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A CULTURAL RESOURCES TESTING PROGRAM,
HOLBROOK, ARIZONA

Report Prepared for the
Los Angeles District
U.S. Army, Corps of Engineers
Contract No. DACW09-87-D-0022
Delivery Order #2

Richard S. Ciolek-Torrello

Contributions by:
Bruce A. Jones
Robert G. Graham

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Technical Series, No. 18

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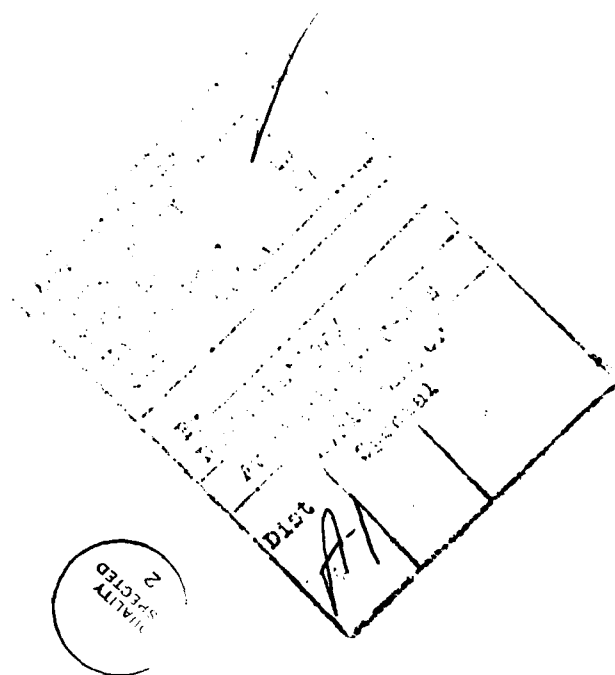


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INTRODUCTION

This report presents results of an archaeological testing and historic architectural evaluation program in Holbrook, Arizona by Statistical Research for the U.S. Army Corps of Engineers, Los Angeles District under Contract No. DACW09-D-88-0022, Delivery Order 2. Between August 15 and August 24, 1988 personnel from Statistical Research carried out archaeological investigations at the Archer Site (AZ P:4:22 ASM) and the Thompson House (AZ P:4:23 ASM) and completed the historic evaluation of 50 standing structures in the vicinity of Holbrook, Arizona. Historic archival research was also carried out in Holbrook, St. Johns, and Tucson in the week prior to field investigations as part of this research program.

In response to periodic flooding of Holbrook, Arizona by the Little Colorado River, the U.S. Army Corps of Engineers (COE) is planning to construct a protective levee. The construction of the levee will destroy parts of two archaeological sites located just east of Holbrook. In addition because flood protection is only being provided to property north of the river, approximately 50 standing structures, located on the south side of the little Colorado River in the town of Holbrook, will either be demolished or left unprotected.

Prior to construction the COE must determine whether any cultural resources, which are eligible for listing on the National Register of Historic Places, could potentially be adversely affected by levee construction. Two potentially eligible archaeological sites which may be adversely affected have been identified by the COE. These sites must undergo a test and evaluation program. To this end, a research strategy for obtaining sufficient data to make an eligibility determination has been prepared (Ciolek-Torrello and Altschul 1988). This strategy specifies the criteria for inclusion in the National Register and presents a plan of work focused on test excavations and archival research. The plan of work also includes an assessment of the area of standing structures in terms of its historic or archaeological potential. The data resulting from the implementation of this plan of work are analyzed in this report and a recommendation on the eligibility of the various properties for inclusion in the National Register is made.

Prior to the implementation of the testing program, the existing information indicated that the two archaeological sites could qualify for the National Register only under criterion "d." There are no standing structures at either site, and thus, they cannot qualify under criterion "c." There was no evidence that the sites are associated with the lives of national or even regional figures. Archival work did not discover any such affiliation either although many figures of regional significance were associated with the Holbrook area. Therefore, the sites are not eligible under criterion "b." It is possible that the sites could be associated with events of broad historical significance. However, to be eligible for inclusion under criterion "a," a property must possess a "strong association with the event or events and it must possess integrity [underlining mine] (NPS 1982:17)." Existing evidence suggests that neither site possesses sufficient integrity (i.e., well preserved standing structures) to qualify under criterion "a."

