Cibola Gray Ware sherds primarily on the basis of quartz sand temper. Review of the other temper types that were used indicates that the primary type is crushed igneous rock, which is the typical temper type for locally produced ceramics (Blinman 1982b). Sandstone temper, which occurs in less than 1 percent of the sherds, is believed to have been used in areas west of the Escalante Sector (Blinman 1982b).

Two reconstructable vessels were recovered from the floor of Pithouse 1. Vessel 1 is an unusual form and has been tentatively called a beaker. Vessels of this type appear to be cups without handles. This vessel has been identified as Bluff Black-on-red. Vessel 2 is either a Chapin Gray or a Moccasin Gray jar. Most of the shoulder and all of the rim portions are missing, making type identification impossible. Both vessels are shown in figure 37.

Flaked Lithic Tools and Debitage

Tables 32 and 33 present the flaked lithic tool and flaked lithic debitage data for Rusty Ridge Hamlet. Since many of the provenience units contain very few items, interpretation will focus on more inclusive units. In addition, because the site was only sampled and not fully excavated, both intrasite and intersite comparisons are considered tentative.

At Rusty Ridge Hamlet the proportions of high-production-input tools such as thin scrapers, bifaces, and projectile points (fig. 38) are relatively large when compared to other Sagehen Phase habitations and the

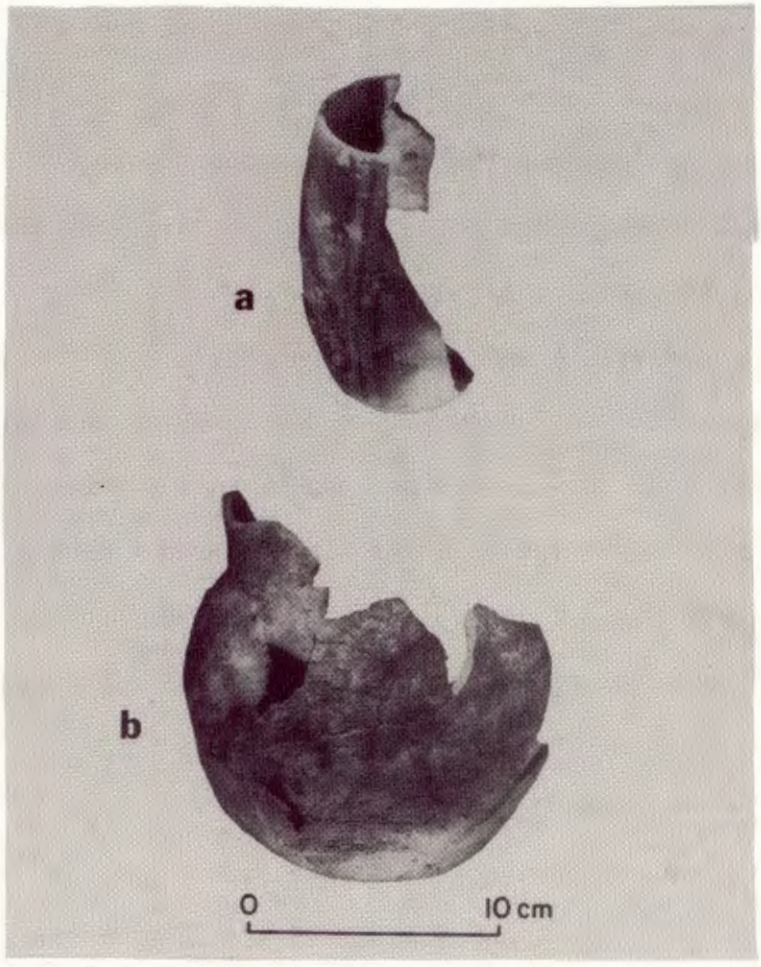


Figure 37. Vessels from Pithouse 1, Rusty Ridge Hamlet: (a) vessel 1; (b) vessel 2 (DAP 130501).

Table 32. Flaked lithic tools, Rusty Ridge Hamlet

	Modern ground surface		Pithouse 1 Surface 1 and features		Pithse 1 roof fall		Pithse 1 noncult fills & features		Pithouse 1 total	
	N	%	N	%	N	%	N	%	N	%
Total tools:	33	100.0	3	100.0	3	100.0	4	100.0	10	100.0
Tool morpho-use										
Indeterminate	2	6.1								
Utilized flake	9	27.3			1	33.3	1	25.0	2	20.0
Core	4	12.1					2	50.0	2	20.0
Chopper, scraper plane	9	27.3								
Thick uniface	3	9.1			2	66.7			2	20.0
Thin uniface	1	3.0								
Thick biface	3	9.1	2	66.7			1	25.0	3	30.0
Thin biface	2	6.1								
Projectile point			1	33.3					1	10.0
Specialized form										
Grain size										
Medium										
Fine	7	21.2	1	33.3					1	10.0
Very fine	20	60.6	2	66.7	3	100.0	4	100.0	9	90.0
Microscopic	6	18.2								
Dorsal face evaluation										
Indeterminate										
Unmodified core	13	39.4					2	50.0	2	20.0
Unthinned item, with cortex	6	18.2					1	25.0	1	10.0
Unthinned item, no cortex	8	24.2			3	100.0			3	30.0
Prelim shaping, with cortex	3	9.1	2	66.7			1	25.0	3	30.0
Prelim shaping, no cortex	1	3.0								
Primary thinning	2	6.1								
Secondary thinning			1	33.3					1	10.0
Well shaped										
Ventral face evaluation										
Unmodified core	13	39.4					2	50.0	2	20.0
Unthinned item, with cortex										
Unthinned item, no cortex	14	42.4			3	100.0	1	25.0	4	40.0
Prelim shaping, with cortex	1	3.0	2	66.7			1	25.0	3	30.0
Prelim shaping, no cortex	4	12.1								
Primary thinning	1	3.0								
Secondary thinning			1	33.3					1	10.0
Well shaped										

NOTES: Pithse - Pithouse.
Noncult - Noncultural.
Surf - Surface.
Prelim - Preliminary.

Table 32. Flaked lithic tools, Rusty Ridge Hamlet--Continued

	Pithouse 2 main chamber Surface 1 and features		Pithouse 2 main chamber noncult fills & features		Pithouse 2 main chamber total		Other excavated units		Site total	
	N	%	N	%	N	%	N	%	N	%
Total tools:	2	100.0	8	100.0	10	100.0	10	100.0	63	100.0
Tool morpho-use										
Indeterminate			1	12.5	1	10.0	1	10.0	4	6.3
Utilized flake			1	12.5	1	10.0	1	10.0	13	20.6
Core									6	9.5
Chopper, scraper plane	1	50.0	1	12.5	2	20.0			11	17.5
Thick uniface									5	7.9
Thin uniface							3	30.0	4	6.3
Thick biface							1	10.0	7	11.1
Thin biface							1	10.0	3	4.8
Projectile point	1	50.0	2	25.0	3	30.0	2	20.0	6	9.5
Specialized form			3	37.5	3	30.0	1	10.0	4	6.3
Grain size										
Medium										
Fine	1	50.0	1	12.5	2	20.0	2	20.0	12	19.0
Very fine	1	50.0	4	50.0	5	50.0	2	20.0	36	57.1
Microscopic			3	37.5	3	30.0	6	60.0	15	23.8
Dorsal face evaluation										
Indeterminate			1	12.5	1	10.0			1	1.6
Unmodified core	1	50.0	1	12.5	2	20.0			17	27.0
Unthinned item, with cortex										
Unthinned item, no cortex			1	12.5	1	10.0	4	40.0	23	36.5
Prelim shaping, with cortex									4	6.3
Prelim shaping, no cortex							4	40.0	8	12.7
Primary thinning			2	25.0	2	20.0	1	10.0	4	6.3
Secondary thinning			1	12.5	1	10.0			2	3.2
Well shaped	1	50.0	2	25.0	3	30.0	1	10.0	4	6.3
Ventral face evaluation										
Indeterminate			1	12.5	1	10.0			1	1.6
Unmodified core	1	50.0	1	12.5	2	20.0			17	27.0
Unthinned item, with cortex			1	12.5	1	10.0	1	10.0	9	14.3
Unthinned item, no cortex							5	50.0	16	25.4
Prelim shaping, with cortex									6	9.5
Prelim shaping, no cortex							1	10.0	2	3.2
Primary thinning							2	20.0	4	6.3
Secondary thinning			3	37.5	3	30.0			4	6.3
Well shaped	1	50.0	2	25.0	3	30.0	1	10.0	4	6.3

Table 33. Flaked lithic debitage, Rusty Ridge Hamlet

	Modern ground surface		Surstr 2 noncult fills & features		Surstr 2 total		Pithse 1 Surface 1 and features		Pithse 1 roof fall		Pithse 1 noncult fills		Pithse 1 total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Flakes/flake fragments:														
Grain size														
Medium	3	1.5												
Fine	38	19.2					1	6.7			4	14.3	5	9.4
Very fine	106	53.5	1	25.0	1	25.0	6	40.0	6	60.0	12	42.9	24	45.3
Microscopic	51	25.8	3	75.0	3	75.0	8	53.3	4	40.0	12	42.9	24	45.3
Total flakes/flake fragments	198	100.0	4	100.0	4	100.0	15	100.0	10	100.0	28	100.0	53	100.0
Mean weight (grams)	12		5		5		8		6		9		8	
Items with cortex	58	29.3	2	50.0	2	50.0	1	6.7	1	10.0	3	10.7	5	9.4
Whole flakes	91	46.0	2	50.0	2	50.0	7	46.7	5	50.0	14	50.0	26	49.1

NOTES: Surstr - Surface Structure.
noncult - Noncultural.
main chbr - Main chamber.
antechbr - Antechamber.
Pithse - Pithouse.

Table 33. Flaked lithic debitage, Rusty Ridge Hamlet--Continued

	Pithse 2 main chbr Surface 1 and features		Pithse 2 main chbr noncult fills		Pithse 2 main chbr chmbr total		Pithse 2 antechbr Surface 1 and features		Pithse 2 antechbr total		Other excavated units		Site total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Flakes/flake fragments:														
Grain size														
Medium													3	1.0
Fine	1	50.0			1	8.3					2	9.1	46	14.7
Very fine			8	80.0	8	66.7	20	87.0	20	87.0	8	36.4	167	53.5
Microscopic	1	50.0	2	20.0	3	25.0	3	13.0	3	13.0	12	54.5	96	30.8
Total flakes/flake fragments	2	100.0	10	100.0	12	100.0	23	100.0	23	100.0	22	100.0	312	100.0
Mean weight (grams)	1		7		6						13		10	
Items with cortex	0	0	7	70.0	7	58.3	1	4.3	1	4.3	3	13.6	76	24.4
Whole flakes	0	0	7	70.0	7	58.3	4	17.4	4	17.4	8	36.4	138	44.2

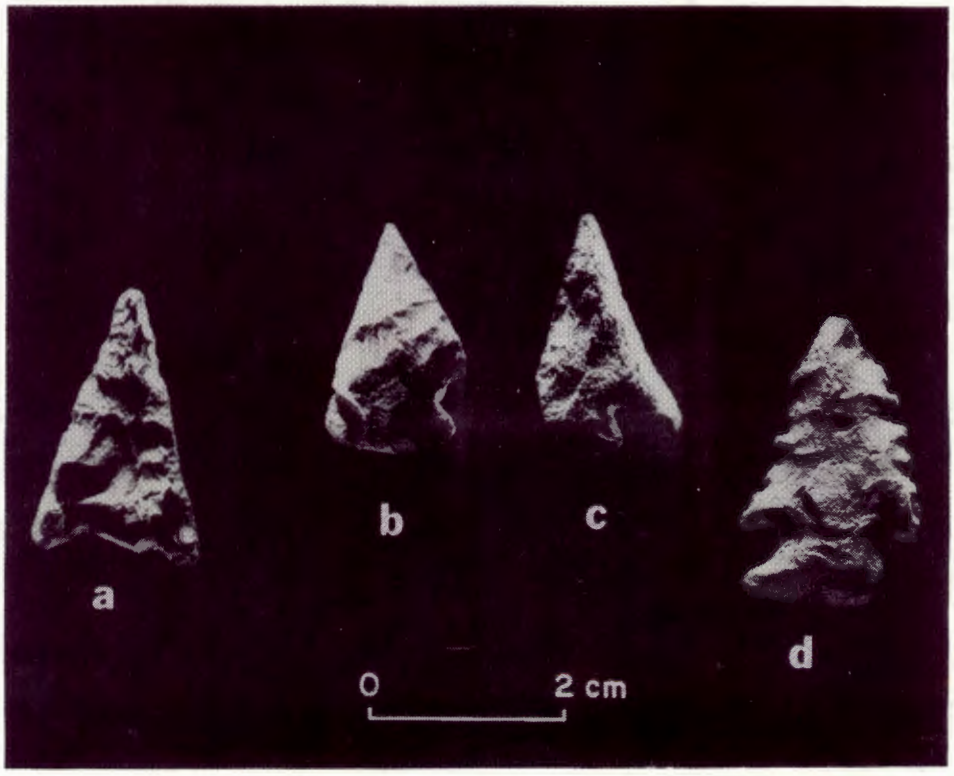


Figure 38. Projectile points, Rusty Ridge Hamlet: (a) and (b) general site provenience; (c) Pithouse 1 floor; (d) Pithouse 2 bench (DAP 121104).

Anasazi profile. This may suggest some unusual site function, perhaps related to animal rather than to plant processing. Such a pattern of greater proportions of high input items is characteristic of earlier patterns of the Anasazi sequence, and to an even greater extent, of the Archaic Tradition. However, this pattern of greater proportions of high production input items is contradicted by the dorsal and ventral thinning stage evaluations which indicate that even these normally high input items did not recieve much thinning attention. In fact, very few tools show any facial thinning, which suggests expedient production of even the more specialized tools. This is generally confirmed by the fact that there are more cores than any other morpho-use category.

Among the lithic debitage items (table 33) there is a difference between the materials from pitstructure contexts and the materials from the surface collection. There are very high proportions of microscopic-grained material in pitstructure contexts, as well as very low proportions of items with cortex. This may suggest that more preliminary reduction of the coarser local materials was being done outside the pitstructures, and that final shaping or maintenance of microscopic material items was done inside.

Nonflaked Lithic Tools

The nonflaked lithic tools from Rusty Ridge Hamlet constitute 37 percent of the total lithic tool assemblage, which is normal for Anasazi habitation sites (Phagan 1981b). Manos dominate the nonflaked lithic tool assemblage (50 percent). Most of the tools (68.3 percent) are simply used, unshaped cobbles. These proportions are characteristic of the earlier portions of the Anasazi sequence. Table 34 lists nonflaked lithic tools according to major provenience units.

Table 34. Nonflaked lithic tools, Rusty Ridge Hamlet

	Modern ground surface		Pithse 1 main chbr floor & features		Pithse 1 main chbr fill		Pithse 1 total		Pithse 2 main chbr floor & features		Pithse 2 main chbr fill		Pithse 2 total		Other excavated units		Total site	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total tools:	11	100.0	12	100.0	5	100.0	17	100.0	4	100.0	1	100.0	5	100.0	5	100.0	38	100.0
Tool morpho-use																		
Indeterminate	1	9.1							1	25.0			1	20.0			2	5.3
Hammerstone	1	9.1	2	16.7	2	40.0	4	23.5	1	25.0			1	20.0	1	20.0	7	18.4
Mano	7	63.7	6	50.0	3	60.0	9	52.9	1	25.0			1	20.0	2	40.0	19	50.0
Generalized, hafted	1	9.1													1	20.0	2	5.3
Misc specialized	1	9.1	4	33.3			4	23.5	1	25.0	1	100.0	2	40.0	1	20.0	8	21.1
Production evaluation																		
Indeterminate															1	20.0	1	2.6
Natural (unmodified)	8	72.7	7	58.3	4	80.0	11	64.7	3	75.0			3	60.0	4	80.0	26	68.4
Minimally shaped	3	27.3	5	41.7	1	20.0	6	35.3	1	25.0	1	100.0	2	40.0			11	28.9
Item completeness																		
Partial implement	6	54.5	2	16.7	1	20.0	3	17.6	1	25.0			1	20.0	2	40.0	12	31.6
Complete/nearly complete	5	45.5	10	83.3	4	80.0	14	82.4	3	75.0	1	100.0	4	80.0	3	60.0	26	68.4
Grain size																		
Indeterminate	6	54.5	6	50.0	3	60.0	10	58.8	1	25.0			3	60.0	3	60.0	22	57.9
Medium	5	45.5	6	50.0	2	40.0	7	41.2	3	75.0	1	100.0	2	40.0	2	40.0	16	42.1

NOTES: Misc - Miscellaneous.
Pithse - Pithouse.
main chbr - Main chamber.

Faunal Remains

The unworked animal bone recovered from Rusty Ridge Hamlet totals only 42 specimens. Table 35 lists these unworked bones as specifically as possible. The majority of the bone, 75.5 percent, has been identified as Mammalia. Of the Mammalia bone identified to genus, 24.4 percent is Lepus spp. (jackrabbit). No articulated remains were identified, which suggests that most of the bones were deposited due to cultural activities.

Table 35. Faunal remains, Rusty Ridge Hamlet

Taxon	Modern ground surface		Pithse 1 fill		Pithse 1 floor		Other excav units		Total site	
	N	%	N	%	N	%	N	%	N	%
Mammals:	2	100.0	13	59.0	5	55.6	2	40.0	22	57.9
Lagomorpha										
Sylvilagus sp.			1	4.5					1	2.6
Lepus spp.			6	27.3	3	33.3	2	40.0	11	28.9
Artiodactyla							1	20.0	1	2.6
Odocoileus hemionus			2	9.1	1	11.1			3	7.9
Total mammals	2	100.0	22	100.0	9	100.0	5	100.0	38	100.0
Other and unidentified			3	100.0			4	100.0	7	100.0
Total			3	100.0			4	100.0	7	100.0
Total assemblage	2	100.0	25	100.0	9	100.0	9	100.0	45	100.0

NOTES: Pithse - Pithouse.
excav - Excavated.

Vegetal Remains

Results of the preliminary analysis of vegetal specimens from Rusty Ridge Hamlet are presented in table 36. All of the specimens are from floor associated contexts. Since both of the pithouses burned, thereby "sealing" the floors and associated features, it can be assumed that

Table 36. Vegetal remains, Rusty Ridge Hamlet

Taxon Family Genus species Plant part	Provenience					
	Pithouse 1		Pithouse 2 (main chamber)			Pithouse 2 (antechamber)
	Floor	Feat 9	Floor	Feat 26	Feat 28	Feat 27
Anacardiaceae *Rhus aromatica* twig			W/C			
Compositae *Artemisia* sp. wood *Chrysothamnus* sp. twig	12.5g/C		4.0gW/C W/C	4/C		<1.0g/C
Cupressaceae *Juniperus* sp. wood			4.0gW/C		42.4g/PC	
Gramineae *Phragmites* sp. stem *Zea mays* kernel cob cupule	5.0g/C 41.0g/C 54fg/C 15/C		9.0gW/C	3/C		8/C
Liliaceae *Yucca* sp. fiber leaves			W/C W/C			
Pinaceae *Pinus edulis* seed		1/C				
Rosaceae Indeterminate wood						>2.8g/C
Salicaceae *Populus* sp. wood	4/C		<64.0gW/C			

NOTES: Feat - Feature.
- Number present.
C - Charred.
PC - Partially charred.
W - Worked, part of PL 8 (Pithouse 2).
g - Weight in grams.
fg - Fragment.

vegetal remains from these proveniences are associated with the occupation of the site and are not the result of postabandonment contamination.

The presence of corn (Zea mays) indicates that the inhabitants of both pithouses had an economy that included cultivated plants. The Artemisia, Populus, and Juniperus specimens probably represent construction materials. The Rosaceae wood might represent material used for construction purposes or for fuel. A variety of vegetal materials were associated with PL 8 from Pithouse 2; however, it appears that there are roof materials mixed with the floor-associated textile materials.

Tree-ring Samples

A total of 50 tree-ring samples was collected from Rusty Ridge Hamlet; 15 are from Pithouse 1, and 35 are from Pithouse 2. Analytic results for these samples are shown in table 37. Unfortunately, only six samples could be dated and several of these are not cut dates. However, the two "v" dates obtained for Pithouse 2 agree with dates indicated by the ceramic assemblage and by the architectural style. The 784r date and the 783vv date obtained for Pithouse 1 also seem reasonable when compared to the architectural style and ceramic assemblage of that structure.

Archaeomagnetic Samples

Three samples were collected for archaeomagnetic dating: sample 1 is from a hearth (Feature 3) located north of Surface Structure 2; sample 2 is from the burned floor of Pithouse 1; and sample 3 is from the central hearth (Feature 9) in Pithouse 1.