While the standing structures are also judged on their scientific merit, the primary criteria for assessing their eligibility will be association with historic events or people and/or high artistic or distinctive architectural value. This assessment is based on two lines of evidence, the physical condition of the buildings and the documentary and oral history of the properties.

This document implements the research design (Ciolek-Torrello and Altschul 1988) and presents the results of the testing and evaluation program. It is divided into eight chapters. Following this introduction, section one provides pertinent environmental and cultural background information on the project area. Chapter Two presents the research questions on which the eligibility of the two archaeological sites will turn. Chapter Three describes field and analytic techniques used to obtain data to evaluate whether the designated research questions can be addressed. Chapter Four presents descriptive results of field investigations. Chapters Five through Seven present laboratory analyses of recovered data. Chapter Eight concludes the report with conclusions and recommendations.

CHAPTER ONE BACKGROUND INFORMATION

Environmental Setting

Holbrook is situated on the Colorado Plateau at an elevation of 5100 feet above sea level. It lies just west of the confluence of the Little Colorado River and one of its largest tributaries, the Puerco River. This point is at the eastern boundary of what is regarded as a culturally and environmentally distinct region known as the central Little Colorado Basin (Gumerman and Skinner 1968:185) (Figure 1.1).

The central Little Colorado Basin represents an ecosystem that is distinct from the higher and wetter Mogollon Rim country to the south and the plateau and canyon country to the north. It is one of the lowest and driest areas of the Colorado Plateau and receives on average only 7.4 inches of precipitation, of which 5.0 inches falls in the form of snow. Temperatures range from a monthly average of 33.0°Fahrenheit in January to a high of 77.4°Fahrenheit in July. The area is aptly characterized as a cold desert. In addition to the lack of rain, the area is plagued with desiccating winds with the Winslow area at the western end of the basin being in the windiest part of the state (Green and Sellers 1964:37).

Given the lack of precipitation, reliable water sources are extremely important features of this ecosystem. Clearly, the most important of these is the Little Colorado River which has its headwaters in the mountains of east central Arizona and west central New Mexico. The Little Colorado River flows in a northeasterly direction for approximately 225 miles before reaching its confluence with the Colorado River. Although generally flowing, the river does dry up on occasion. Two miles east of Holbrook a major tributary, the Puerco River, joins the Little Colorado. The Puerco River drains much of the Colorado Plateau between Gallup, New Mexico and Holbrook.

The geology of the area is relatively simple in comparison to the surrounding areas. Upstream and south of Holbrook, the Little Colorado River cuts through Coconino Sandstone and the Moenkopi formation. Large outcrops of Moenkopi sandstone characterized by a high gypsum content occur in the form of knolls and buttes on the eastern and northern fringes of Holbrook. Most of the basin and the Little Colorado drainage downstream of Holbrook, however, are covered by the Chinle formation overlaid by large areas of Quaternary sands, silts, and gravel. The Hopi Buttes area in the north end of the basin are characterized by basalt intrusions in various sandstone formations.

Vegetation is sparse and homogeneous. Bunch grass is the dominant vegetation community throughout most of the Basin while the surrounding areas are characterized by forests or woodlands. Trees and large shrubs are virtually nonexistent in the area. In contrast, the floodplain of the Little Colorado River has a lush vegetative cover. Dense, almost impenetrable stands of cottonwood, desert willow, saltbush, and tamarisk (a relatively recent arrival) dominate this riparian community.