The results obtained for these samples appear in table 38. Since several dates may be given for each sample because of the nature of the paleomagnetic pole positions (Hathaway and Eighmy 1981), the dates should be evaluated in association with other temporal evidence such as ceramics

Table 37. Tree-ring analysis results, Rusty Ridge Hamlet

Field No.	Provenience	Species	Inside date	Outside date
1-4	Pithse 1, Level 2	Pinus ponderosa		
5	Pithse 1, Level 2	Juniperus sp.		
6	Pithse 1, Level 2	Pinus ponderosa		
7	Pithse 1, Level 2	Juniperus sp.	693p	784r
8	Pithse 1, Level 2	Juniperus sp.		
9	Pithse 2, Surf 1	Populus sp.		
10, 11	Pithse 2, Surf 1	Pinus ponderosa		
12-14	Pithse 2, Surf 1	Populus sp.		
15	Pithse 2, Surf 1	Pinus ponderosa		
16	Pithse 2, Surf 1	Populus sp.		
17	Pithse 2, Surf 1	Pinus ponderosa	632p	684v
18, 19	Pithse 2, Surf 1	Populus sp.		
20	Pithse 2, Surf 1	Pinus ponderosa		
21, 22	Pithse 2, Surf 1	Populus sp.		
23-26	Pithse 2, Surf 1	Pinus ponderosa		
27-31	Pithse 2, Surf 1	Populus sp.		
32	Pithse 2, Surf 1	Juniperus sp.	370	617vv
33	Pithse 1, Level 1	Pinus ponderosa		
34	Pithse 1, Level 1	Pinus ponderosa	717p	783vv
35, 36	Pithse 1, Level 1	Populus sp.		
37-39	Pithse 1, Level 1	Pinus ponderosa		
40	Pithse 2, Surf 1	Juniperus sp.	468+p	635vv
41-44	Pithse 2, Level 1	Juniperus sp.		
45, 46	Pithse 2, Surf 1	Pinus ponderosa		
47	Pithse 2, Level 1	Pinus ponderosa	622p	685v
48-50	Pithse 2, Surf 1	No species ID		

NOTES: The following tree-ring symbols were provided by the Laboratory of Tree-ring Research, University of Arizona, Tucson:

- p - Pith ring present.
- +p - Less than a full section is present, but the outermost ring is continuous around available circumference.
- r - Less than a full section is present, but the outermost ring is continuous around available circumference.
- v - A subject judgment that, although there is no direct evidence of the true outside on the specimen, the date is within a very few years of being a cutting date.
- vv - There is no way of estimating how far the last ring is from the true outside.

Pithse - Pithouse.
Surf - Surface.

or tree-ring dates. When compared with the ceramic and tree-ring dates obtained for the entire site, the second date given for sample 1 seems much too late, but the first date seems quite reasonable. Since this feature could date to any time between A.D. 615 and 705 according to this first date, it seems that it is probably associated with the earliest occupation of the site.

Only one date is given for the sample obtained from the floor of Pithouse 1, and this date seems too late, even at the low end (A.D. 895). If the structure had been occupied until this date one would expect to find sherds from ceramics manufactured at this time, and this is not the case.

Table 38. Archaeomagnetic results, Rusty Ridge Hamlet

Sample No.	Provenience	Dates (A.D.)
1	Feature 3	660 (± 45), 1400 (± 45)
2	Pithouse 1, Surface 1	915 (± 20)
3	Pithouse 1, Feature 9	775 (± 40), 935 (± 40), 1515 (± 40)

Of the several possible dates given for the hearth of Pithouse 1, the first date is the most reasonable. The range of this date is A.D. 735-815. If the sample represents the last burning of the hearth then the higher end of the range seem quite reasonable. Ceramics and tree-ring dates also indicate that this is plausible date.

Site Synthesis

Chronology

All of the evidence recovered from Rusty Ridge Hamlet indicates that there were two successive occupations: the first represented by Pithouse 1 and the last represented by Pithouse 2. Using the various dating

methods available it should be possible to derive a reasonable occupation date for each pithouse.

According to the architectural evidence, Pithouse 1 dates to sometime between A.D. 700 and 760. Ceramics recovered from the structure indicate that it could have been occupied between A.D. 740 and 860. Tree-ring analysis results indicate that trees cut for the roof of the structure were felled in A.D. 784. Finally, the results of the archaeomagnetic sample obtained from the hearth of the structure provide a possible date range of A.D. 735 to 815. Tree-ring cut dates seem to be more precise than other dating methods; therefore, it appears that the structure was built at approximately A.D. 784.

Although it is more difficult to determine the time of abandonment, it must have occurred shortly after Moccasin Gray was introduced since the percentage of sherds of this type is small. If the structure was used for a long period of time after the introduction of this type, the percentage of sherds of this type would have been higher. Since Moccasin Gray begins to appear at about A.D. 760, it seems that the structure was abandoned shortly after this date, but it is not possible to determine an exact terminal date based on ceramics alone. The archaeomagnetic date range for the hearth of this structure is A.D. 735 to 815. When this date is viewed in conjunction with the ceramic evidence, it seems entirely possible that the structure was abandoned some time around A.D. 815. Therefore, based on all of the evidence, it appears that Pithouse 1 was constructed around A.D. 784 and abandoned before A.D. 815. According to the DAP phase scheme this structure was occupied during the Dos Casas Subphase (A.D. 760-850) of the Sagehen Phase (A.D. 600-850).

An analysis of architectural attributes observed at Pithouse 2 indicates that this structure was constructed sometime between A.D. 600 and 700. Ceramics recovered from this structure indicate that it was occupied between A.D. 600 and 720. Two tree-ring samples obtained from this pithouse indicate that trees for the roof were cut within a few years of A.D. 684. Based on all of this evidence it appears that Pithouse 2 was occupied between A.D. 680 and 720. According to the DAP phase scheme this time period corresponds to the Tres Bobos Subphase (A.D. 600-700) of the Sagehen Phase.

Integration of Spatial and Temporal Units

It has been established that Pithouse 1 belongs to the Dos Casas Subphase and that Pithouse 2 belongs to the Tres Bobos Subphase. Since each of these pithouses represents a major building episode, each of them also represents an element. However, each element includes more than a single pithouse, it also includes associated surface structures and features. Since the surface structures at this site were not excavated their association with the pithouses is based on relative proximity. Assignment of features to elements is also based on their spatial relationship with the pithouses.

Element 1. Pithouse 2 was the first pithouse constructed at the site, and it was the main habitation structure of Element 1. Surface Structure 2 is located just north of Pithouse 2, which is a typical location for rooms associated with pithouses. Therefore, Surface Structure 2 is also assigned to Element 1. Surface Structure 3 is located southwest of Pithouse 2; this is also a typical location for surface structures belonging to the Tres Bobos Subphase (Brisbin and Varien 1981). Two features are located north of Surface Structure 2: a hearth and a

fireplace. Based on location alone they would probably be assigned to Element 1. An archaeomagnetic date given for a sample obtained from the hearth verifies this assignment; that date is A.D. 660 (±45).

Element 2. Pithouse 1 is the main habitation structure of Element 2. Surface Structure 1 was apparently constructed as part of this element since it is located north of the pithouse. The three hearths west of the pithouse and the posthole east of the pithouse are assigned to this element on the basis of proximity

Episode 1. The solitary burial in the fill of Pithouse 1 represents an event that occurred sometime after the site was abandoned. It is not possible to tell exactly when the individual was placed in the pithouse, but it is possible to state that the interment took place after the pithouse began to fill with natural sediments, but before it had completely filled. Since the rate of deposition in pitstructures is currently not known the best date that can be assigned to the episode is about A.D. 850.

Household clusters. By definition a household cluster is the space and structures used by a household (Kane 1981a). Based on evidence recorded for this site and based on analogy with other excavated sites in the sector, it is believed that the pithouse of each element was used as the household domicile and that the surface structures were used for storage. Outside features were used for various household activities. Therefore, each pithouse and its associated surface structures and outside features constitute a household cluster. Household cluster numbers were assigned on a project-wide basis.

Due to the simplistic nature of this site, each household cluster is equivalent to an element, and each element is assigned to a subphase. The relationship of these units is shown in table 39.

Table 39. Relationship of temporal and spatial units, Rusty Ridge Hamlet

Structures features	Household cluster No.	Element No.	Date (A.D.)	Subphase
Pithouse 2, Surstr 2 and 3, Feat 1, 2, and 3	8	1	680-720	Tres Bobos
Pithouse 1, Surstr 1, Feat 4, 5, 6, and 7	9	2	784-815	Dos Casas

NOTES: Surstr - Surface Structure.
Feat - Feature.

Summary

Investigations at Rusty Ridge Hamlet revealed that the site was occupied at two different times by two different households. Each household built a subterranean pithouse as its domicile and surface structures presumably for storage. That these households conducted some of their activities outside is shown by the presence of hearths and pits near the pithouses.

A period of at least 50-60 years elapsed between the first and the second occupation of the site. During that time many changes occurred. By the time the members of Household Cluster 9 occupied the site, the pithouse antechamber was replaced with a vent shaft and the surface structures were concentrated north of the pithouse. The members of Household Cluster 9 were also using ceramics such as Bluff Black-on-red and Moccasin Gray, which were unknown to the members of Household Cluster 8. Yet many things remained the same: both households still appear to be small, perhaps consisting of a nuclear family; each household group was living by itself and was probably fairly autonomous; and both household groups lived in pithouses.

DEER HUNTER HAMLET (SITE 5MT2853)

Introduction

Deer Hunter Hamlet was initially recorded on 6 November 1976 by a University of Colorado survey team (Kane 1977). Field investigations began on 12 September 1979 and were completed on 20 November 1979. A total of 85 person-hours was expended. This work was conducted during the deer hunting season and many hunters were seen in the site vicinity, thus the name Deer Hunter Hamlet.

Limited investigations revealed that this was a dual occupation site. Remains of the earliest occupation include Pithouse 2 and possibly several outside features. The second occupation is represented by Pithouse 1 and possibly Surface Structure 1 and several outside features.

Location

Deer Hunter Hamlet is situated on a south-trending dip slope near the center of the Sagehen Flats Locality. A large drainage is east of the site; other smaller drainages are found to the west. The site is located in Montezuma County, Colorado in the SE 1/4 of the SE 1/4, sec. 25, T38N, R16W. The Universal Transverse Mercator grid coordinates for this location are 4,154,860 mN, 715,140 mE, zone 12. Topographic setting in the immediate site vicinity is shown in figure 39.

Investigative Strategy

Site specific details about the magnetometer survey, the surface collection, and subsurface excavations are given in the following

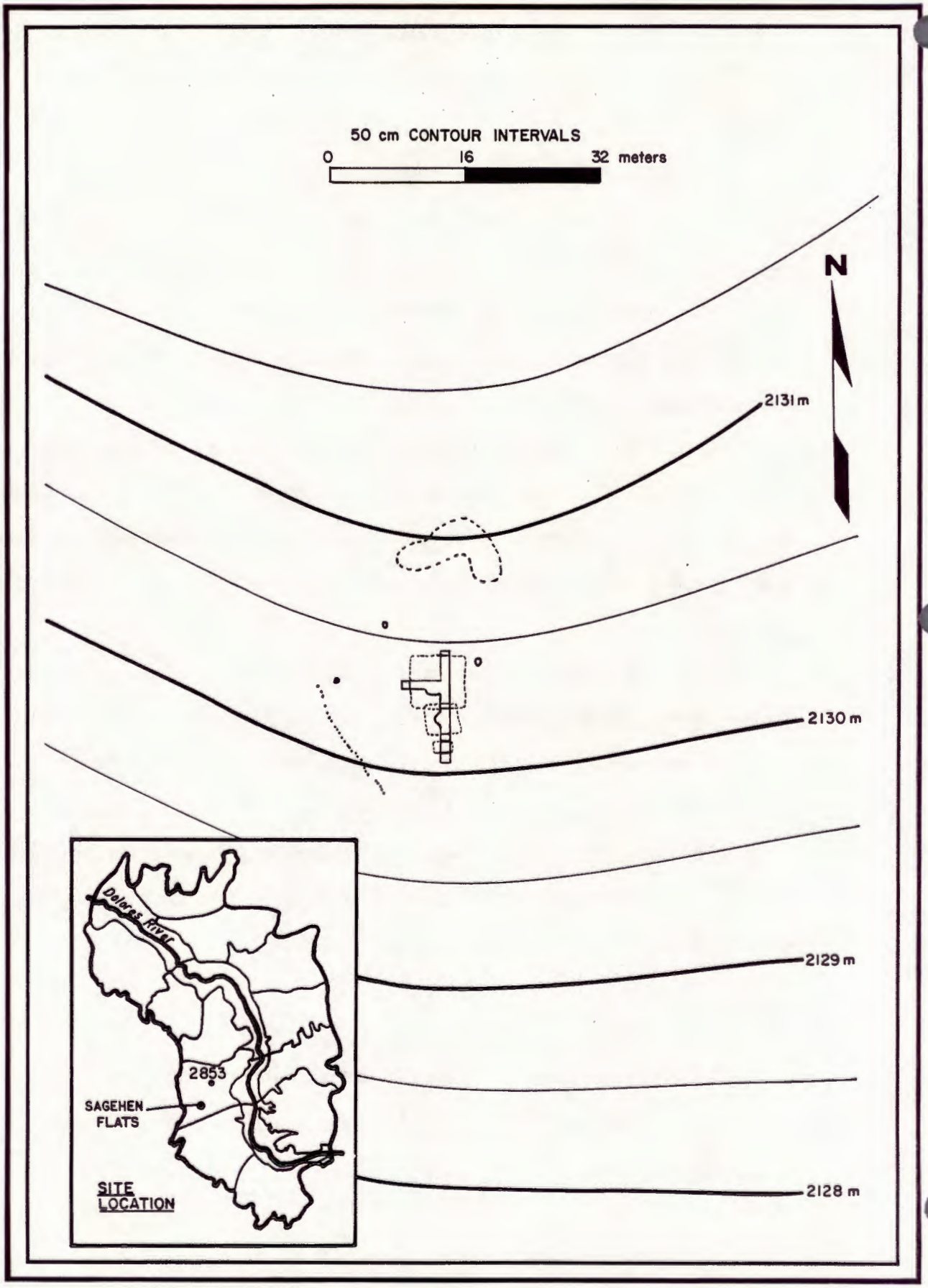


Figure 39. Topographic map of Deer Hunter Hamlet.

discussions. General information about the investigative strategy for tested sites is given in the "Introduction" section of this report.

Magnetometer Survey

During the 1979 field season, a magnetometer survey of Deer Hunter Hamlet was conducted over a 40- by 20-m area. Seven magnetic anomalies of archaeological potential were observed; the locations of these anomalies are shown in figure 40.

Anomaly 1 had a magnitude and geometry similar to a burned region and its source was suspected to be a pitstructure. Upon investigation it was shown that this anomaly corresponded to Pithouse 2. However, this structure did not burn.

Although Anomaly 2a was suspected to be less than 1.2 m deep, it was not known what sort of feature was its source. Investigations of this area did not reveal any cultural features or other phenomena that might have created the anomaly. Anomaly 2b was suspected to be a burned area not far below the surface; however, investigation of this area did not reveal a source for this anomaly.

Anomaly 3 was believed to be linked with anomaly 2a, but again no cultural features were located in this area. The same is true for anomaly 4, which was suspected to be a burned area. However, this area was not extensively bladed due to the rubble mound (Surface Structure 1) located to the north.

Anomaly 5 was found to correspond in part to Surface Structure 1. No initial suggestions as to its source were proferred, but it was not given the high priority of sources that are believed to be caused by archaeological phenomena. However, since the anomaly does not correspond to the

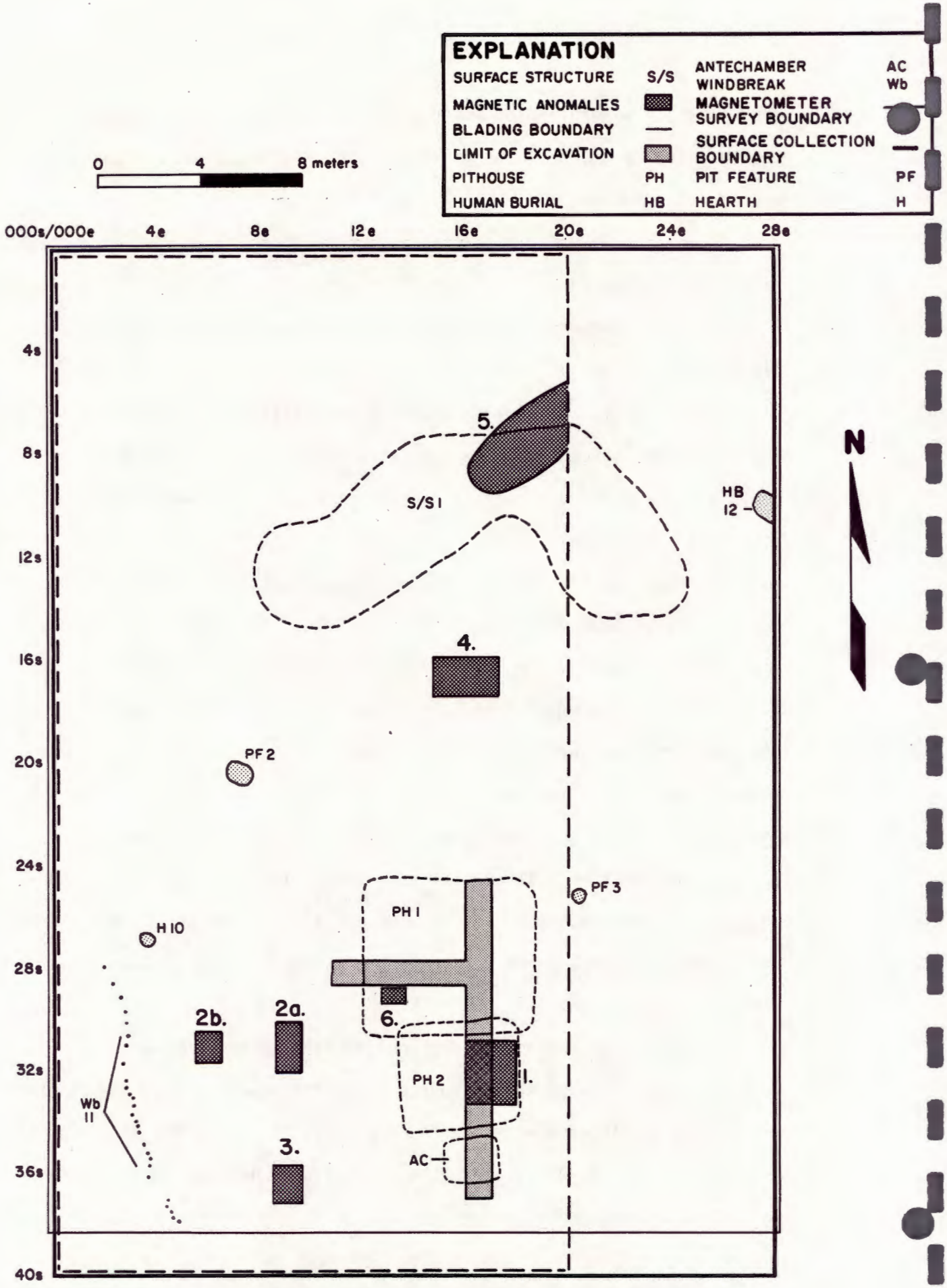


Figure 40. Site sampling plan, Deer Hunter Hamlet.

entire extent of the surface structure, it is possible that some source other than the surface structure caused the anomaly.

Anomaly 6 was suspected to be an architectural feature with semicompacted fill. Investigation revealed that this anomaly falls within Pithouse 1 and is probably related to the pithouse, possibly to a feature within it. Since this portion of the pithouse was not excavated, the exact source of the anomaly is not known.

Surface Collection

In order to conduct the surface collection, a grid of 4- by 4-m squares was established over the limits of the site; the total area of the grid was 1120 m^2. The artifact assemblage collected from the surface consists of 34 flaked lithic tools and debitage, 5 nonflaked lithic tools, and 33 ceramic sherds. These items are further identified in the "Material Culture" discussion of this section. Figures 41, 42, and 43 show surface distribution of these artifacts.

Subsurface Investigations

After the surface collection was completed and a contour map of the site was made, the site limits were bladed to remove the plow zone. During these blading operations a rubble mound was encountered, so blading in the area of the mound was discontinued to prevent disturbances to architectural features. This rubble mound was later labeled Surface Structure 1.

Blading of the remainder of the site revealed 10 stains. Subsequent investigations of these stains revealed that six of them were of cultural origin. One large stain was the result of cultural fill inside two partially superimposed pitstructures (Pithouses 1 and 2). The other

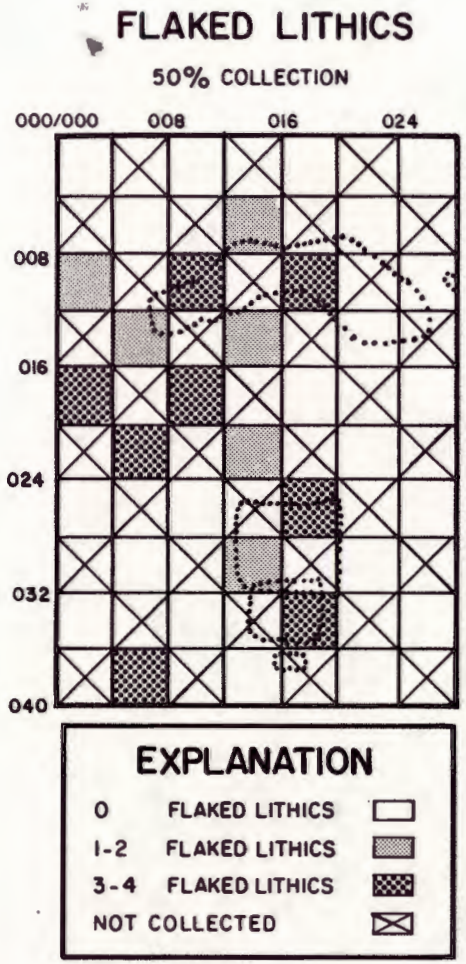


Figure 41. Surface distribution of flaked lithic items, Deer Hunter Hamlet.

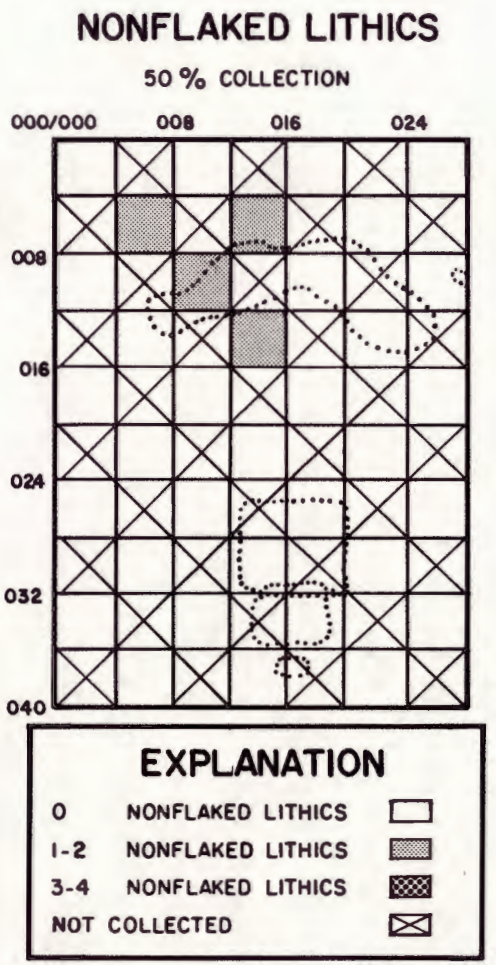


Figure 42. Surface distribution of nonflaked lithic items, Deer Hunter Hamlet.

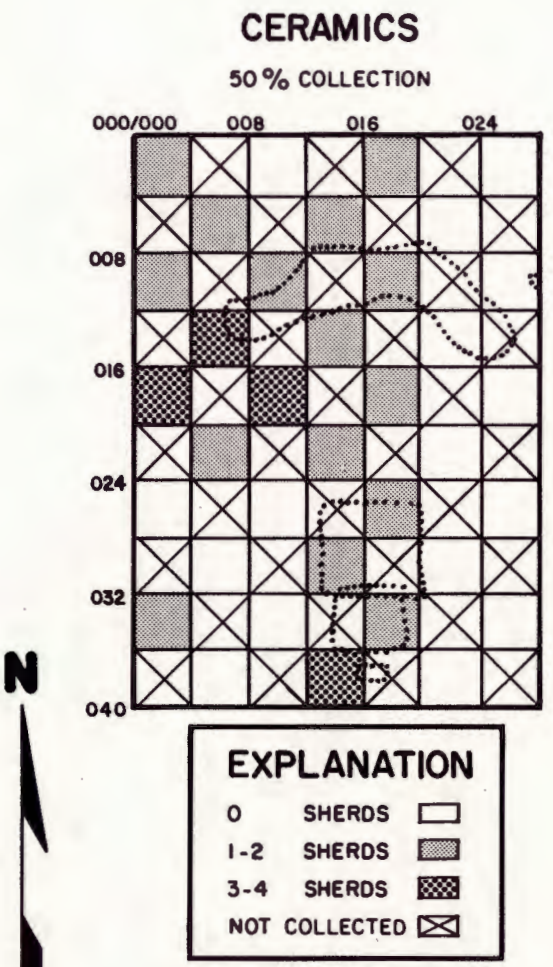
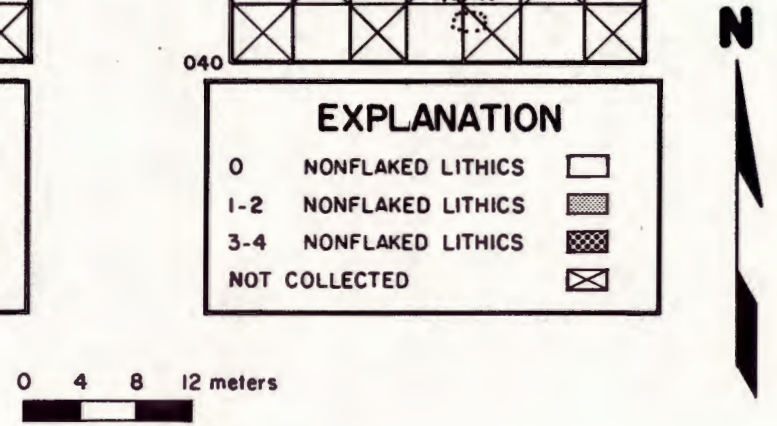


Figure 43. Surface distribution of ceramics, Deer Hunter Hamlet.



stains were the result of a burial, an alinement of charred posts, and three pit features. Figure 44 shows these features and structures.

All of the smaller features were completely excavated and mapped. Initially, the large stain was augered to determine approximate dimensions, after which it was trenched with a backhoe. These tests showed that there were two pithouses and that one had been dug into the other. Limited excavation within each pithouse continued in order to locate hearths from which archaeomagnetic samples could be collected. All features encountered during this additional excavation were fully excavated. Limits of excavation are shown in figure 40.

Architectural Remains

Limited excavation at Deer Hunter Hamlet located a pithouse with an antechamber, anotner pithouse dug into the earlier pithouse, a surface structure, a windbreak, two outside pits, one outside hearth, and a human burial.

Pithouse 1

Main chamber.

Dimensions:

North-south diameter:	5.90 m
East-west diameter (inferred):	6.00 m
Depth (after blading):	0.75 m

Since excavations within this structure were limited, the exact shape of this structure is not known. Figure 45 shows this structure in plan view but the shape is inferred. This figure also shows that Pithouse 1 was dug into Pithouse 2. It is not clear what material was used to construct the wall between the two structures; but adobelike material found on the floor of Pithouse 1 is possibly the remains of this wall. The other walls of

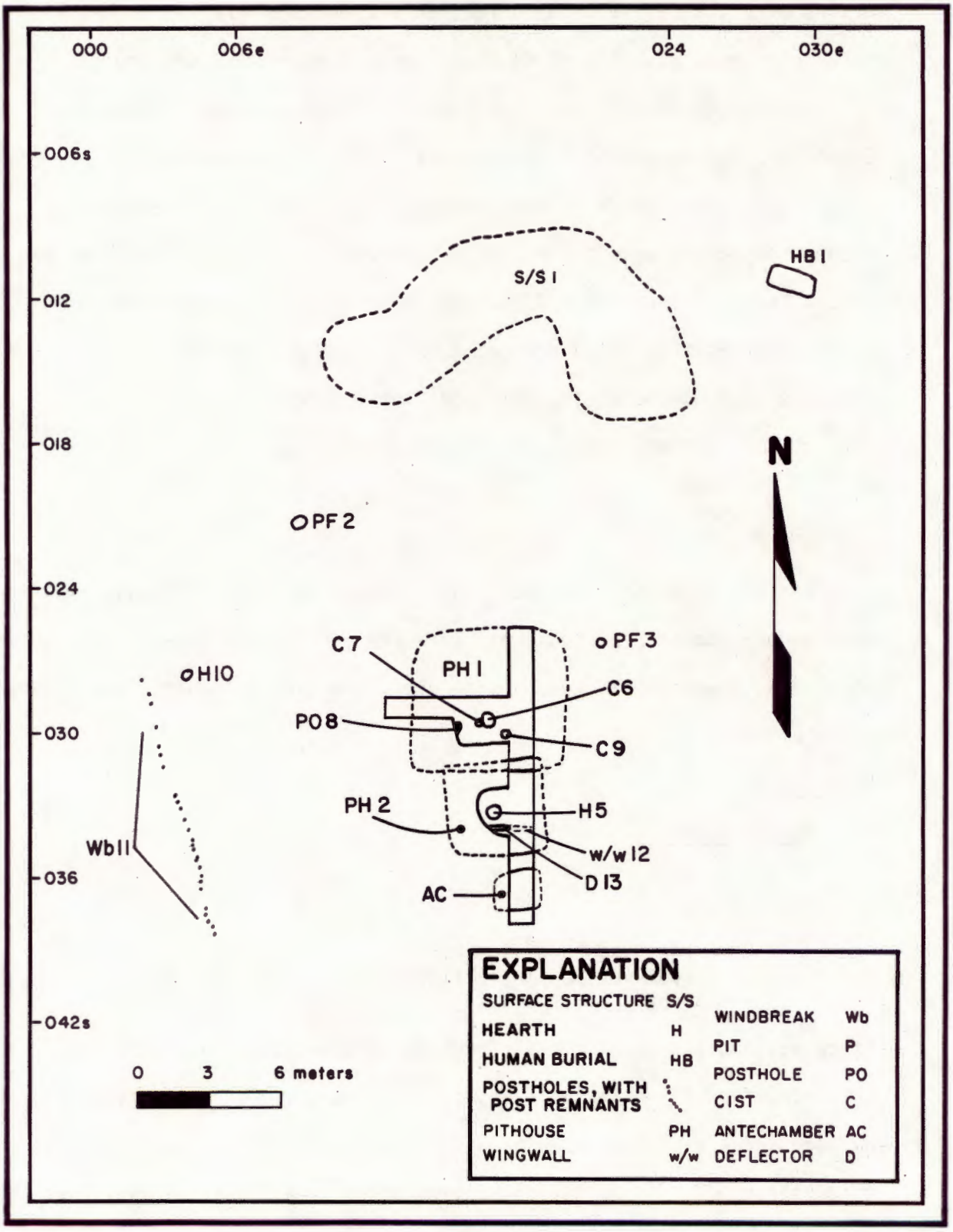


Figure 44. Spatial relationship of major cultural units, Deer Hunter Hamlet.

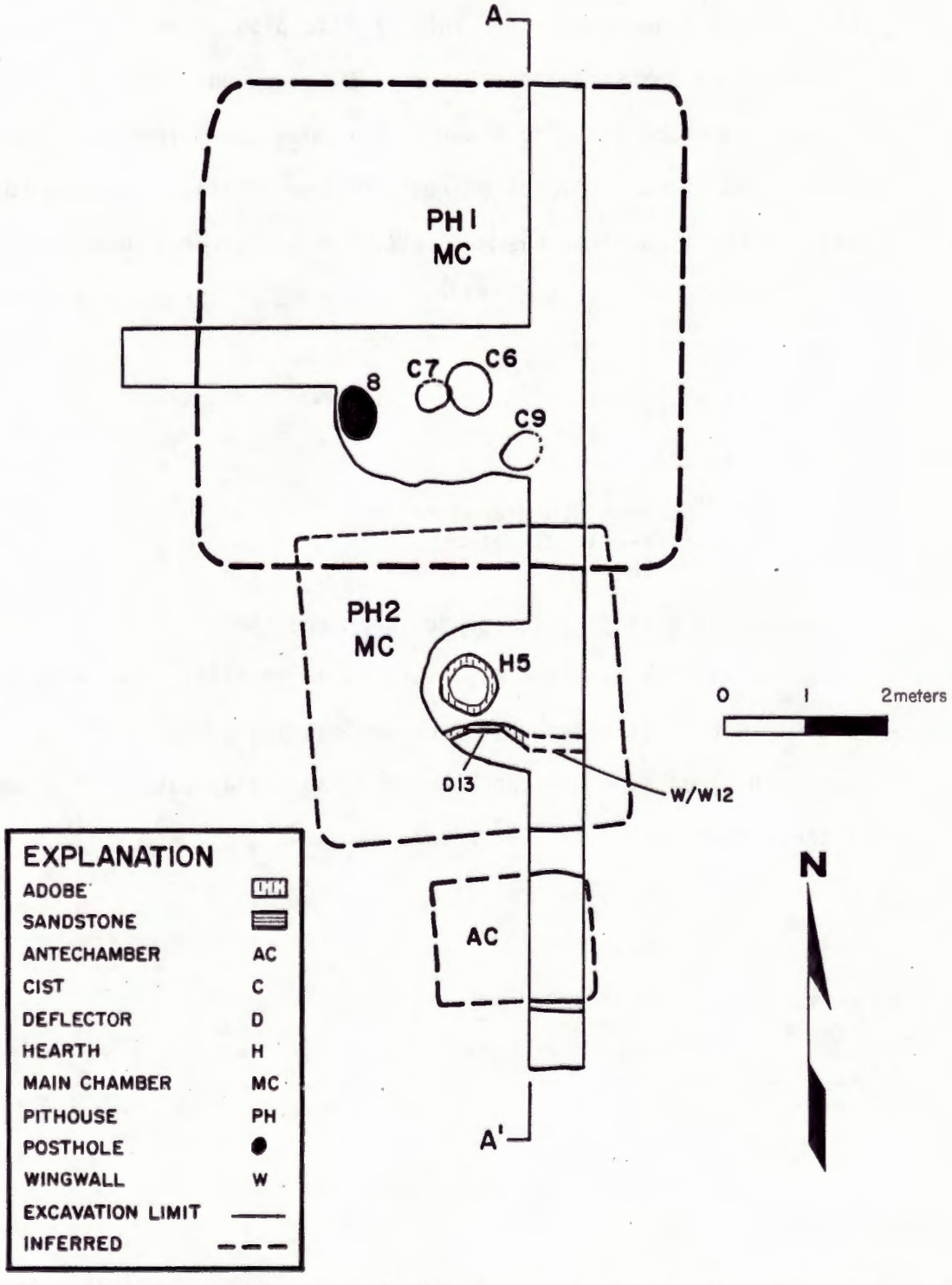


Figure 45. Plan map of Pithouses 1 and 2, Deer Hunter Hamlet. See figure 46 for profile.

the pithouse are straight from top to bottom and are composed of native soil that had not been given further treatment.

Stratigraphy: The fill sequence revealed in the west profile of the north-south backhoe trench (fig. 46) shows that after Pithouse 1 was abandoned it filled with naturally deposited sediments until the deposits were level with the ground surface. This profile also shows that Pithouse 1 was constructed sometime after Pithouse 2 was abandoned.

Floor (Surface 1): The floor of Pithouse 1 was irregular and not smoothed, but lightly compacted from use. No artifacts were found on the portion of the floor that was excavated. Four features were located in this excavated portion; these features consist of three floor cists and one posthole.

Floor cist (Feature 6):

Dimensions:

North-south diameter:	60 cm
East-west diameter:	60 cm
Depth:	20 cm

This feature is a large cist located near the center of the structure. It is circular in plan view and basin-shaped in profile. The feature was apparently not in use when the structure was abandoned, since it was filled with clean sand and capped with a sandy clay patch. Feature 7 cut into the western edge of this feature (fig. 45).

Floor cist (Feature 7):

Dimensions:

North-south diameter (inferred):	43 cm
East-west diameter:	43 cm
Depth:	20 cm

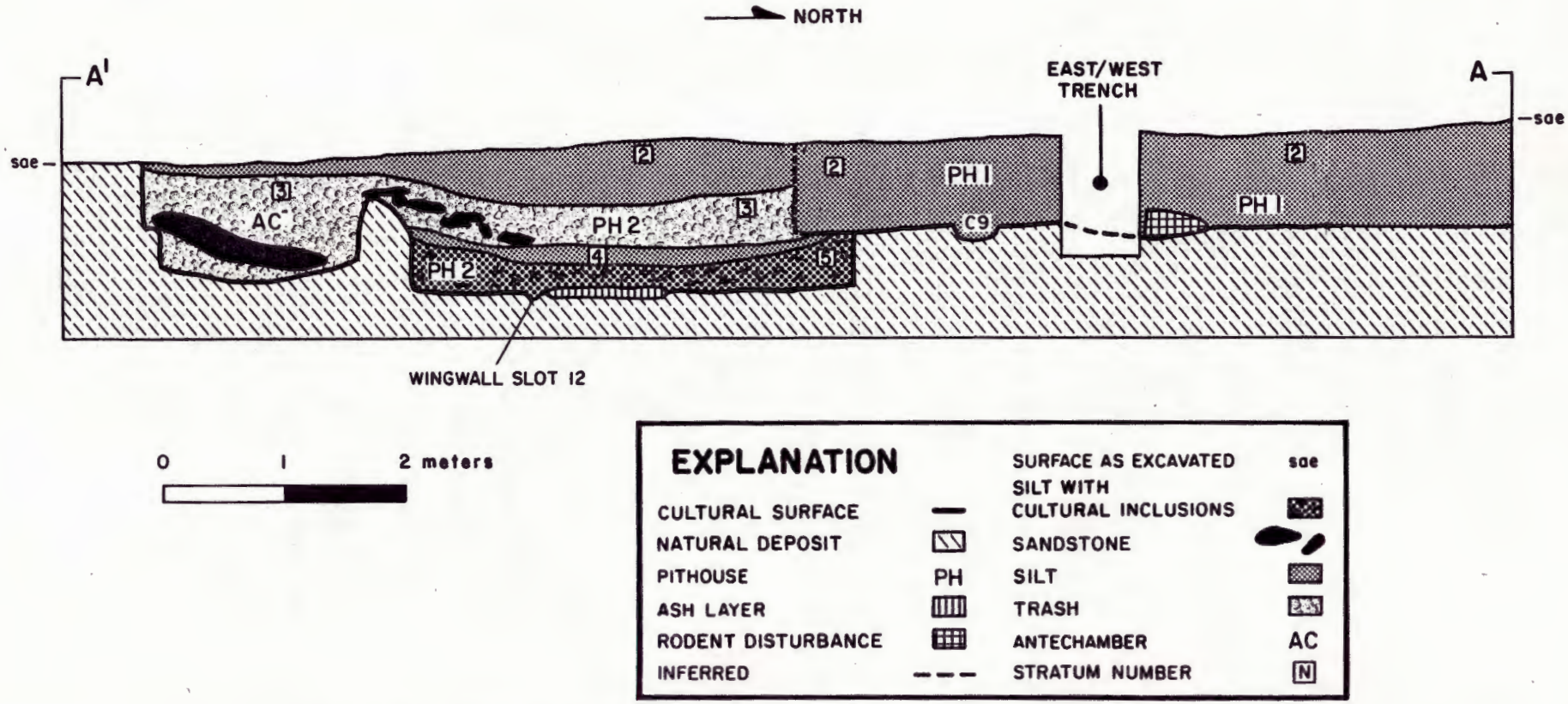


Figure 46. Stratigraphic profile of Pithouses 1 and 2, Deer Hunter Hamlet. See figure 45 for location of profile.

This floor cist is inferred to be circular in plan; the shape is inferred because the northern quarter was removed by the backhoe. In profile this feature is basin shaped. The east wall of the cist is intrusive into Feature 6; the rest of the feature had been dug into sterile soil.

Floor cist (Feature 9):

Dimensions:

Length (inferred):	65 cm
Width:	39 cm
Depth:	13 cm

This floor cist is located southeast of the other two floor cists (fig. 45). Because the north-south backhoe trench extended below the level of tne floor in Pithouse 1, the eastern edge of this feature was destroyed. The cist is oval in plan and basin shaped in profile. The cist had been dug into the sterile soil below the floor of the pithouse.

Posthole (Feature 8):

Dimensions:

Length:	65 cm
Width:	28 cm
Depth:	77 cm

The posthole, which is in the southwest quarter of the structure, was the only feature of this type discovered during the limited excavations. This feature might have been used to hold one of the main support posts for the roof; however, it is not in the usual place for a main support posthole. Usually these features are found nearer the corners of the structure. The remains of a decomposed post were found in this feature. The elongated shape of the posthole is due to rodent activity in the structure.

Interpretations. Pithouse 1 clearly was occupied after Pithouse 2 had been abandoned. Based on comparisons with other similar pithouses excavated in the Escalante Sector, it is assumed that this structure was the main domicile for a small household (cf. Brisbin 1982). It is not known if this structure had a vent or an antechamber.

Pithouse 2

Main chamber.

Dimensions:

North-south diameter:	3.90 m
East-west diameter (inferred):	3.80 m
Depth (after blading):	1.26 m

Since excavations in this structure were limited, the exact shape is not known. This chamber is shown in figure 45 but its shape is inferred. It is believed that this chamber was connected to the antechamber by a passageway, but excavations were not extensive enough to reveal such a feature.

Stratigraphy: The fill sequence revealed in the west profile of the north-south backhoe trench is shown in figure 46. This profile clearly shows that Pithouse 2 was constructed and abandoned before Pithouse 1 was built. However, it is not clear which of the deposits were in Pithouse 2 when Pithouse 1 was built.

The lowest stratum (Stratum 5) was a layer of silt that contained clay and other cultural materials. Although some of the materials in this stratum might be due to a collapsed and decomposed roof, no definite parts of the roof were identified. Above this stratum is a layer of silt (Stratum 4) which contained few cultural materials. This stratum represents a time of limited activity or total abandonment of the site. It is clear that these strata were deposited before Pithouse 1 was

constructed, but the depositional history of the next two strata is unclear.

Stratum 3 was a thick layer of dense trash that extended across the main chamber and into the antechamber. Above this trash is Stratum 2, which is a postabandonment layer of silt with some cultural materials. There are two possible interpretations of these strata. The first possibility is that the trash was deposited by the inhabitants of a structure that was not found during testing operations. After these people stopped depositing trash, possibly because they abandoned the site, the rest of the pit filled with naturally deposited sediments. Pithouse 1 was then constructed and the northern edge of Strata 2 and 3 was truncated during construction activities. If this is true then a wall at the south end of Pithouse 1 might have been necessary to retain these strata. There is some evidence for the existence of this wall.

The other possibility is that Pithouse 1 was constructed before Strata 3 and 2 were deposited. If this was the case, a freestanding southern wall would have been necessary to complete the pithouse. Additionally, if Stratum 3 was nonexistent when Pithouse 1 was constructed, then, Stratum 3 was probably deposited by the inhabitants of Pithouse 1. However, these people abandoned the site before they completely filled Pithouse 2 with trash. After this final abandonment, Pithouse 1 and the remainder of Pithouse 2 filled with silty deposits due to natural processes. Stratum 1 is the final stratum, and it is the plow zone. It is not included on the profile since mapping was done after Stratum 1 had been removed.

Floor (Surface 1): The floor of Pithouse 2 was hard and compacted from use but did not appear to be prepared in any other way. A few

artifacts were recovered from the floor and are described in the "Material Culture" discussion of this section. A hearth, a deflector, and a wing-wall were the only features associated with the floor in the excavated area.