In contrast to vegetation, the faunal population of the basin is surprisingly large and diversified (Masse 1974). Several species of fish, 39 species of mammals, and 148 species of birds are believed to utilize this area

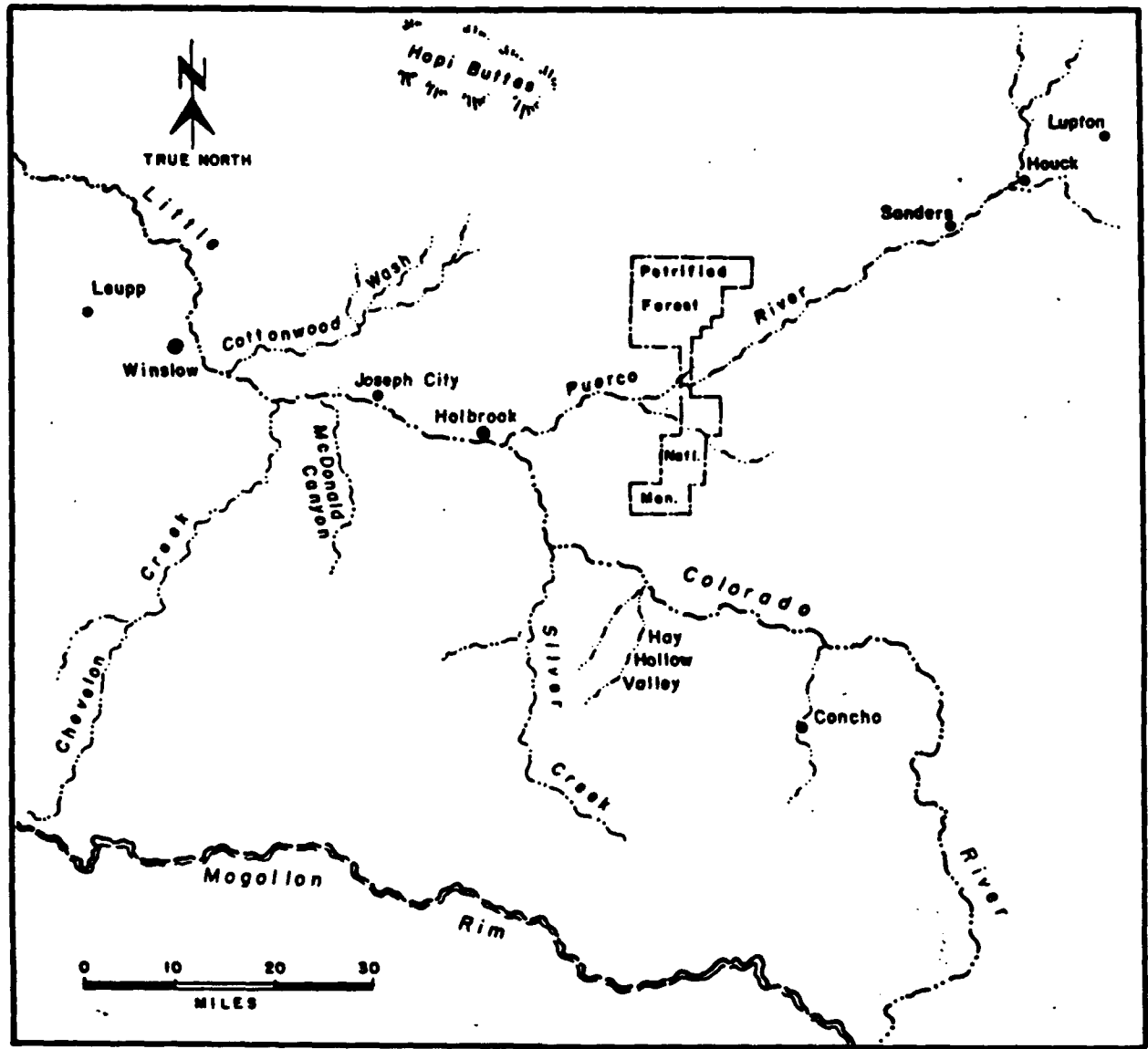


Figure 1.1. Holbrooke and surrounding areas in northeastern Arizona.