Central hearth (Feature 5):

Dimensions:

Length:	73 cm
Width:	80 cm
Depth:	13 cm

Centrally located in the main chamber is a shallow basin-shaped hearth that had been dug into the sterile soil beneath the floor. The hearth was lined with clay, which extended out of the pit to form a raised rim around the circumference of the pit. This rim is raised 2 cm above the floor and is 10 to 12 cm wide. Four shallow pits had been excavated into this clay rim; they range in diameter from 7 to 10 cm (fig. 47). Purpose of these pits is not known, but it is postulated that they were used as pot rests for vessels that were tapered at the bottom.

The fill of this feature consisted of 5 cm of gray ash at the bottom, which was covered with a 4-cm-thick layer of brown sand. A small basin-shaped pit had been dug into the brown sand. Ash and charcoal observed in this pit indicate that a single small fire had been built in it. On top of the charcoal and ash was a sandstone slab about 2 cm thick, which might have been used to extinguish the fire (fig. 47). This appears to have been the last fire built in the hearth and possibly represents some ceremony associated with site abandonment. Ash scattered on the floor around the hearth might have been removed from the hearth.

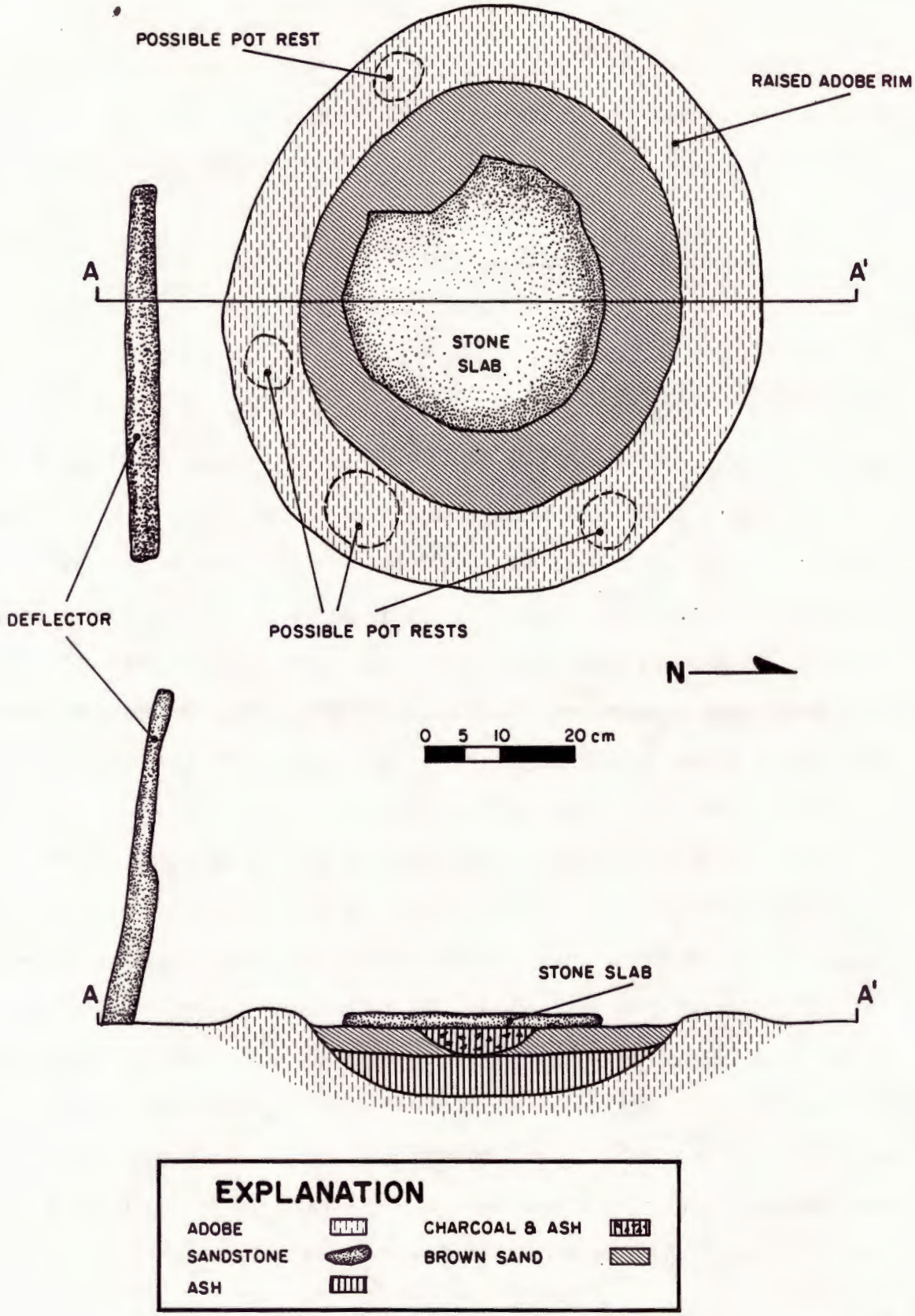


Figure 47. Plan map and stratigraphic profile of hearth (Feature 5), Rusty Ridge Hamlet.

Deflector (Feature 13):

Dimensions:

Length:	50 cm
Width:	4 cm
Deight:	45 cm

The deflector is a sandstone slab that had been anchored into the floor by inserting it into a slot that extended into the sterile soil below the floor. The area around the slab had been packed with dirt to keep it in place. This feature is located about 50 cm south of the center of the hearth and was incorporated into the wingwall.

Wingwall (Feature 12):

Dimensions:

Length:	unknown
Width:	12 cm
Depth of slot:	4 cm

The wingwall was constructed of vertically set slabs covered with adobe. A slot, 4 cm deep, had been dug into the floor and the slabs had been set into this slot, much like the deflector. The backhoe removed one of these slabs while trenching the structure, so only the slot for the wingwall is shown in the profile map of the structure (fig. 46). Only a portion of the wingwall was uncovered during excavation so the total length is not known; however, most wingwalls extend across the entire structure.

Antechamber. Only a small portion of the antechamber was exposed during testing operations so few details about this structure are available; shape and width have been inferred on the plan map (fig. 44). The length, 1.65 m, of this structure indicates that it was an antechamber. Width of the structure is not known; depth below plow zone is 90 cm.

The floor of the antechamber is 14 cm higher than the floor of the main chamber, and the two chambers are separated by a remnant of sterile soil. This remnant of soil is believed to be soil that was left in place on the east side of a passageway connecting the two chambers.

The south end of this structure has a narrow bench that is about 35 cm above the floor. Benches encircling the west, east, and south sides of an antechamber are fairly common (cf. Brisbin and Varien 1981; Birkedal 1976).

Interpretations. Pithouse 2 clearly was occupied before Pithouse 1. This structure is believed to have been the primary domicile for a household, based on the presence of domestic features, such as the hearth, and on comparison with other similar pithouses excavated in the Escalante Sector (cf. Brisbin and Varien 1981). The presence of an antechamber indicates that it was probably constructed during the early part of the Anasazi sequence. More details about the postulated occupation date for this structure appear in the "Chronology" discussion in this section.

Surface Structure 1

While the grader was removing the plow zone, a dense concentration of sandstone rubble was observed north of the pitstructures. This rubble mound was subsequently designated as Surface Structure 1 (fig. 44). The size of the mound (approximately 117 m^2) indicates that there are probably several contiguous rooms and that the surface structure is actually a roomblock. However, the sampling plan for tested sites did not call for the excavation of surface rooms unless they were believed to contain materials suitable for tree-ring or archaeomagnetic analysis, or if they were in a relatively undisturbed condition. Since this structure appeared to have been disturbed by modern plowing activities and appeared not to have burned, it was not further investigated.

Ancillary Features

Blading operations revealed five features located outside of the structures (fig. 44). These features consist of a human burial, two pit features, a hearth, and a possible windbreak.

Human burial (Feature 1). The remains of a human burial (Burial 7) were found about 6 m east of Surface Structure 1. The remains were scattered over a large area; no burial pit and no grave goods were found. The disturbed condition of the burial is apparently due to modern plowing of the area. Details about the remains are presented in table 40. Sex and age of the individual could not be determined due to the sparse quantity of skeletal remains recovered.

Table 40. Human remains from Feature 1, Deer Hunter Hamlet

Inventory (element present)	Observations
Cranium	5 fragments
Maxillary dentition	2 incisors, 1 molar
Mandibular dentition	2 molars
Tibia	1 fragment
Unidentifiable fragments	7 long bone shaft fragments, 125 other small fragments
Scapula, right	Spine, glenoid fossa and acromion process
Radius, right	Shaft fragments

Pit (Feature 2).

Dimensions:

Length:	50 cm
Width:	50 cm
Depth:	5 cm

A circular pit that is basin shaped in profile is located about 7 m northwest of Pithouse 1. Because it was truncated by the plow, it is only

5 cm deep. It had been dug into the sterile soil at the site, and the walls were unlined. The fill throughout the pit was a mixture of silt loam and charcoal. Based on the presence of the charcoal it is inferred that the pit might have been used for some sort of activities requiring fire.

Pit (Feature 3).

Dimensions:

North-south diameter:	30 cm
East-west diameter:	30 cm
Depth:	5 cm

This pit is located about 1.5 m east of Pithosue 1 and is similar in size and shape to Feature 2. It also was truncated by the plow, so original depth is not known. Fill of this feature was also a silt loam with charcoal. Due to its similarity to Feature 2, it is assumed that Feature 3 was used for the same sort of activities as Feature 2.

Hearth (Feature 10).

Dimensions:

North-south diameter:	30 cm
East-west diameter:	30 cm
Depth:	10 cm

This hearth is located about 8 m west of Pithouse 1. In plan view it is circular, and in profile it is basin shaped. It had been dug into the sterile soil and was unlined. Like the other surface features, it was truncated by the plow so original depth is not known. The fill consisted of a very dark loam containing a large amount of charcoal. This feature is believed to have been used for activities associated with fire (possibly cooking).

Windbreak (Feature 11). An alinement of posts was located about 11 m west of the pitstructures. Burning preserved these posts, although they were somewhat damaged by the plow. In all, 26 posts were located. Occasional deep plow scars were noted in the large gaps between the posts; it is possible that the gaps originally contained posts that were completely destroyed by the plow. The alinement was followed north until no more posts were located, and it was followed south to the edge of the bladed area (for limits of the bladed area see figure 40). Since the posts continued to the edge of the bladed area it is possible that they continue south, but time did not allow for more investigation.

Rohn (1975) has identified sites in the Yellow Jacket locale (about 20 km southwest of the project area) that have stockades encircling central site areas. The remains of these stockades consist of posts similar to those comprising Feature 11. However, it does not appear that the posts of Feature 11 continued around the pithouses, since this area was thoroughly checked for features. Instead, this feature seems to be limited to an alinement of posts west of the pithouses. Since the prevailing winds and storms in this area come from the west and southwest, it is believed that this alinement of posts possibly served as a windbreak.

Material Culture

Ceramics

The ceramic assemblage recovered during limited investigation of Deer Hunter Hamlet is sparse, but it can be used to help date the occupation of the site. Ceramic dates used in this discussion were provided by Blinman (1982a).

A surface collection made at the time the site was surveyed included 20 sherds. Excavation activities recovered an additional 102 sherds. The majority (100 sherds) of the ceramics were gray ware body sherds that cannot be assigned to a specific type. However, on the basis of temper type and lack of slip these sherds have been assigned to a grouped type called Early Pueblo Gray. Sherds in this category could have belonged to Chapin Gray, Moccasin Gray, or Mancos Gray vessels. Therefore, sherds belonging to this Early Pueblo Gray group could be from vessels manufactured anytime between A.D. 600 and 900. Table 41 lists total sherds by type and provenience.

Table 41. Ceramic summary, Deer Hunter Hamlet

Culture category: Ware / Type	Total surface collection		Pithouse 2 fill		Pithouse 2 floor		Pithouse 1 fill		Survey collection		Site total	
	N	%	N	%	N	%	N	%	N	%	N	%
Mesa Verde:												
Gray ware												
Chapin Gray			2	4.3			3	14.3	1	5.0	6	4.9
Early Pueblo Gray	31	93.9	38	82.6	1	50.0	15	71.4	15	75.0	100	82.0
White ware												
Early Pueblo White			1	2.2			2	9.5	1	5.0	4	3.3
Red ware												
Bluff B/R			4	8.7							4	3.3
Early Pueblo Red	2	6.0	1	2.2	1	50.0	1	4.8	3	15.0	8	6.5
Trade ware												
Cibola												
Total ceramics	33	100.0	46	100.0	2	100.0	21	100.0	20	100.0	122	100.0
Vessel form:												
Bowl	1	3.0	5	11.0	1	50.0	3	14.3	3	15.0	13	10.7
Jar	31	93.9	41	89.0	1	50.0	18	85.7	16	80.0	107	87.7
Other	1	3.0							1	5.0	2	1.6

Twelve red ware sherds were recovered; four of these were identified as Bluff Black-on-red, the remaining eight were identified as Early Pueblo

Red. Early Pueblo Red is another grouped type, which has a date range of A.D. 720-925. All of the Bluff Black-on-red sherds were recovered from the trash deposits in Pithouse 2. If this trash was deposited by the inhabitants of Pithouse 1, then Pithouse 1 had to have been occupied after the introduction of this type which is believed to have been around A.D. 740.

Usually the absence of Moccasin Gray sherds would indicate that the site was abandoned prior to the introduction of this type. This type begins to appear in the Escalante Sector about A.D. 760 and disappears about A.D. 925. However, it has been suggested that if occupation of the site continued into the time period when Moccasin Gray first began to appear, then only a few vessels of this type would be expected to be found.[7] It is further suggested that the small ceramic assemblage recovered from this site makes the probability of finding sherds from several vessels of Moccasin Gray quite low. But if occupation continued into the period when Moccasin Gray becomes more common and is found in higher proportions, then one would expect to find a few sherds of this type. On this basis a fairly firm terminal occupation date of A.D. 825 is suggested. Based on the presence of red wares an initial occupation date of A.D. 725 is suggested.

Flaked Lithic Tools and Debitage

The assemblage of flaked lithic tools from the site, as summarized in table 42, consists of 16 items: 7 utilized flakes, 4 cores, 4 chopper/scrapers, and 1 indeterminate item. Eighty-one percent of the tools were recovered from the modern ground surface or from the fill of Pithouse 2; these general proveniences probably represent areas where items were discarded.

[7]See footnote 3.

Table 42. Flaked lithic tools, Deer Hunter Hamlet

	Surface collection		Pithouse 2 fill		Pithouse 2 total		Other excavated units		Site total	
	N	%	N	%	N	%	N	%	N	%
Total tools:	7	100.0	6	100.0	6	100.0	3	100.0	16	100.0
Tool morpho-use										
Indeterminate							1	33.3	1	6.2
Utilized flake	5	71.4	1	16.7	1	16.7	1	33.3	7	43.7
Core	1	14.3	3	50.0	3	50.0			4	25.0
Chopper, scraper plane	1	14.3	2	33.3	2	33.3	1	33.3	4	25.0
Grain size										
Fine	3	42.8	4	66.7	4	66.7	1	33.3	8	50.0
Very fine	4	57.1					2	66.7	6	37.5
Microscopic			2	33.3	2	33.3			2	12.5
Dorsal face evaluation										
Unmodified core	1	14.3	3	50.0	3	50.0	1	33.3	5	31.2
Unthinned item, with cortex	5	71.4	2	33.3	2	33.3			7	43.7
Unthinned item, no cortex	1	14.3	1	16.7	1	16.7	2	66.7	4	25.0
Ventral face evaluation										
Unmodified core	1	14.3	3	50.0	3	50.0	1	33.3	5	31.2
Unthinned item, no cortex	6	85.7	3	50.0	3	50.0	2	66.7	11	68.7

Flaked lithic debitage from the site consists of 53 items; these are summarized in table 43. Of these, 85 percent were recovered from the modern ground surface and the fill of Pithouse 2.

When comparing grain size of flaked lithic tools with flaked lithic debitage, similarities can be seen. Fine-grained material was used most often for tools and occurs most frequently in the debitage items. Very fine grained and microscopic-grained items also are proportionately similar between the categories.

Nonflaked Lithic Tools

The assemblage of nonflaked lithic tools recovered from the site consists of 14 items; these are summarized in table 44. During the surface collection five items were recovered from the modern ground surface over

the surface structure and north of the surface structure. Of the items recovered from excavations, 55 percent were recovered from the fill of Pithouse 2. As was suggested for the flaked lithic items found in the fill of this pithouse, the presence of nonflaked lithic tools in the fill probably represents refuse.

Table 43. Flaked lithic debitage, Deer Hunter Hamlet

	Total surface collection		Pithouse 2 fill		Pithouse 2 total		Other excavated units		Site total	
	N	%	N	%	N	%	N	%	N	%
Flakes/flake fragments:										
Grain size										
Medium	2	7.4	1	5.5	1	5.5			3	5.7
Fine	8	29.6	11	61.1	11	61.1	3	37.5	22	41.5
Very fine	8	29.6	3	16.7	3	16.7	4	50.0	15	28.3
Microscopic	9	33.3	3	16.7	3	16.7	1	12.5	13	24.5
Total flakes/ flake fragments	27	100.0	18	100.0	18	100.0	8	100.0	53	100.0
Mean weight (grams)	7.6		29.8		29.8		18.8		16.8	
Items with cortex	12	44.4	9	50.0	9	50.0	4	50.0	25	47.2
Items with platform	12	44.4	4	22.2	4	22.2	5	62.5	21	39.6

Faunal Remains

The assemblage of nonhuman bone from Deer Hunter Hamlet totals 17 items. All of these bones were recovered from the pithouses (table 45). The small amount of bone allows for few interpretations. Rabbit and rodent remains might be intrusive into the site. For example, all eight of the jackrabbit bones found on the floor of Pithouse 2 are from the same individual and might represent an animal which burrowed into the structure and died there. However these species are known to occur frequently in archaeological sites in the Southwest and they might represent animals used for food. The presence of dog and elk is surely a result of prehistoric activities.

Table 44. Nonflaked lithic tools, Deer Hunter Hamlet

	Total surface collection		Pithse 2 fill		Pithse 2 total		Other excavated units		Site total	
	N	%	N	%	N	%	N	%	N	%
Total tools:	5	100.0	5	100.0	5	100.0	4	100.0	14	100.0
Tool morpho-use										
Indeterminate	1	20.0							1	7.1
Generalized, unhafted	1	20.0	3	60.0	3	60.0	1	25.0	5	35.7
Hammerstone	1	20.0	1	20.0	1	20.0	1	25.0	3	21.4
Mano	1	20.0					2	50.0	3	21.4
Generalized, hafted	1	20.0	1	20.0	1	20.0			2	14.3
Production evaluation										
Indeterminate	2	40.0							2	14.3
Natural (unshaped)	3	60.0	4	80.0	4	80.0	3	75.0	10	71.4
Minimally shaped			1	20.0	1	20.0	1	25.0	2	14.3
Item completeness										
Partial implement	2	40.0	1	20.0	1	20.0			3	21.4
Complete/nearly complete	3	60.0	4	80.0	4	80.0	4	100.0	11	78.5
Grain size										
Indeterminate	1	20.0					1	25.0	2	14.3
Fine	4	80.0	5	100.0	5	100.0	2	50.0	11	78.5
Nongranular							1	25.0	1	7.1

NOTE: Pithse - Pithouse.

Table 45. Faunal remains, Deer Hunter Hamlet

Taxon	Pithse 1 fill		Pithse 2 fill		Pithse 2 floor		Pithse 2 antechbr fill		Site total	
	N	%	N	%	N	%	N	%	N	%
Mammals:										
Lepus californicus					8	100.0			8	47.1
Sylvilagus sp.			1	33.3					1	5.9
Cynomys gunnisoni							2	66.6	2	11.7
Canis familaris			2	66.6					2	11.7
Artiodactyla	1	33.3							1	5.9
Cervus elaphus	2	66.6							2	11.7
Other & Unidentified							1	33.3	1	5.9

NOTES: Pithse - Pithouse.
Antechbr - Antechamber.

Archaeomagnetic Sample

A single archaeomagetic sample was obtained from the hearth (Feature 5) in Pithouse 2. Analysis of this sample yielded a date of A.D. 870 ± 25 years.

Site Synthesis

Chronology

Although it is obvious that there were at least two major occupations of the site, it is difficult to date each of the occupations. This difficulty is due to the paucity of temporally diagnostic artifacts and materials suitable for tree-ring analysis. The only data available for placing the site in a temporal setting are the ceramics, one archaeomagnetic sample, and architectural attributes.

The ceramic assemblage is sparse but indicates a total occupation range of A.D. 725 to 825. However, the initial date, A.D. 725, is based on the presence of one red ware sherd on the floor of the earlier pithouse (Pithouse 2). It is quite possible that this sherd filtered down to the floor from the trash in the fill; possibly through a rodent burrow. If this is true, the initial occupation date would be earlier than A.D. 725. The architectural attributes of this pithouse seem to indicate that this is the case. The presence of an antechamber places the occupation of the structure sometime between A.D. 600 and 700 (Hewitt et al. 1981). However, it is possible that this structure was constructed late in this time range and was occupied into that period when red wares first appear. Therefore, the A.D. 725 date might be closer to a terminal date for the occupation of the pithouse. Based on these two lines of evidence the date of occupation for Pithouse 2 is believed to be sometime between A.D. 600

and A.D. 725. According to the DAP temporal scheme this period spans portions of two subphases of the Sagehen Phase: the Tres Bobos Subphase (A.D. 600-700) and the Sagehill Subphase (A.D. 700-760).

An archaeomagnetic sample taken from the hearth of Pithouse 2 yielded a date of A.D. 870 ± 25 years. This date is too late regardless of the minor discrepancies between the ceramic and architectural dates.