today. The faunal distribution of the basin appears to be distinct from surrounding areas, leading some to suggest that distinctive hunting patterns affected the distribution of prehistoric populations in the area (Gumerman and Skinner 1968:185)

The two archaeological sites in the project area are situated on the edges of the first terrace overlooking the Little Colorado River (Figure 1.2). The Archer site (AZ P:4:22) is located on a heavily dissected finger ridge. The ridge itself is primarily composed of Pleistocene alluvium consisting of coarse sand and gravel resting on decomposing bedrock of Moenkopi sandstone. Aeolian sands are also an important constituent of the recent deposits. The site is largely devoid of vegetation, with only an occasional clump of grass observed.

The Thompson House (AZ P:4:23) is situated at the base of the southern face of an eroded sandstone knoll of the Moenkopi formation located north of the confluence of Five Mile Wash with the Little Colorado River (Figure 1.2). The confluence of the Puerco and Little Colorado rivers occurs only about 700 m southeast. The site is well protected from the wind, rain, and sun, but is covered with considerable colluvial deposition from the knoll. As with the prehistoric site, the historic site is found above the active floodplain in an area largely devoid of vegetation. Geomorphological evaluations, carried out as part of the testing program by Tom Kolbe of Northern Arizona University, indicates that neither site has been impacted by historic flood events.

The area of standing structures, the Perkins Addition, in Holbrook extends from the first terrace south of the river into the floodplain (Figure 1.2). A typical riparian vegetative community characterizes the latter area, although it is heavily altered by human habitation. This area has been significantly impacted on several occasions by historic floods.

Previous Research

Although the Southwest United States in general, and the Four Corners region in particular, are among the most intensively studied archaeological areas in the world, the central Little Colorado Basin has been the scene of surprisingly little work. The first professional archaeologists to report on sites in the area were Fewkes (1898, 1904) and Hough (1903), who focused primarily on burials at the larger Pueblo IV sites near Winslow, Arizona.

Colton (1939:66-69) defined the Winslow Branch of Anasazi culture based on the information provided by Fewkes and Hough and his own surveys in the area. This new branch was delimited by the poorly known distribution of Little Colorado White ware which roughly corresponded with the boundaries of the central Little Colorado Basin. Because of the almost complete absence of excavation, however, Colton was able to say little more about this new branch.

For almost 30 years after this time the area was ignored by professional archaeologists except for very limited excavations along two pipelines in the 1950s (Bliss and Ezell 1956; Olson 1964) and along U.S. Highway 66 east of Winslow (Breternitz 1957). The area was also surveyed in a cursory fashion during this time (Olson 1963:97). The most important work in the area was two

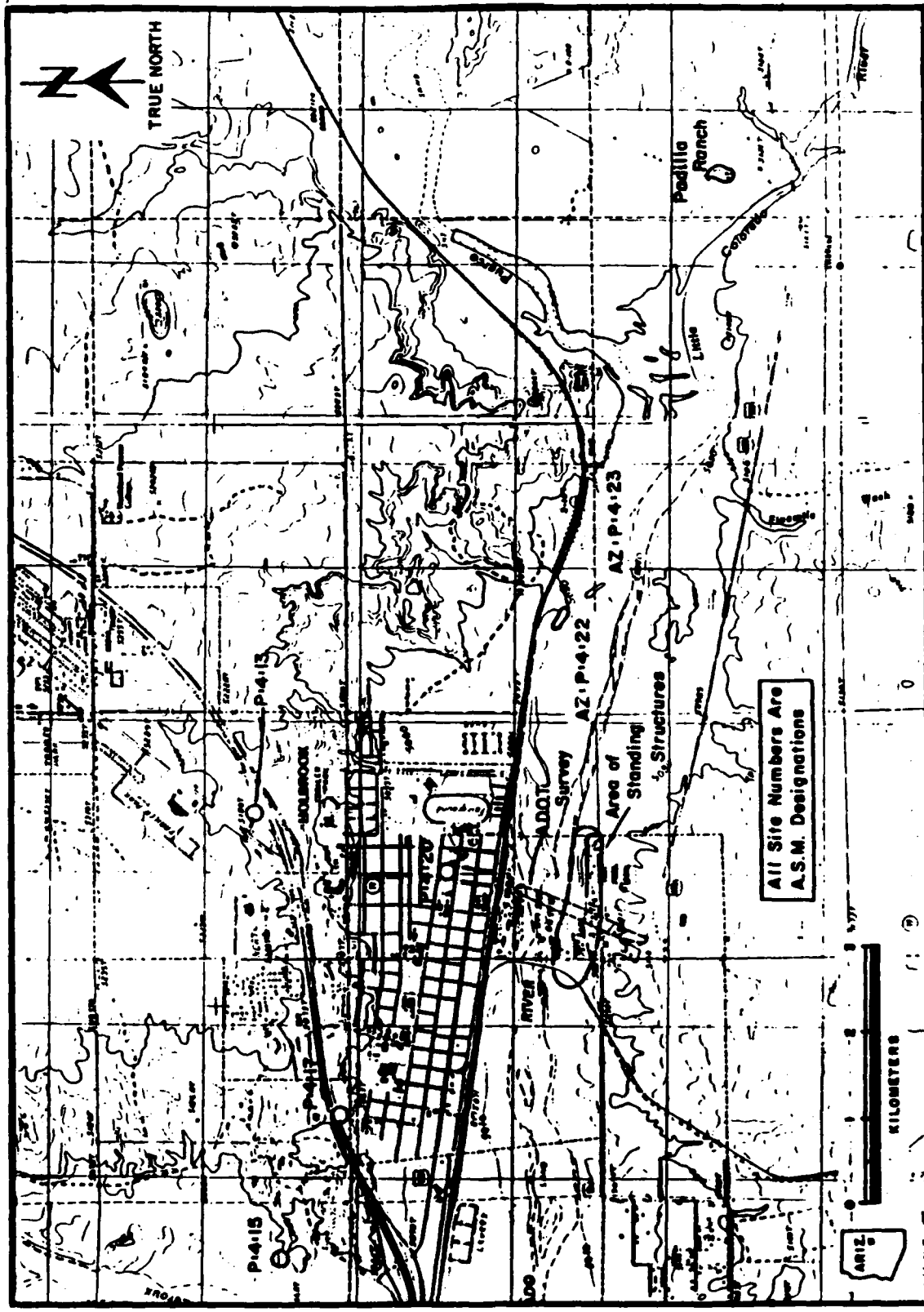


Figure 1.2. Location of project areas and nearby archaeological sites.

sets of excavations carried out by the Museum of Northern Arizona in 1966. Five sites were excavated by Skinner several miles east of Holbrook as a result of the planned construction of Interstate 40. Six other sites were also excavated at this time by Gumerman. Gumerman's excavations were carried out in conjunction with an extensive survey in the Hopi Buttes region for the U.S. Geological Survey, Branch of Astrogeology in an attempt to study paleoclimatic and paleogeologic change. These projects led to the first synthesis of the Winslow Branch of the Anasazi culture (Gumerman and Skinner 1968:185).

The Holbrook sites excavated by Skinner included the Wigwam and Sundown sites. The former consisted of a clay-walled 5-room pueblo with a 2 m deep D-shaped kiva. Summer habitation and year-round storage were suggested as a functional interpretation of this site. The ceramics from the site included Little Colorado and Tusayan White and Gray wares. This suggested an early Pueblo II date (A.D. 1075-1100); this site is the type site for the Holbrook phase (Gumerman and Skinner 1968:189).