The occupation of Pithouse 1 is even more difficult to date. It appears to have been occupied after the introduction of red wares and possibly abandoned before the introduction of Moccasin Gray; however, it might have been abandoned after the introduction of this latter type, and a terminal date of A.D. 825 is suggested. Architectural attributes indicate that this pithouse was constructed sometime between A.D. 700 and 760. Based on this limited data, the date of occupation for Pithouse 1 appears to be somewhere between A.D. 725 and 825. According to the DAP temporal scheme this date range spans portions of two subphases of the Sagehen Phase: the Sagehill Subphase (A.D. 700-760) and the Dos Casas Subphase (A.D. 760-850).

Integration of Spatial and Temporal Units

According to DAP temporal and spatial systematics (Kane 1981a) each major occupation or major building event at a site is called an element. A limited use of the site is called an episode. Therefore, each of the occupations at Deer Hunter Hamlet, represented by each of the pithouses, is a separate element. A limited reuse of the site, represented by the human burial, is an episode.

Element 1. Element 1 is represented by Pithouse 2, its associated antechamber, and interior features. It is possible that some or all of the features located outside of the structure (e.g., the windbreak) belong

to this element, but there is not enough evidence to determine the association of these features with either element.

Due to its size and similarity with other pithouses, Pithouse 2 is believed to have been the main domicile for a single household. The space, features, and structures used by this household were designated Household Cluster 10. In this case Household Cluster 10 is synonomous with Element 1. Household cluster numbers were assigned on a project-wide basis.

Element 2. This element is represented by Pithouse 1 and possibly by Surface Structure 1. Architectural data collected in the Escalante Sector indicate that roomblocks consisting of contiguous rooms located north of the pitstructure are associated with pitstructures dating to the Sagehill Subphase or later. Noncontiguous rooms scattered north and west of the pitstructure are usually associated with pitstructures dating to the Tres Bobos Subphase (Kane 1981a). Based on the large size of Surface Structure 1, it is believed to consist of several contiguous rooms. This, and its location north of the pithouses have allowed it to be assigned to Element 2. However, this assignment should be considered tentative since the interpretation of the architecture might be in error. Again, it is possible that some of the outside features at the site belong to this element, but evidence that would confirm the association is lacking.

Like Pithouse 2, Pithouse 1 is believed to have been the primary domicile for a single household. The space, features, and structures used by this household were designated Household Cluster 12. In this case, Household Cluster 12 is synonomous with Element 2.

Episode 1

Episode 1 is a brief use of the site and is represented by the human

burial. It is possible that the burial is associated with one of the major occupations of the site, but there is no evidence to confirm an association with either element. Therefore, it is tentatively considered to represent a separate, short-term use of the site.

Summary

Architectural remains at Deer Hunter Hamlet consist of two pithouses, one surface structure, and numerous outside features. Evidence recorded during limited excavations indicates that Pithouse 2 was the earliest structure and was occupied sometime between A.D. 600 and 725. This structure was the primary domicile for members of Household Cluster 10. Other features and structures used by this household cannot be identified due to lack of evidence that would confirm association. After this structure was abandoned another pithouse was constructed in the same area, partially cutting into Pithouse 2. This second pithouse, Pithouse 1, is believed to have been occupied sometime between A.D. 725 and 825. This pithouse was the primary domicile for members of Household Cluster 12. It is believed that Surface Structure 1 was also used by members of this household.

The amount of time that elapsed between the two occupations is not known. It has been postulated that the trash found in Pithouse 2 was deposited by the inhabitants of Pithouse 1. However, it is also possible that this trash was deposited by members of a household who occupied another pithouse that was not discovered during the investigation of the site.

SUNFLOWER HAMLET (SITE 5MT4640)

Introduction

Sunflower Hamlet is a small habitation site situated on a south-trending ridge in the northern uplands west of the Dolores River. According to DAP temporal and spatial systematics this site is located in the Sagehen Flats Locality (fig. 48) and represents one component during the Sagehen Phase of the Anasazi Tradition, A.D. 600-850 (Kane 1981a). The site was recorded during the 1978 DAP survey operations (Dykeman et al. 1981) and at that time was described as a lithic and ceramic scatter. No functional interpretations were suggested, but the site was believed to date to the Pueblo I period. Limited investigation of the site began on 14 September 1979 and continued until 22 October of that year. Because testing operations were not completed at that time, investigations were resumed on 29 May 1980 and completed on 6 June 1980. A total of 224 person-hours was expended investigating the site.

Location

Sunflower Hamlet is located in the SW 1/4 of the SW 1/4, sec. 19, T38N, R15W. The Universal Transverse Mercator grid coordinates for this location are 4,145,240 mN, 715,900 mE, in zone 12. Situated on the eastern edge of a south-trending ridge, this site commands a view of the surrounding countryside. East of the site is an intermittent drainage that empties into the Dolores River; to the west are smaller drainages that empty into the Sagehen Flats Marsh.

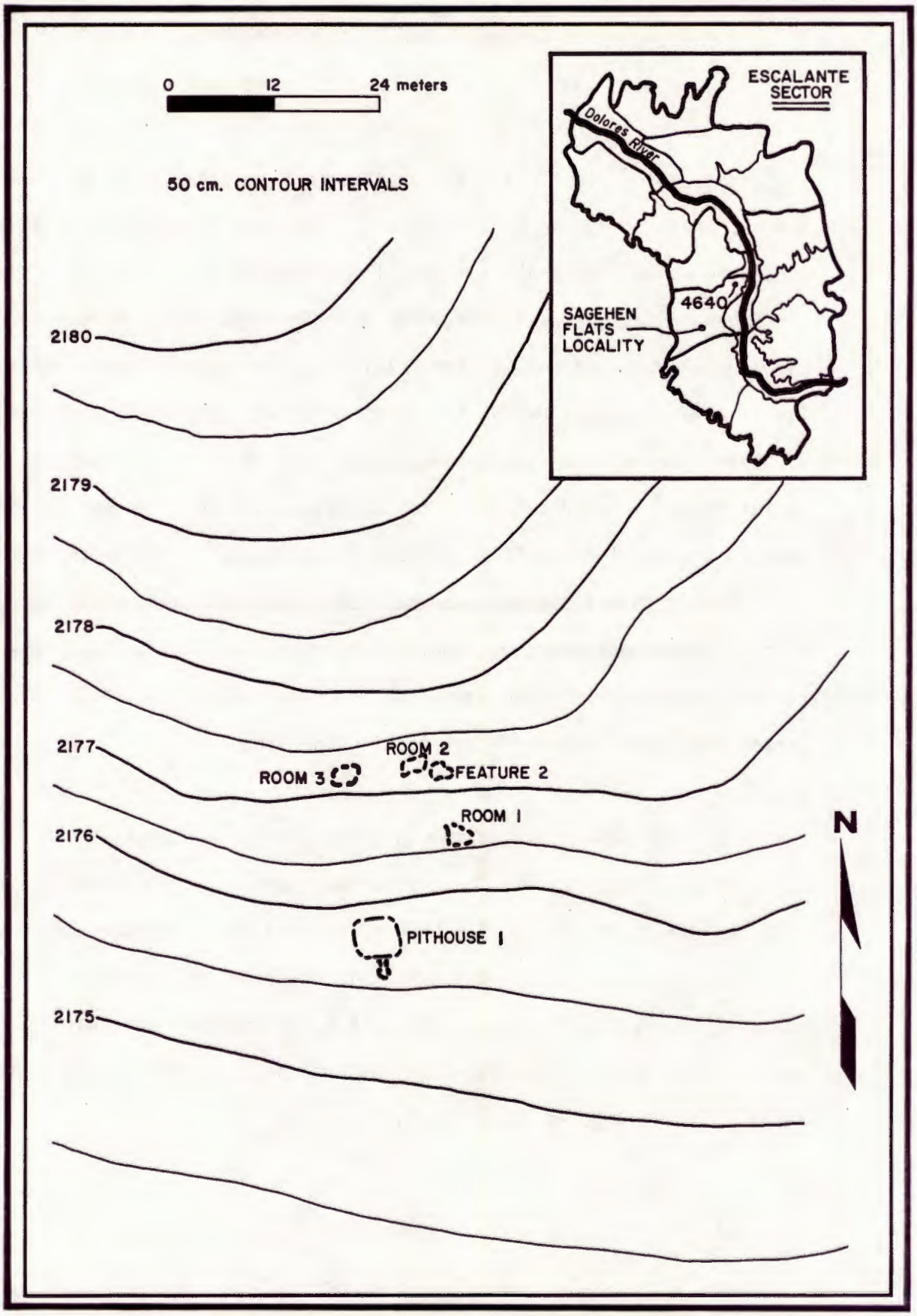


Figure 48. Topographic map of Sunflower Hamlet.

Investigative Strategy

The basic methods used to investigate this site have been discussed in the "Introduction" section of this report. The following discussion includes site-specific details about the magnetometer survey, surface collection, and subsurface excavations.

Magnetometer Survey

During the 1978 field season a magnetometer survey was conducted over an area of 40 by 20 m (fig. 49). This survey resulted in the definition of five magnetic anomalies, but none were suspected to be the result of archaeological features. However, blading operations and limited testing revealed four cultural features that correspond to three of the magnetic anomalies (fig. 49). The magnetometer survey did not extend far enough south to record the pithouse. No cultural features were observed to be related to the other two anomalies.

Surface Collection

Surface evidence of prehistoric occupation at Sunflower Hamlet consisted of a limited scatter of ceramics, lithic tools and debitage, and bone. There were no depressions indicative of pitstructures, nor obvious clusters of building rubble that would indicate surface structures. Distributions of ceramics and flaked lithic items are depicted in figures 50 and 51. Only one nonflaked lithic item was recovered from the surface. Comparative data from other hamlets excavated in the Escalante Sector indicate that high surface artifact densities can be expected on and around the surface structures, whereas low densities of surface artifacts can be expected in the vicinity of the pitstructures. While this is

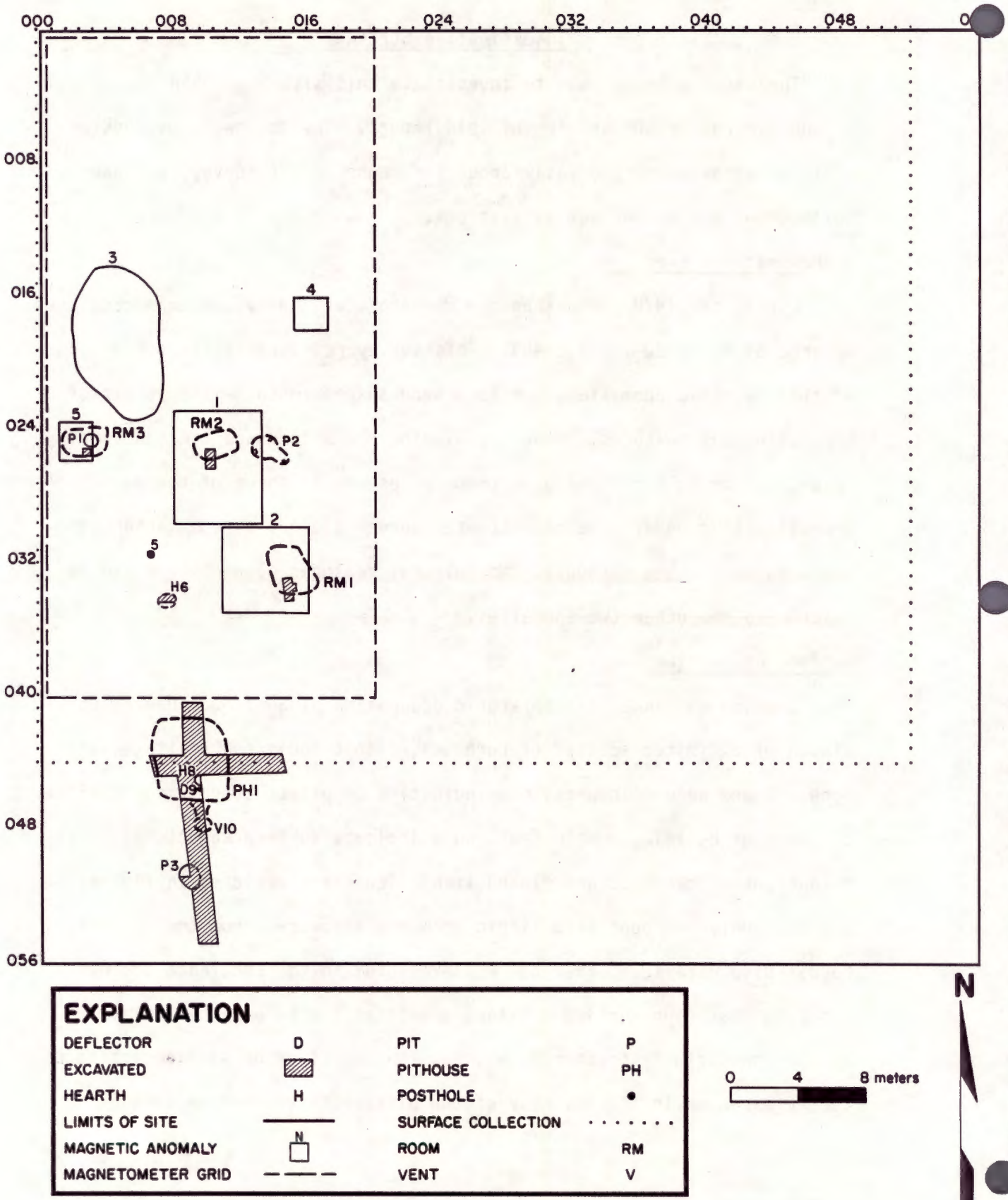


Figure 49. Site sampling plan, Sunflower Hamlet.

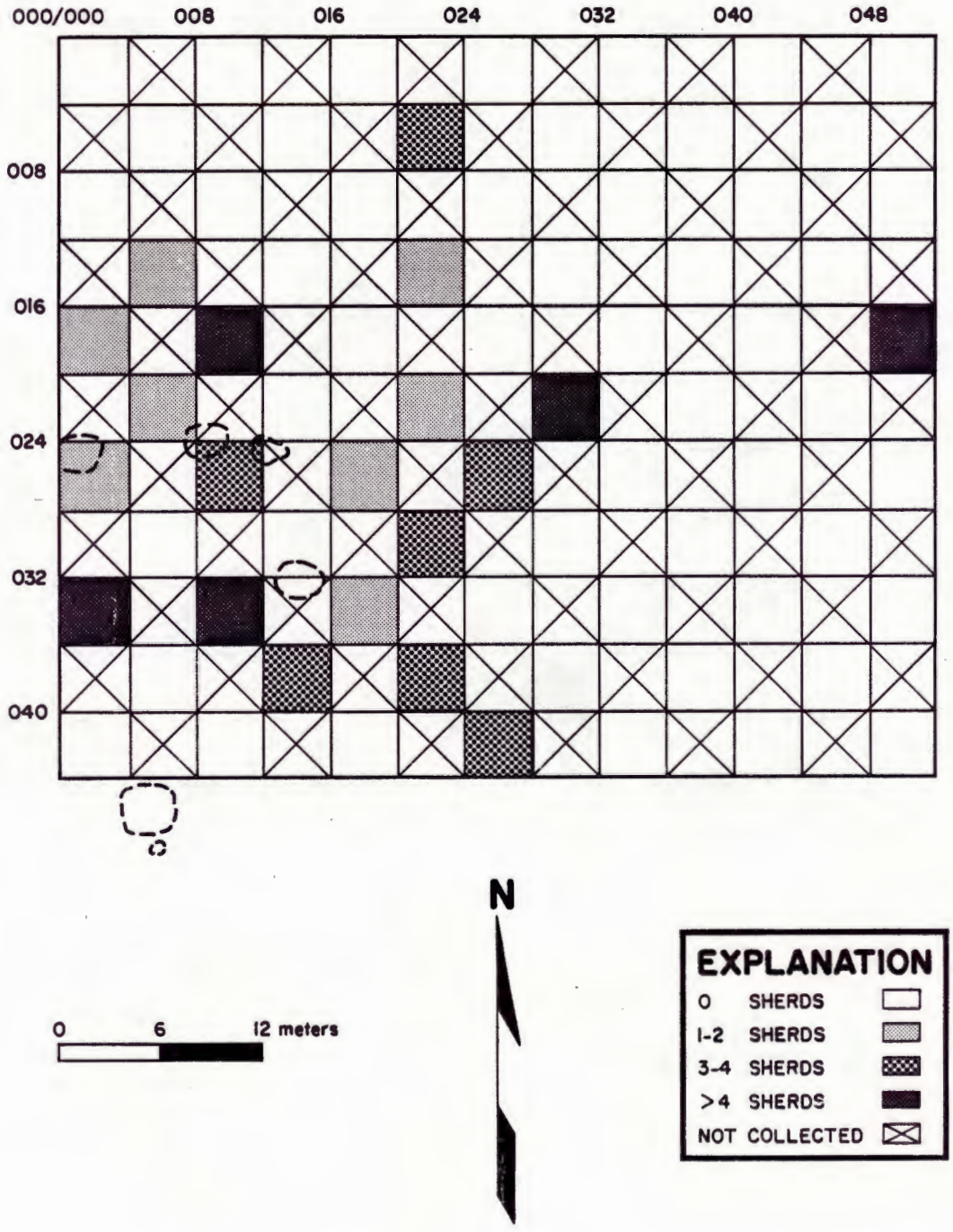


Figure 50. Surface distribution of ceramics, Sunflower Hamlet.

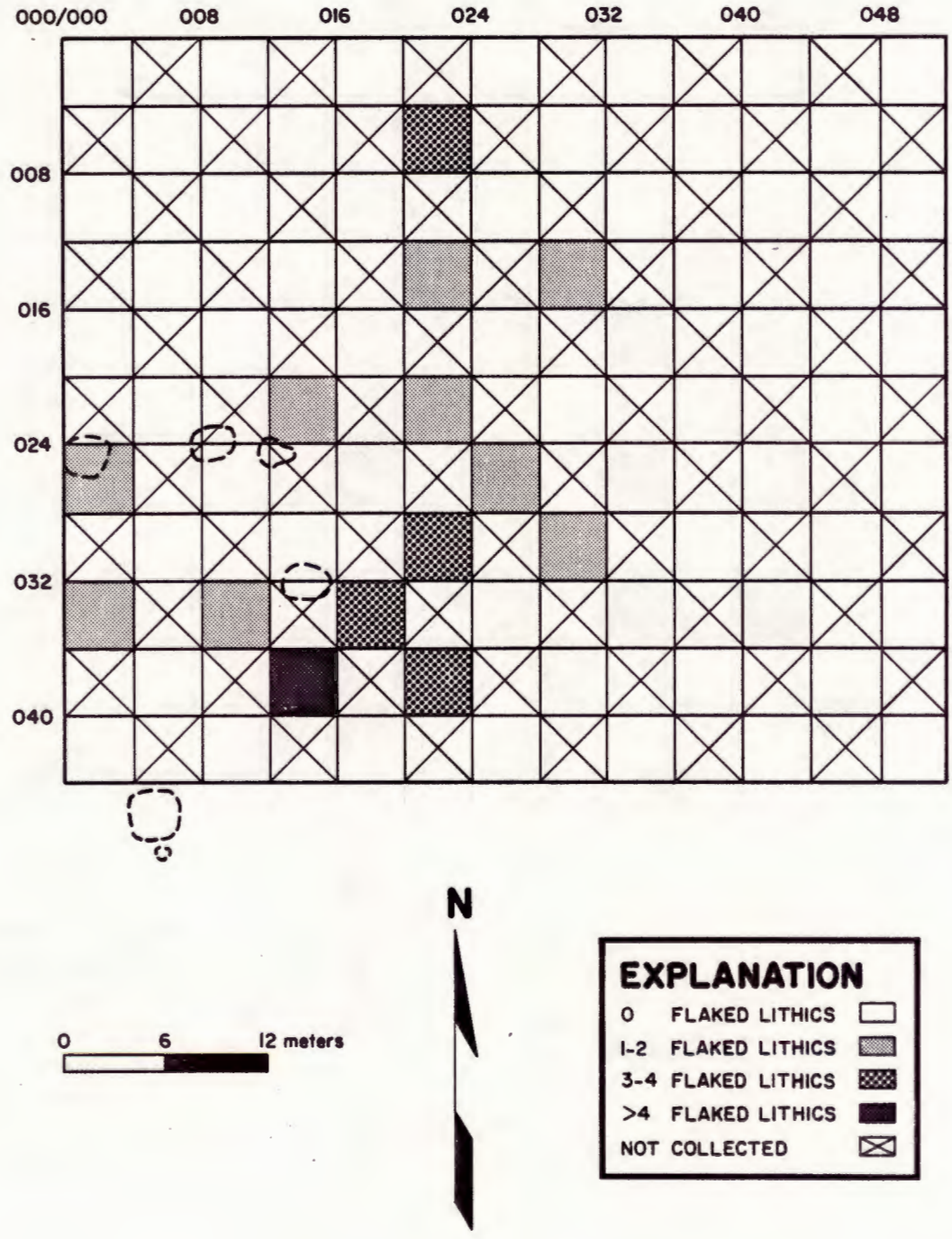


Figure 51. Surface distribution of flaked lithic items, Sunflower Hamlet.

generally the case at Sunflower Hamlet, the surface collection did not extend far enough south to include the area over most of the pithouse. There were several areas in the northern part of the site that had high artifact densities that were not related to subsurface features.

Subsurface Investigations

After the surface collection was completed and a topographic map was made, the area with the highest density of artifacts, i.e., the western part of the site, was bladed. These blading activities revealed several stains. In order to determine the origin of these stains each one was shovel scraped until true limits of the stains were exposed. Three of the larger stains were determined to be the remains of rooms. To determine the character and depth of the fill in these structures, small hand-excavated trenches were dug into each of them (fig. 49); no further excavation of these rooms took place.

Another large stain was determined to be a large pit (Feature 2). Three small test trenches were hand excavated into this feature (fig. 49). Another pit (Feature 3) was exposed during backhoe operations, and its eastern half was destroyed by these activities. One-half of the fill of the remaining portion of the pit was completely excavated. Two other small features (Features 5 and 6) that were exposed during blading activities were determined to be a hearth and a posthole; one-half of each of these features was excavated to observe the fill and to determine the depth of the feature.

The source of the largest stain at the site was determined to be dark fill inside a pithouse. In order to further investigate this structure, two backhoe trenches were dug into it (fig. 49). Only two features associated with the floor of this structure were exposed in the trenches.

One of these was determined to be a hearth (Feature 8); a small test pit was excavated into it to determine its depth. No other excavations took place in the pithouse. Figure 52 shows the spatial relationship of major cultural units at Sunflower Hamlet.

Architectural Remains

Once cultural units were outlined by shovel scraping, actual excavation was limited to small test trenches, which yielded sufficient data for the following descriptions. Many of the dimensions presented below are approximations, and some dimensions could not be estimated.

Pithouse 1

Dimensions:

North-south diameter:	5.40 m
East-west diameter:	4.75 m
Floor area (approximate):	24.63 m^2
Depth (below modern ground surface):	1.60 m

This structure is a deep pithouse with no bench (fig. 53). The front of the pithouse, where the ventilator shaft is located, is oriented to the southeast. Birkdal (1976) describes this southeast orientation as being typical for pithouses during this period of the Anasazi Tradition. The walls of this structure were cut into the sterile subsoil and apparently they were not prepared in any other way.

Stratigraphy. The nature of the fill observed in the pithouse indicates that after abandonment this structure lay open and was subject to natural depositional processes. A stratigraphic profile constructed for the pithouse indicates four separate strata, all the result of natural deposition (fig. 54). The uppermost strata is the disturbed topsoil often referred to as the plow zone. The second and third strata are very

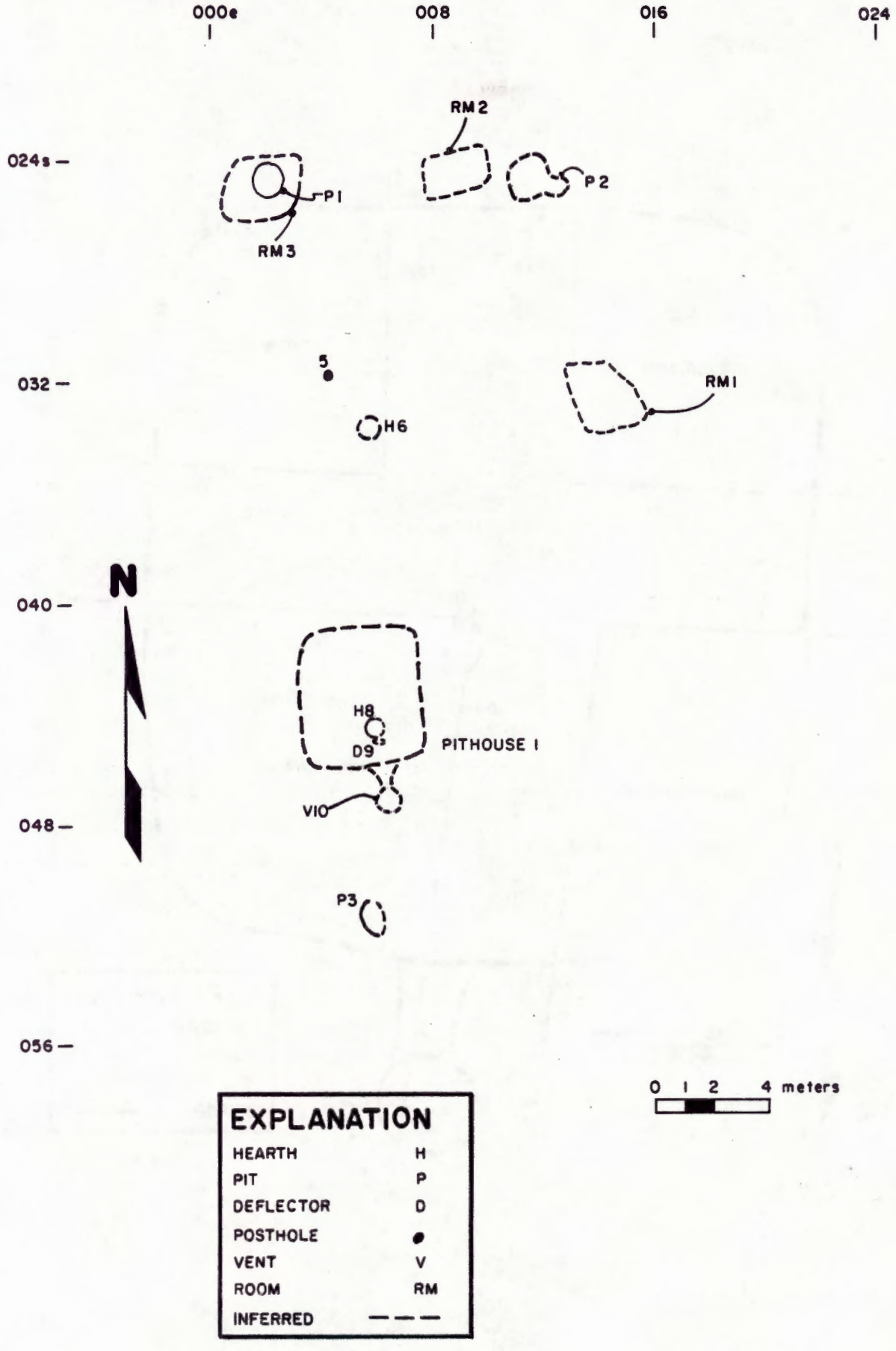


Figure 52. Spatial relationship of major cultural units, Sunflower Hamlet.

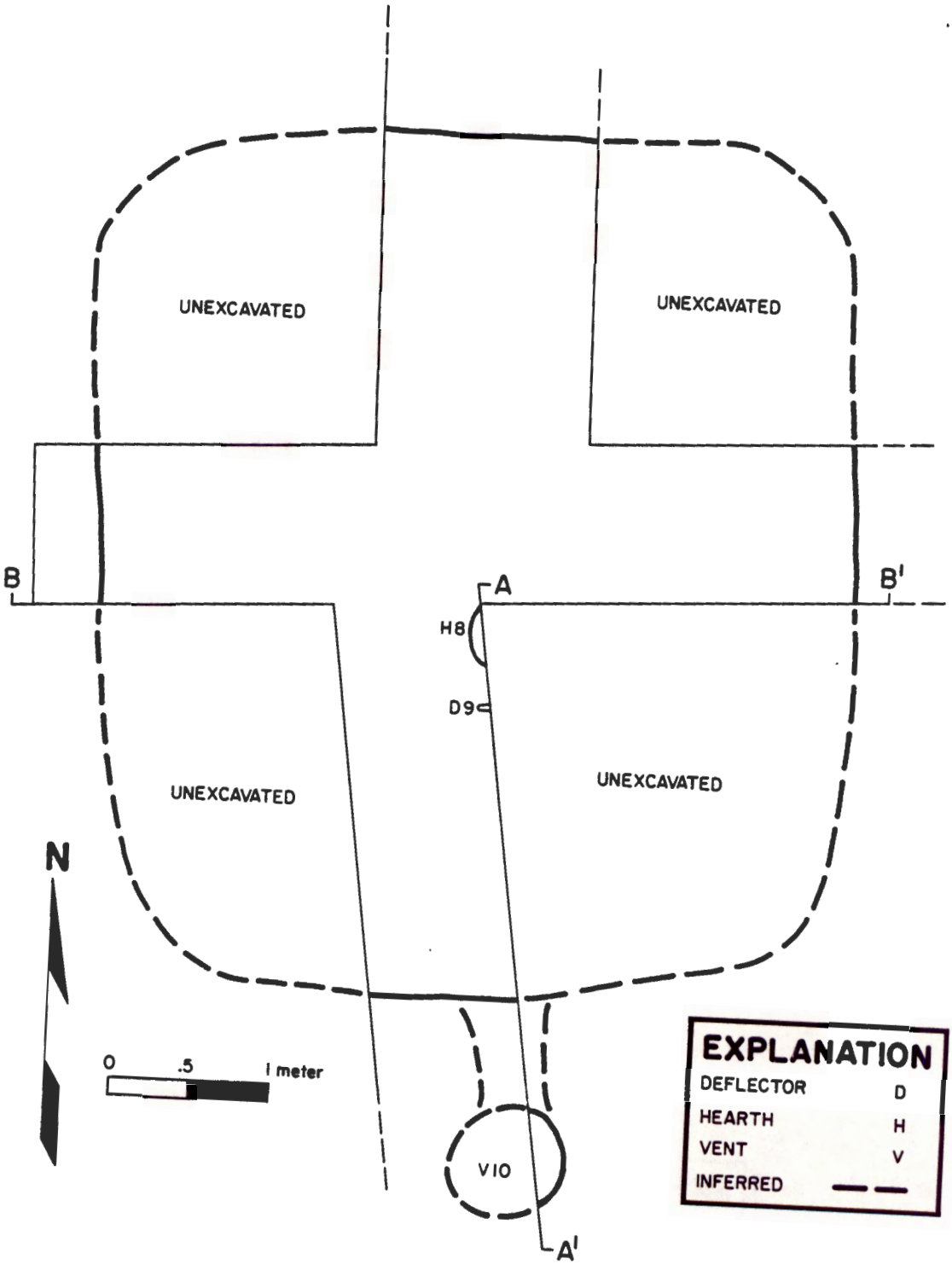


Figure 53. Plan map of Pithouse 1, Sunflower Hamlet. See figure 54 for profile B; see figure 55 for profile A.

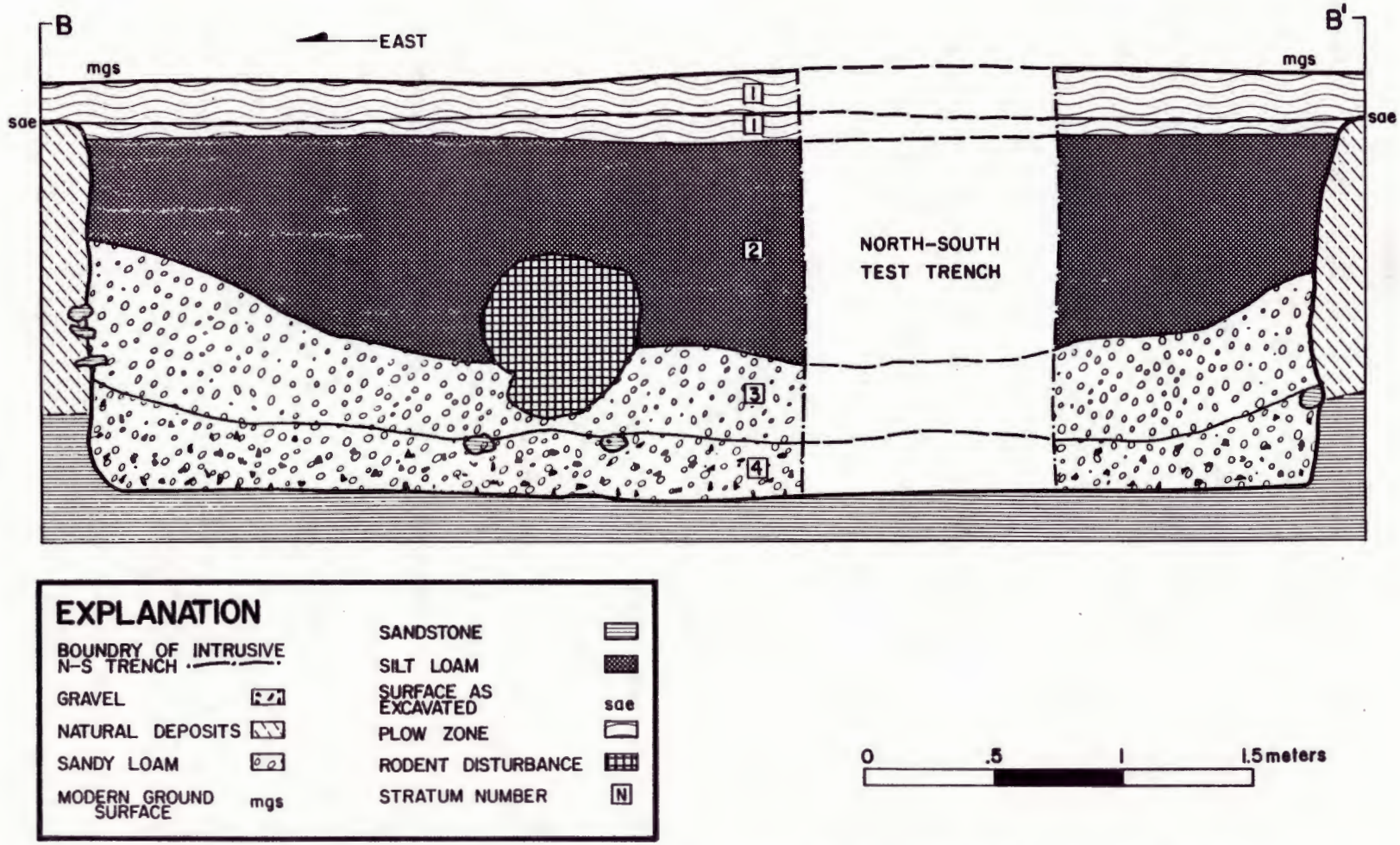


Figure 54. Stratigraphic profile of Pithouse 1, Sunflower Hamlet. See figure 53 for location of profile.

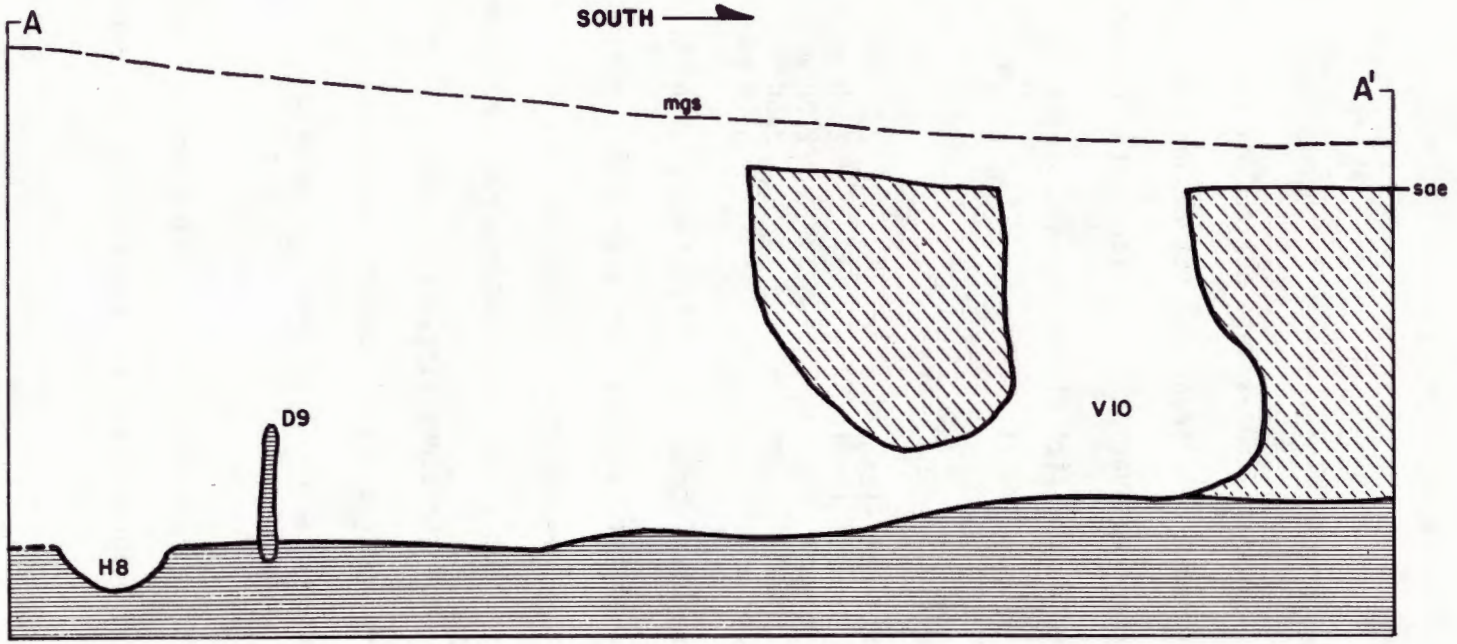
similar and the major difference between them is textural; Stratum 2 is a silt loam, Stratum 3 is a sandy loam. Stratum 4 is also a sandy loam but with sandstone inclusions that are the size of gravel.

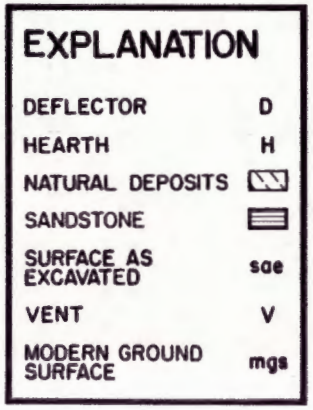
Floor (Surface 1). In order to level the floor of the pithouse, the builders excavated into the soft underlying sandstone. The floor appeared to be a use-compacted surface; it was stained a very dark gray. Since the pitstructure did not burn, this dark staining probably resulted from the compression of charcoal and ash into the surface.

Central hearth (Feature 8): Revealed in the north-south trench was a pit that is thought to be a hearth on the basis of its relationship to the deflector and its central location in the pitstructure. This feature was not fully excavated but limited examination provided the following information. The feature is an unlined pit without a raised rim and it is basin shaped in profile. The pit measures 42 cm north-south and is approximately 10 cm deep.

Deflector (Feature 9): An upright sandstone slab believed to be the deflector is located 30 cm south of the hearth and in front of the ventilator tunnel. This slab extends 40 cm above the floor and averages about 5 cm in thickness. It is embedded in the floor of the pitstructure, but its depth below the floor was not determined.

Ventilation system (Feature 10). The north-south backhoe trench was cut through the middle of the pithouse, revealing the ventilator shaft and its associated tunnel (fig. 55); therefore, only the north-south dimensions of the ventilator are available. The ventilator shaft has an estimated diameter of 63 cm at the top and 80 cm at the bottom. An approximate depth from prehistoric ground surface to the bottom of the shaft is





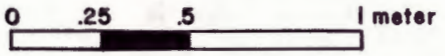


Figure 55. North-south architectural profile of Pithouse 1, Sunflower Hamlet. See figure 53 for location of profile.

1.40 m. The tunnel connecting the shaft to the pitstructure measures 70 cm in length and 23-50 cm in height.

Rooms

North and east of the pitstructure are three noncontiguous, rectangular rooms. The structures were defined on the basis of stains and tested by means of small test trenches. Since no definite walls were exposed and subsurface excavation was limited, the following dimensions of the rooms are based on the size of the exposed stains.

Room 1.

Dimensions:

North wall length:	2.30 m
South wall length:	2.50 m
East wall length:	2.30 m
West wall length:	2.50 m
Floor area:	6.20 m^2

This roughly rectangular structure is located 7.5 m northeast of Pitstructure 1. The walls of this structure were probably made of wattle and daub construction since no masonry remnants or sandstone rubble were found. Several burned corn cobs and kernels and other artifacts were collected near the middle of the structure (fig. 56). Only one interior feature was observed during testing operations, but it was determined to be a rodent burrow. It was noted that the floor was dug below prehistoric ground surface.

This structure is believed to have been a storage facility based on its size and its relationship to the pitstructure and other rooms at the site (fig. 52).

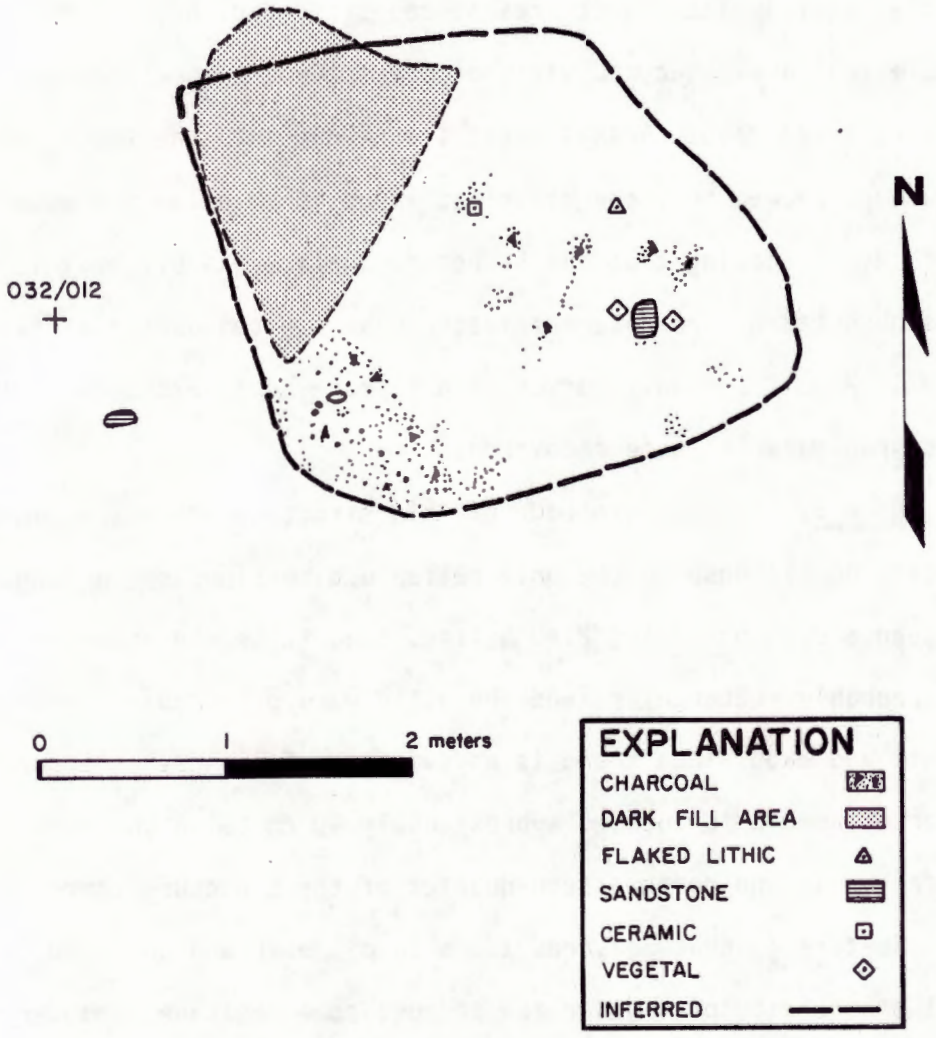


Figure 56. Plan map of Room 1, Sunflower Hamlet.