The Sundown site (AZ P:4:11) (Figure 1.2) was assigned to the McDonald Phase (Pueblo III) dating to about A.D. 1100-1250. Most sites of this later phase, including two others near Holbrook excavated by Skinner, consist of four or five pit houses, several surface dwellings, and an occasional kiva (Gumerman and Skinner 1968:192). Settlements were widely dispersed, apparently to take advantage of small widely scattered plots of arable land. The Sundown site was unique, being a larger "plaza-type" site. The site had six dwelling units, two kivas, and a circular Great Kiva fronting a plaza enclosed by a low wall. Gumerman excavated a similar but smaller site, the Plaza Site, in the Hopi Buttes area. Although not large in comparison to the Great Pueblos of the northern Plateau, the unusual size of these sites and the high proportion of ceremonial structures indicates that these sites served as ceremonial centers for the dispersed settlement system of the central Little Colorado basin.

Unfortunately, with few exceptions (see Gumerman 1969) site reports on many of these early excavations have never been completed and the only readily available information relates to the relatively narrow set of problems involving phase definitions and time/space relationships. Even specific data relevant to these problems, such as absolute dates and ceramic counts, remain unreported. The recent publication of Gumerman's 1969 dissertation (1989) may remedy this situation.

Since 1968, mostly small compliance related projects have been conducted in the area. These included an excavation of a BMIII site near Winslow (Rippey 1969), assessments of several of the ruins in the Homolovi group (Adams 1980; Masse 1974; Weaver et al. 1982), and a survey for the COE involving proposed rechannelization areas and associated levees along the Little Colorado River in Holbrook (Granger and Weaver 1977). No archaeological sites were recorded in nearly 12 miles of the latter survey. Recently, the Arizona Department of Transportation has conducted a series of survey and evaluation projects in conjunction with the realignment of State Route 77 in Holbrook (Rosenberg n.d.; Stone 1985, 1987). Several historic structures and trash dumps were evaluated for inclusion in the National Register of Historic Places and found not to be eligible.

Additional information relevant to the archaeology of the Holbrook area comes from work in surrounding areas, especially the Homolovi Ruin group near Winslow and the Petrified Forest in the lower Puerco Valley. Recently, the earlier assessments of the Homolovi Ruin group outside of Winslow have led to large scale excavations at several ruins as part of a long term research and educational program conducted by Arizona State Museum and Arizona State Land Department. Preliminary reports for some of this work is available (Adams 1986; Hayes and Adams 1985; Hayes et al. 1984). In the 1930s the Petrified Forest National Park began a program to interpret and stabilize sites within the park. Initially Mera (1934) recorded 109 sites. This work was followed by the partial excavation and stabilization of the Puerco Ruin (Schroeder 1961) and the Flattop Site (Cosgrove 1951). In the 1940s Reed (1947) in his capacity of Park Service Archaeologist, supervised the excavation of a small rock shelter and a large survey that recorded over 300 sites. At this time Wendorf (1953) began analyzing the ceramics from the park and formulated a series of pottery horizons for the region. Wendorf's work also included a detailed description of work at the Flattop and Twin Buttes sites, small Basketmaker II and III villages. Since the 1950s work in the Petrified Forest has continued albeit at a much slower pace (see Stewart 1980).

Culture History - Prehistoric Periods

Early Man

The discovery of Clovis and Folsom projectile points near Winslow (Sims and Daniel 1967) and in the upper Little Colorado and Puerco valleys (Agenbroad 1967) represents the only evidence of paleo-Indian occupation of the northern plateau of Arizona. The earliest substantial occupation of the region is documented by the presence of lithic debris and percussion flaked tools, such as scrapers and hand axes, on ridges of the first terrace of the Little Colorado River. These materials are the basis of what has been termed the "Tolchaco" focus (Bartlett 1943). Although widespread with over 70 sites recorded in the Little Colorado River Basin, little is known about this focus as most of the data derive from surface sites with few diagnostic artifacts or features (Stewart 1980:72). With no subsurface manifestations it is not surprising that there has been considerable argument about the Tolchaco phenomenon. There has even been some question as to whether these materials in fact represent the remains of human activity (Ascher and Ascher 1965).