Room 2.

Dimensions:

North wall length:	2.70 m
South wall length:	2.60 m
East wall length:	1.75 m
West wall length:	1.50 m
Floor area:	4.60 m^2

Located 15 m north of the pithouse, Room 2 is rectangular and is similar to the other surface structures at the site (fig. 52). The lack of stone rubble indicates that the walls of the structure were probably constructed of wattle and daub. A small test trench dug into the south side of this structure showed that the floor was about 40 cm below the modern ground surface, indicating that the structure surface was slightly lower than the outside surface. No internal features were noted during excavation. Like Room 1, Room 2 probably served as a storage room, although no indications of stored material were recovered.

Room 3. The western edge of this structure was not defined during testing operations, so the only reliable dimension is the length of the eastern side, that being 2.40 m (fig. 57). Like the other rooms, Room 3 was probably rectangular, and the walls were presumably constructed of wattle and daub since there is no evidence of masonry construction. The floor of Room 3 is located approximately 40 cm below the modern ground surface. In the northeastern quarter of the structure there is a large pit (Feature 1) that measures 1.5 m in diameter and about 50 cm deep. The fill of the pit contained a few sherds, some debitage, and very little charcoal. The function of this pit could not be determined. No other features associated with this structure were found during testing operations.

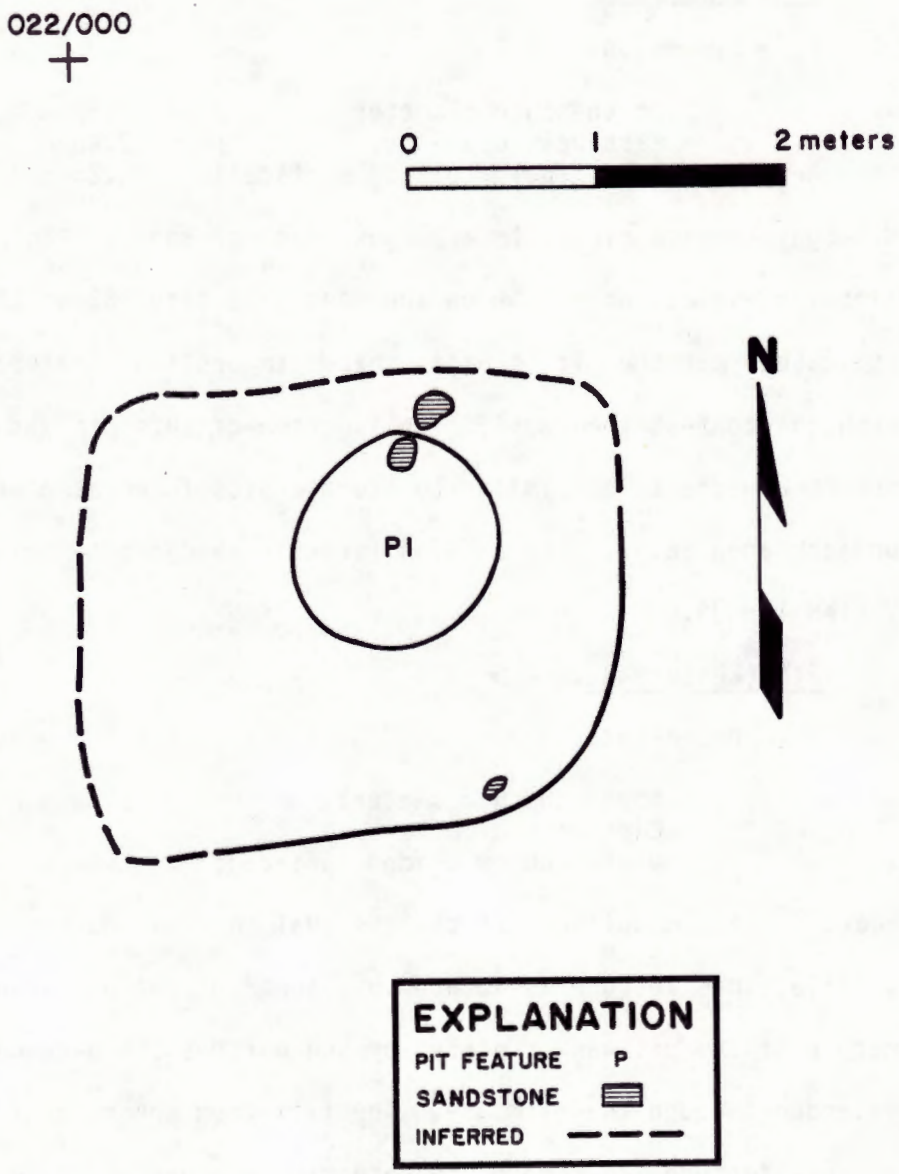


Figure 57. Plan map of Room 3, Sunflower Hamlet.

Ancillary Features

Surface scraping revealed four features that were not directly associated with the structures. These features are two large pits, one hearth, and a posthole.

Pit (Feature 2).

Dimensions:

North-south diameter:	1.72 m
East-west diameter:	2.40 m
Depth (below bladed surface):	0.25 m

A large, shallow pit is located just east of Room 2. This pit is nearly circular except for a lobe on the east side (fig. 52). Limited testing indicated that the pit is basin shaped in profile, unlined, and filled with charcoal-stained soil. The function of this pit was not determined, but it appears to be similar to storage pits found at other sites in the project area (e.g., Site 5MT4644 [Brisbin 1982]; Site 5MT4545 [Brisbin and Varien 1981]).

Pit (Feature 3).

Dimensions:

North-south diameter:	1.60 m
East-west diameter:	1.40 m
Depth (below bladed surface):	0.80 m

Feature 3 is an unlined pit that is oval in plan and basin shaped in profile; this feature is located 5 m south of the pithouse. The eastern margin of the pit was truncated by the north-south backhoe trench, which extended through the pithouse. The fill from the remaining southern half of this feature was removed to determine its depth and character of fill. It contained a moderate amount of charcoal fragments, none of which were large enough for radiocarbon analysis. Several burned sandstone fragments were found in the fill, but the pit itself showed no signs of in situ

burning which indicates that this pit was not used for roasting or other cooking activities.

The function of this pit was not determined, but it appears to be similar to large pits at other sites that are believed to have been used for storage. The nature of deposits indicates that the final function of this feature may have been as a refuse depository.

Posthole (Feature 5). Feature 5 is an isolated posthole that is located 2.5 m southeast of Room 3 (fig. 52). The posthole measures 9 cm in diameter and its base is believed to have been about 20 cm below the prehistoric ground surface. Part of a burned post was found in the posthole, but it was in poor condition. No other postholes were noted in the general vicinity.

Hearth (Feature 6). Feature 6 is located only 1.75 m southeast of Feature 5 (fig. 52). It was badly disturbed by modern plowing practices and project blading operations, so exact dimensions are not known. Its inferred diameter is 60 cm; the current depth is 5 cm, but it is inferred to have been at least 20 cm deep, based on the reconstructed prehistoric ground surface. The feature is circular in plan view and basin shaped in profile. It contained a considerable amount of burned wood, but none of it was large enough to be submitted for tree-ring analysis.

Material Culture

The limited artifact collection from Sunflower Hamlet consists of nonperishable items, with the exception of the few corn kernels and cobs that were preserved due to burning. The collection is limited by the nature of the testing program, but it is probably representative enough to make general statements about the activities that took place at the site and to help date its occupation.

Ceramics

Ceramics recovered from Sunflower Hamlet have been classified into types: Chapin Gray, Moccasin Gray, Early Pueblo Gray, Early Pueblo Red, and Early Pueblo White. Chapin Gray and Moccasin Gray are temporally diagnostic types, whereas the other three are grouped types. Provenience distribution of all identified types is presented in table 46.

Chapin Gray has been described by Breternitz et al. (1974) as a smooth-surfaced gray ware that had a long period of popularity from A.D. 575-900. Moccasin Gray, a gray ware identified by the broad, unobliterated bands around the neck, first appeared in the Mesa Verde region around A.D. 775 (Breternitz et al. 1974). However, Blinman (1982a) indicates that Moccasin Gray probably began to appear in the project area at about A.D. 760. This type of pottery was continually produced until about A.D. 925.

Early Pueblo Gray sherds are body sherds that cannot be identified to a more specific type, since they lack the diagnostic rim to classify them as either Chapin Gray, Moccasin Gray, or Mancos Gray. The temper type and surface treatment allow Early Pueblo Gray sherds to be placed in the broad time span of A.D. 600-900.

Similarly, Early Pueblo Red and Early Pueblo White sherds are those sherds that do not have enough painted design or other diagnostic traits to be classified as more specific types. However, data concerning the surface treatment and temper of these materials date them to the early part of the Pueblo sequence; Early Pueblo White sherds are thought to date from A.D. 500 to 950 and Early Pueblo Red sherds date from A.D. 720 to 925 (Blinman 1982a).

Table 46. Ceramic summary, Sunflower Hamlet

Cultural category: Ware / Type	Surface collection N	%	Room 1 fill N	%	Room 2 fill N	%	Room 3 fill N	%	Pithse 1 fill N	%	Pithse 1 floor N	%	Large pit (Feat 3) N	%	All other proveniences N	%	Site total N	%	weight (g)
Mesa Verde:																			
Gray ware																			
EP gray	53	79.1	15	71.4			7	100.0	26	86.6			3	60.0	8	72.7	112	77.8	991.6
Chapin gray	2	3.0			1	100.0			2	6.7			1	20.0	1	9.1	7	4.9	75.8
Moccasin gray	1	1.5															1	0.7	8.8
White ware																			
EP white	8	11.9									1	50.0					9	6.2	37.0
Red ware																			
EP red	3	4.5	6	28.6					2	6.7	1	50.0	1	20.0	2	18.2	15	10.4	50.8
Total	67	100.0	21	100.0	1	100.0	7	100.0	30	100.0	2	100.0	5	100.0	11	100.0	144	100.0	1164.0
Vessel form																			
Jar	63	94.0	16	76.2	1	100.0	6	85.7	29	96.7	1	50.0	4	80.0	10	90.9	130	90.3	1090.0
Bowl	4	6.0	5	23.8					1	3.3	1	50.0	1	20.0	1	9.1	13	9.0	38.8
Other							1	14.3									1	0.7	35.2

NOTES: EP - Early Pueblo.
Pithse - Pithouse.
Feat - Feature.
(g) - gram.

Vessel forms, determined by rim-sherd analysis and sherd curvature, are predominantly jars, possibly reflecting a need for vessels suitable for storage and cooking. No whole or restorable pots were recovered during the testing operations.

Lithic Artifacts

There are many ways of classifying stone tools and debitage recovered from archaeological sites. The DAP archaeologists chose to use two broad categories, flaked lithics and nonflaked lithics, in which to place these items (Phagan 1981a). These two categories distinguish between items formed primarily by flaking and items formed by some method other than flaking, such as grinding.

The lithic artfiact assemblage collected from Sunflower Hamlet is small due to the limited nature of the excavations, therefore little can be stated about the assemblage.

Flaked lithic items. A total of 3 flaked lithic tools and 55 pieces of debitage were recovered from Sunflower Hamlet; proveniences are shown in tables 47 and 48. The single used core in the collection was found in a large pit (Feature 3) along with other materials that were apparently purposely discarded; this tool is made of a very fine grained Morrison chert. Cores of this type are generally believed to have been used for chopping or pounding activities.

Two unifaces, possibly used as scrapers, were recovered from the modern ground surface. These items were fashioned from siltstone and Burro Canyon chert. One of these items is a thin, end-worked uniface; the other is a thick side-worked uniface. Of the 55 pieces of debitage (waste flakes) 63.6 percent were collected from the modern ground surface.

Table 47. Flaked lithic tools, Sunflower Hamlet

	Pit (Feature 3) N	%	Surface collection N	%	Site total N	%
Total tools:	1	100.0	2	100.0	3	100.0
Tool morpho-use						
Core	1	100.0			1	33.3
Thick scraper			1	50.0	1	33.3
Thin scraper			1	50.0	1	33.3
Grain size						
Very fine	1	100.0	1	50.0	2	66.7
Microscopic			1	50.0	1	33.3
Dorsal face evaluation						
Unmodified core	1	100.0			1	33.3
Unthinned item, with cortex			2	100.0	2	66.7
Ventral face evaluation						
Unmodified core	1	100.0			1	33.3
Unthinned item, no cortex			2	100.0	2	66.7

Table 48. Flaked lithic debitage, Sunflower Hamlet

	Surface collection N	%	Room 1 floor N	%	Room 3 fill N	%	Pithse 1 fill N	%	Pithse 1 floor N	%	Pithse 2 fill N	%	Other excavated units N	%
Flakes/flake fragments:														
Grain size														
Medium														
Fine	9	26.1	1	50.0										
Very fine	10	29.0					1	16.7	1	100.0			2	22.2
Microscopic	16	46.4	1	50.0	1	100.0	5	83.3			1	100.0	7	77.7
Total flakes/flake fragments	35	100.0	2	100.0	1	100.0	6	100.0	1	100.0	1	100.0	9	100.0
Items with cortex	12	34.3	1	50.0			3	50.0					5	55.6
Items with platform	14	40.0	2	100.0	1	100.0	4	66.7	1	100.0	1	100.0	6	66.7

NOTE: Pithse - Pithouse.

Nonflaked lithic items. The nonflaked lithic collection consists of three manos, two grinding/abrading stones, and one hammerstone (table 49). Three of these items were manufactured from sandstone, the others are made of igneous rock. The manos are of the unshaped type with

some pecking on the use surfaces. The wear patterns on the grinding/abrading stones indicate use on only one side. The presence of these tools indicates that grinding of some sort of materials took place at Sunflower Hamlet; possibly corn since this cultigen was found in two of the surface structures.

Table 49. Nonflaked lithic tools, Sunflower Hamlet

	Pithouse 1 fill		Pithouse 1 floor		Site total	
	N	%	N	%	N	%
Total tools:	5	100.0	1	100.0	6	100.0
Tool morpho-use						
Hammerstone	1	20.0			1	16.7
Mano	3	60.0			3	50.0
Miscellaneous specialized	1	20.0	1	100.0	2	33.3
Production evaluation						
Natural (unshaped)	5	100.0	1	100.0	6	100.0
Item completeness						
Complete/nearly complete	5	100.0	1	100.0	6	100.0
Grain size						
Indeterminate	1	20.0			1	16.7
Medium	1	20.0			1	16.7
Fine	3	60.0	1	100.0	4	66.7

Vegetal Remains

Only a few plant remains were collected during the testing operations at Sunflower Hamlet; all of the specimens are charred. Samples were collected from Rooms 1 and 3; specific proveniences are shown in table 50. The presence of corn cobs and kernels indicates an economy that involved the cultivation of the nonindigenous species. The pine and mountain mahogany wood fragments recovered from the structures might represent construction materials. Sagebrush is commonly recovered from other sites in the project area and might have been used for firewood.

Table 50. Vegetal remains, Sunflower Hamlet

Taxon	Room 1	Room 3
Artemisia sp.	+	
Cercocarpus sp.	+	
Pinus ponderosa	+	
Pinus sp.	+	
Zea mays		
Kernel	300	
Cob	++	
Cupule	+++	1

NOTE: + - Denotes 1 gram or less for wood; a few fragments for corn.
++ - Denotes 1-10 grams for wood; numerous fragments and some complete specimens for corn.
+++ - Denotes greater than 10 grams for wood; numerous fragments and complete specimens weighing more than 10 grams for corn.

Nonhuman Bone

A single bone was recovered from the fill of the pithouse; it has been identified as a large mammal bone. Although the item is worked, identification of tool type was not possible.

Site Synthesis

Chronology

Since materials suitable for tree-ring and archaeomagnetic analysis were not available, the occupation date of the site will be based on the ceramics and architectural attributes.

The ceramic assemblage is sparse, but the presence of red wares indicates that the site was occupied after their introduction around A.D. 720. The paucity of Moccasin Gray sherds indicates that occupation probably ceased at about the time this type was introduced. Since Moccasin Gray begins to appear around A.D. 760 in the DAP area, it is believed that Sunflower Hamlet was probably abandoned at about this time.

Based on the evidence this site appears to have been occupied between A.D. 720 and 760.

Architectural evidence also indicates that the site was probably occupied in the eighth century. The depth of the pithouse and its lack of a bench indicate that the structure was built between A.D. 700 and 760; however, the small vent shaft is typical of pithouses dating between A.D. 760 and 840 (Hewitt et al. 1981). However, ceramic evidence indicates that the structure could not have been occupied too long after the introduction of the Moccasin Gray ceramic type.

The scattered noncontiguous surface rooms are characteristic of sites in the Escalante Sector that date to about A.D. 740 (Brown 1979; Yarnell 1979); contiguous surface rooms begin to appear around A.D. 780 (Brisbin 1982).

Based on the ceramic and architectural evidence a conservative estimate for the occupation of the site would be between A.D. 720 and 800. According to the DAP phase scheme (Kane 1981a), this site could belong to the Sagehill Subphase (A.D. 700-760) or to the Dos Casas Subphase (A.D. 760-850); both subphases are part of the Sagehen Phase (A.D. 600-850).

Integration of Spatial and Temporal Units

There is nothing at the site that would indicate a considerable time lapse between the construction of the structures; all of the structures appear to be contemporaneous and part of the same element and component.

Element 1. Element 1 is represented by a single pithouse, three surface rooms, and various outside features. Based on comparisons with other early Pueblo sites (Bullard 1962; Birkedal 1976; Hayes and Lancaster 1975), it is believed that the pithouse was the primary domicile and the surface rooms were used for storage. The size of Pithouse 1 (approxi-

mately 25 m^2) indicates that it could have been occupied by about four people (Casselberry 1974). According to Birkedal (1976), four people would represent a nuclear family or a household. Winter (1976) indicates that the space and features used by a household is a household cluster. Thus, if only one household occupied this site, then all the structures and features belong to the same household cluster.

Within this household cluster various use areas can be identified. Each of the surface rooms and the large pit near the rooms constitute separate use areas presumably used for storage (Hayes and Lancaster 1975; Bullard 1962). The pithouse represents a special, enclosed use area where a variety of activities took place. If one assumes that the household was a somewhat autonomous, self-sufficient group (Kane 1981a), then religious, social, and economic activities were probably carried out within the pithouse. Since the structure was not completely excavated, it is not possible to test this hypothesis.

Outside use areas are difficult to define due to the limited nature of the excavations. However, the presence of a hearth, a posthole, and a large pit indicates that various activities took place outside of the structures. These activities might have included storage, discard, and food processing.

Summary

Based on all available evidence, it is concluded that Sunflower Hamlet was occupied by a single, nuclear family. This family group probably was self-sufficient and had an economy that was dependent, at least partially, on domestic crops, which were stored in numerous surface rooms. This family occupied the household cluster sometime between A.D. 720 and 800.

PART III: INTEGRATIVE STATEMENTS CONCERNING 1979 TESTED SITES

CONCLUSIONS

The preceding sections of this report have dealt with the nine tested sites on an individual basis, and each was discussed in terms of function and temporal placement. Table 51 is a summary of the temporal and functional assessment of these sites.

Table 51. Temporal functional matrix for tested sites

	Great Cut Phase	Sagehen Phase (A.D.)	McPhee Phase (A.D.)
Limited activity sites			
Charred House		600-720	
Cansado Camp		600-825	
Lee Side Camp			
Episode 1	2000 B.C.-A.D. 500		
Episode 2		600-900	
Episode 3			910-1050
Desecho Camp		600-825	
Roadside Camp		600-900	
Habitation sites			
Lone Pine Hamlet			
Element 1		690-700	
Element 2		700-720	
Rusty Ridge Hamlet			
Element 1		680-720	
Element 2		784-815	
Deer Hunter Hamlet			
Element 1		600-725	
Element 2		725-825	
Sunflower Hamlet		720-800	

The primary goal of the 1979 site testing program was to obtain data that could be used to augment data from excavated sites. In particular it was hoped that the tested sites would yield information about various types of sites that were part of Sagehen Phase communities in the Sagehen Flats Locality. Table 51 shows that all of the tested sites, except for two episodes at Lee Side Camp, were used or occupied during the Sagehen Phase. This table also shows that these sites were either limited activ-

ity loci or habitation sites. Thus, it seems that the primary goal of the testing program was attained. However, it is necessary to determine how the information from these sites can be used to help answer questions outlined in the DAP research design. This research design has five major problem domains: economy and adaptation, paleodemography, social organization and settlement patterns, foreign interactions, and cultural process (Kane 1981c:81).

Economy and Adaptation

Vital areas of study for the economy and adaptation problem domain include the reconstruction of the prehistoric resource base and the use history of particular resources (Kane 1981c:86). Many of the tested sites yielded materials that are part of this resource base. For example, vegetal remains from these sites indicate the types of plants that were exploited for food, fuel, and construction purposes. Lithic tools obtained from these sites can be used in synthetic studies concerning projectile point typologies, domestic food processing practices, and lithic resource procurement areas. Faunal remains from the tested sites can be used in studies concerning prehistoric hunting and butchering practices. Ceramic collections can be used in studies focusing on clay and temper sources as well as in studies aimed at refining ceramic dating techniques.

Another important area of study included in this problem domain is adaptation to the environment. Kane (1981c:91) has indicated that structures that provide shelter are an important part of the adaptation process. Types of shelters, their functions, their carrying capacity in terms of people and stored goods, and their construction are all issues to

be addressed. Data derived from architectural remains at the tested sites can be included in studies addressing these problems.

Paleodemography

This problem domain focuses on two broad aspects of the prehistoric population. The first concern is to determine total population numbers and densities for each phase, temporal and spatial variation of these densities, and population movements (Kane 1981c:111). The second area of focus concerns the age, sex, and health of the population (Kane 1981c:111).

Data derived from the tested sites is very important in determining population densities for the Sagehen Phase. Although most of these sites could be placed in the Sagehen Phase on the basis of survey data, it is hazardous to make population estimates with survey data alone since it is very difficult to determine how many household clusters were present and if they were contemporaneous. However, the limited amount of excavation at these sites revealed the number of contemporaneous household clusters for each element at each site. By determining the average number of individuals that used a household cluster, a population estimate for each element can be made. These estimates can then be used with estimates from other sites to establish population parameters for community clusters. Site estimates can also be used to calculate sector-wide population figures for each phase or subphase.

During the course of excavation at the tested sites, several burials were encountered. Although some of the remains were fragmentary, information about age, sex, and health can be added to the general data base concerning population characteristics.

Social Organization

This is a complex problem domain that can be broken down into four subdomains: social, economic, political, and ideological/ceremonial (Kane 1981c:116). Although data from the tested sites might eventually become important in studies concerning the three latter subdomains, most of the data is appropriate for studies concerning social organization. Residential groups appear to be a direct reflection of social organization, these groups range from household clusters to a maximum subsistence-settlement unit (Kane 1981c:118). Data recovered from excavated Sagehen Phase sites indicate that sites occupied early in the phase typically consisted of one household cluster, while toward the end of the phase they might consist of several contemporaneous and probably contiguous household clusters. Data recovered from the tested sites further verified this contention. This data also can be used to refine definitions of these groups and assess their social significance. Additionally, these sites can be used in studies about site layout and community layout and the social implications of these arrangements.

Foreign Interactions

The study of foreign interactions requires first the definition and recognition of foreign items, and second a reconstruction of trade networks. No foreign items, except a few sherds believed to have been manufactured west of the Escalante Sector, were recovered from the tested sites. Therefore, data from these sites is of little use in answering questions about foreign interaction.

Cultural Process

This is a very broad domain that is concerned with diachronic change on many different levels. A number of studies concerning change have been carried out by DAP staff. These studies include changes in architecture, changes in ceramic style, and changes in lithic tool style. Data from the tested sites were either used in these studies or helped to verify the results of these studies.

Validity of the Testing Program

The previous discussion has been an attempt to show how data derived through limited investigation is useful in answering questions above the site level. While there are some questions that cannot be addressed because the appropriate data was not available, some very important questions can be addressed. While more data about a single site would be available through total excavation, this requires a greater expenditure of labor. Basic data about the number and relationship of structures, dates of occupation, and tool assemblages from numerous sites can be attained through little labor expenditure. To stress the point, a total of 5570 person-hours was expended in the total excavaton of two household clusters at Dos Casas Hamlet (Brisbin et al. 1982), whereas a total of 1025 person-hours was expended investigating nine of the tested sites.

It is felt that, in general, the 1979 testing program was very successful and it is recommended that such programs be continued in the future since they can augment total excavation programs.

APPENDIX A: ARCHAEOMAGNETIC RESULTS FOR RUSTY RIDGE HAMLET

by

J. Holly Hathaway and Jeffery L. Eighmy

Archaeomagnetic dating is a relatively recent chronometric method employed by archaeologists. Archaeomagnetism is based on the fact that burned material retains the direction of the earth's magnetic field at the time of incineration at that location. By using the Southwest master curve of independently dated magnetic poles (DuBois 1975) 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 DAP as well as an evaluation of the applicability of the current Southwest master curve to the Dolores area, refer to Hathaway and Eighmy (1982).

Three archaeomagnetic samples were collected from Rusty Ridge Hamlet during the 1979 field season. The site is located at 37.52° N latitude and 251.43° E longitude in the Sagehen Flats Locality in the Dolores River valley. The site was a dual occupation site that was occupied during the Sagehen Phase (A.D. 650-800).

Sample 1 was collected from a hearth (Feature 3) located north of Surface Structure 2; sample 2 was collected from the burned floor (Surface 1) of Pithouse 1; and sample 3 was collected from the central hearth (Feature 9) of Pithouse 1. Twelve specimens were collected to complete the sample set. Each specimen (an estimated volume of 3.4 cm^3) was encased in a 2.5 cm plaster cube (15.6 cm^3). The orientation of each specimen 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. Geological Survey 1965 geologic map, and in substantial agreement with

expected values estimated from the National Oceanic and Atmospheric Administration map, "Magnetic Declination in the United States - Epoch 1975.0."

Data from samples 1-3 are recorded in table A.1. Samples were demagnetized at 25 oersteds. Demagnetization is a laboratory process used to eliminate effects from secondary components in a specimen, such as viscous or low temperature thermoremanent magnetization.

Table A.1 Archaeomagnetic sample data, Rusty Ridge Hamlet

	Provenience sample number		
	Feature 3 1	Pithouse 1 Surface 1 2	Pithouse 1 Feature 9 3
Specimens used in final analysis/total collected	10/12	11/12	7/12
Demagnetization level (Oe)	25	25	25
Mean inclination (dip)	62.44	45.44	49.48
Mean declination (°E)	4.58	7.79	5.82
Mean intensity (emu/cc)	$.428 \times 10^{-4}$	$.238 \times 10^{-4}$	$.332 \times 10^{-4}$
Mean sample vector	9.97	10.99	6.99
Precision parameter (k)	322.01	1145.61	411.47
Alpha 95 (degrees)	2.70	1.35	2.98
Paleolatitude (degrees)	82.85	77.53	81.34
Paleolongitude (degrees)	279.05	37.40	35.90
Error along great circle (EP) (degrees)	3.28	1.09	2.63
Error perpendicular to great circle (EM) (degrees)	4.21	1.72	3.96

The individual magnetic directions for samples 1-3 are plotted in figures A.1 and A.2. Two outliers were identified from sample 1, one from

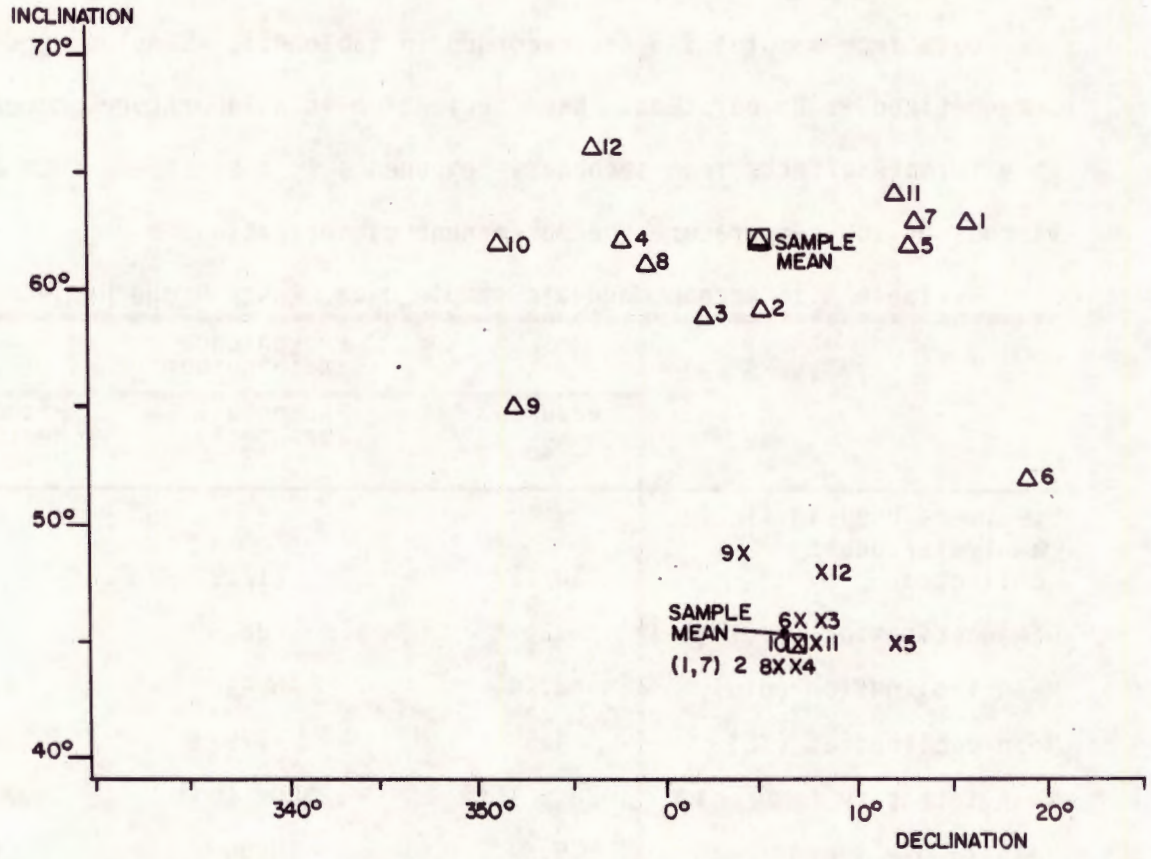


Figure A.1 Individual magnetic directions for archaeomagnetic samples 1 and 2, Rusty Ridge Hamlet.

Δ 5MT2848-1 Specimens 6 and 9 defined as outliers. ⊠ indicates mean sample direction excluding outliers.

x 5MT2848-2 Specimen 2 falls outside plotting surface and was defined as an outlier. ⊠ indicates mean sample direction excluding outliers.

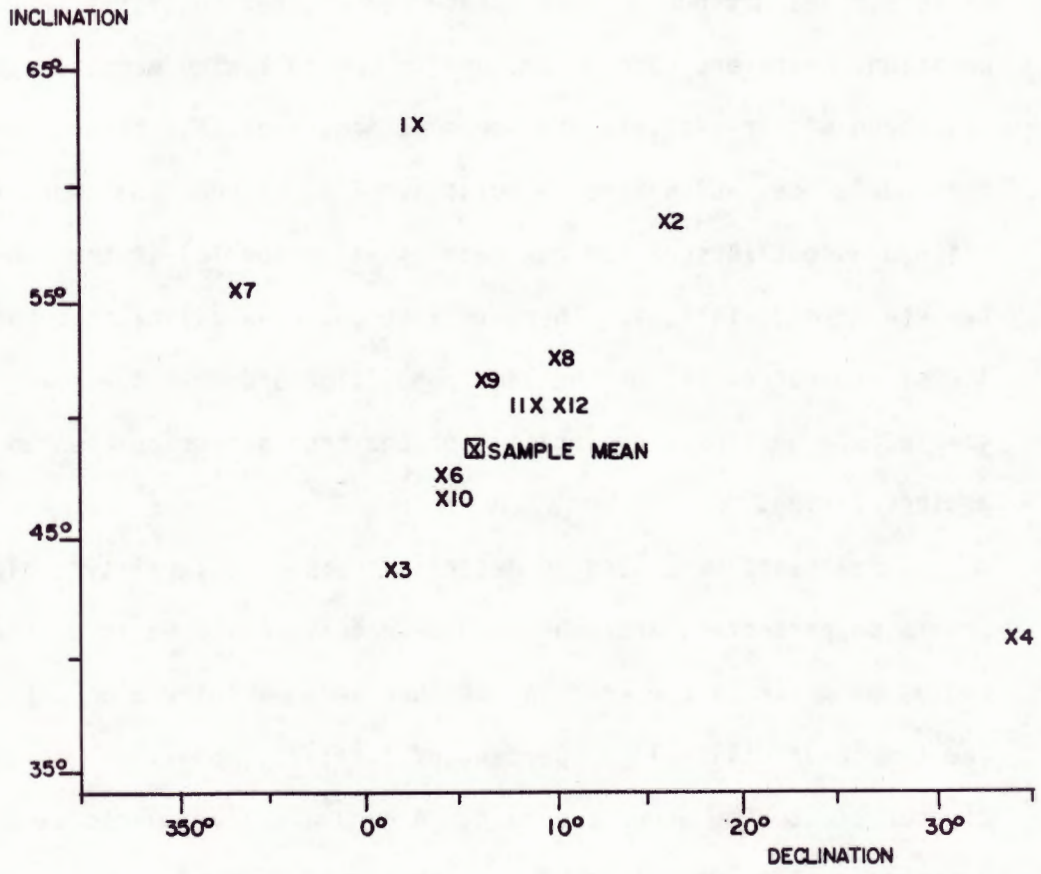


Figure A.2 Individual magnetic directions for archaeomagnetic sample 3, Rusty Ridge Hamlet.

x 5MT2848-3 Specimens 5 falls outside plotting surface. Specimens 1, 2, 4, 5, and 7 defined as outliers. ⊠ indicates mean sample direction excluding outliers.

sample 2, and five from sample 3. Samples with more than four outliers (33 percent of the population) are viewed skeptically and results based on these samples may not be an accurate representation of the true paleopole position. Outliers were determined in the following manner. The sample was rerun with relatively extreme specimens excluded, then a new mean and the angular deviation were calculated. The excluded specimens were defined as outliers of the new mean (smaller sample) if they fell beyond two standard deviations. There is a strong possibility that these "outliers" are not a part of the same population and that the new ("cleaned") sample is a better representation of the true direction created by the ancient firing.

Three tests were used to determine sample reliability: alpha 95, precision parameter, and mean sample vector. 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 tighter clustering about the mean. A good archaeomagnetic sample is defined by alpha 95 values of less than 3.5°. Provided this criterion is met, samples are then plotted and their position relative to the Southwest master curve reported. The precision parameter (k) 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. Error along the great circle (EP) and perpendicular to the great circle (EM) are functions of the alpha 95, which has an oval distribution when plotted, with a short axis that runs along the great circle between the collecting site and the paleopole position. The long axis is perpendicular to the short axis; both are centered on the paleopole. The

range of error for each sample is determined from the value calculated for the long axis.

The paleopole positions for the demagnetized and cleaned samples were calculated and plotted (figure A.3). These positions were compared to the current Southwest master curve; dates reported reflect correspondence with this curve. Due to the nature of this curve several interpretations may be possible given a particular paleopole position. To properly assess these results, archaeological interpretations should be used in determining the most plausible alternative.

Sample 1 falls near the A.D. 600 and 1400 portions of the curve with a $\pm$ 45 year range of error. The paleopole plot of sample 2 has a very small range of error ($\pm$ 20 years) and falls near the A.D. 915 portion of the curve. Sample 3 is located near several portions of the curve including A.D. 775, 935, and 1515, with a $\pm$ 40 year error range.

A hydrometer test conducted on soil collected from the floor of Pithouse 1 (sample 2) by the Colorado State University Soils Laboratory (Fort Collins, Colorado) indicates a ratio of 40 percent sand, 35 percent silt, and 25 percent clay. This soil sample was categorized as a clay. Clays and clay-based soils are optimum for recording and retaining the ancient magnetic pole positions. Sand is less conducive to good archaeomagnetic results due to the size of the particles ($\pm$ .02 mm). The presence of clay is but one characteristic necessary for the production of good archaeomagnetic results. Firing atmosphere, maximum attained temperature, type of affected ferrous mineral, and amount of intrusive material all interact to produce the resultant thermoremanent magnetization.

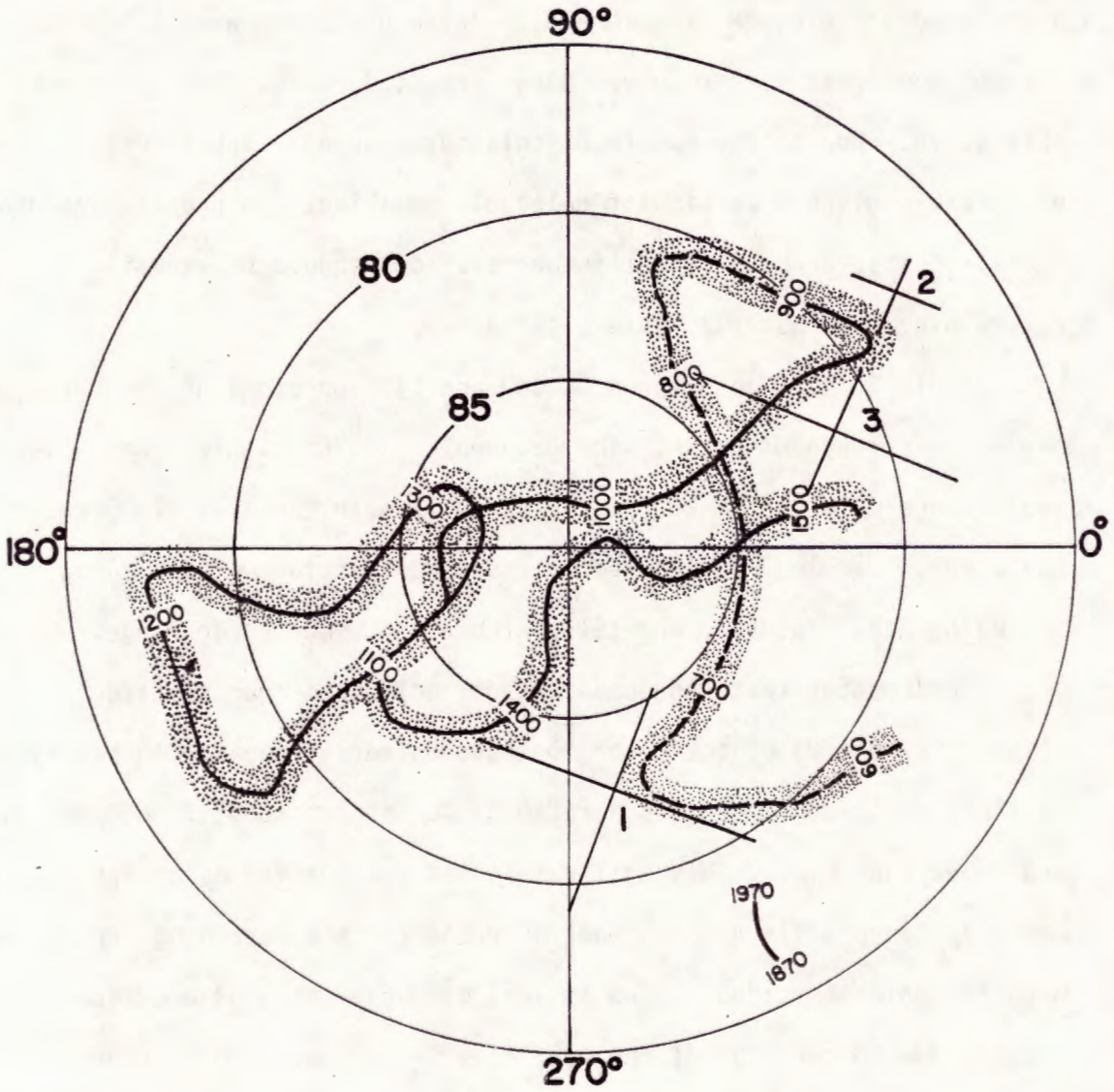


Figure A.3 Paleopole plots for archaeomagnetic samples 1, 2, and 3, Rusty Ridge Hamlet. Solid portion is based on DuBois (1975); dashed portion is based primarily on Wolfman (1979). Modern portion is calculated from USGS magnetic declination and inclination maps for the United States - Epoch and from Svendsen (1962).

APPENDIX B: HUMAN REMAINS REPORT FOR RUSTY RIDGE HAMLET

by

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Excavation at Rusty Ridge Hamlet revealed the remains of a human burial (Feature 12). These remains represented at least one adult and are summarized in table B.1. Some of these fragmentary remains are covered with charcoal-streaked soil, but the bone itself had not been burned. Analysis of the dental remains indicate that the age of this individual was in the 20's at death. It is not possible to determine the sex from these remains; however, judging by the relative scarcity of heavy muscle markings and the septal aperture of the olecranon fossa the subjective impression is that the individual is female.

There is no gross pathology nor abnormality apparent from these remains, with the exception of an unusual wear facet on the proximal articular surface of the tibia. This wear on the intercondylar eminence might reflect some defect of or injury to the menisci, but it probably was not severe enough to affect mobility. Postmortem damage to these remains suggests animal destruction.

Table B.1 Inventory of human remains, Rusty Ridge Hamlet

Element	Comments
Parietal	Lambdoidal flattening
Occipital	Extra ossicle in the right lambdoid suture
Right petrous temporal	
Right molar fragment	
Left maxilla	First, second, and third molars in place
Frontal	
Sphenoid or palatine	Fragments
Ribs	Fragments
Vertebrae	1 thoracic; cervical fragments, possibly atlas
Humerus	Right fragments, left head and shaft fragments
Radius	Right and left fragments
Ulna	Right and left fragments
Carpals	5
Metacarpals	4
Phalanges (hand)	7
Femur	Right and left
Tibia	Right and left; wear facets on right intercondylar eminence
Fibula	Right and left
Right calcaneus	
Talus	
Navicular	
Cuneiform	
Metatarsals	5
Phalanges (foot)	10

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