The most thorough studies of Tolchaco sites have been carried out by Keller and Wilson (1976) and Reid (1982:143-150). These analyses concluded that the sites in question were used for lithic quarrying and preliminary manufacturing, with flakes rather than cores being removed from the site. They also conclude that the Tolchaco focus represents a specialized and limited activity site type involving the exploitation of cobble resources along the terraces of the Little Colorado River rather than a distinct cultural tradition (Keller and Wilson 1976; Reid 1982:145). Although dating is uncertain due to the lack of diagnostics, it is presumed that Tolchaco material is related to an Archaic culture (Granger and Weaver 1977:8; Reid 1982:145).

Archaic occupations in the region are often affiliated with the Desert Culture concept. Sites assigned to this culture have been identified near

Winslow and in the Puerco Valley, on the basis of isolated Pinto points (Sims and Daniel 1967). Much larger lithic assemblages were found in a group of sites in the vicinity of Concho (Wendorf and Thomas 1951) and in the Hay Hollow Valley (Martin and Rinaldo 1960; Longacre 1964) in the upper little Colorado Valley. Most of these sites were probably temporary hunting camps and have been associated with a regional variant of the Desert Culture known as the Concho Complex. Two sites, the County Road and Hay Hollow sites, which were dated to the late Archaic period, however, contain evidence of corn, crude pottery, and houses (Martin 1967; Plog 1974). These sites evidently represent the transition from a migratory Archaic lifestyle to a more sedentary type that emerged in the following time periods.

Basketmaker II and III

Prior to the Formative Period, little evidence exists for occupation of the area around Holbrook. After the Archaic period, the central Little Colorado River area emerged as a distinct archaeological zone. The distinctiveness of the area is apparently a product of its position between the three major cultural areas of northern Arizona, the Anasazi, Mogollon and Sinagua, and the unusually arid environment of the basin. The archaeology of the area clearly reflects a mixing of cultural elements along with a specific adaptation to local environmental conditions (Gumerman and Skinner 1968:185).

The first documented settlement of the central Little Colorado River basin occurs during Basketmaker II. Two sites, NA6588 and the Flattop Site, both located in the Petrified Forest National Park date between A.D. 300-600 (Breternitz 1957; Wendorf 1953). The Flattop Site, located at the south end of the park, is a pit house village which appears to represent the northern boundary of Mogollon culture at this time (Gumerman and Skinner 1968:189). In contrast, NA6588 in the northern end of the park and another site in the Hopi Buttes area are more similar to Basketmaker II sites in the Puerco Valley (Gumerman 1966). Gumerman and Skinner (1968:188) use this evidence to suggest that the central Little Colorado River was already serving as the boundary between the Mogollon and Anasazi cultures at the beginning of the Formative period.

Although no excavations of Basketmaker III sites have been conducted in the immediate vicinity of Holbrook, work in the Petrified Forest to the East (Wendorf 1953), the Hopi Butte District to the north (Gumerman 1969), and near Winslow to the west (Breternitz 1957; Rippey 1969) all indicate that the area lies on a cultural boundary. Based on ceramics and architectural data Gumerman and Skinner (1968:188) suggest that the area around Holbrook was affiliated with the Kayenta Anasazi. Close ties, however, were maintained between groups residing on the Puerco and the Little Colorado rivers, indicated by the common occurrence of early types of Cibola White ware along with the predominant Kayenta types.

Most investigators agree that the Petrified Forest represented a boundary between the Cibola and Kayenta areas (Gumerman and Skinner 1968:188; Granger and Weaver 1977:12; Wendorf 1953). The virtual disappearance of Cibola White Ware in the Hopi Buttes area after Basketmaker III suggests that cultural differentiation increased between the central Little Colorado River area and the Petrified Forest and other areas of the Puerco Valley to the east. The people of the central Little Colorado River continued limited contact with the

Mogollon to the south throughout the occupation of the area.

Two major pottery finishing traditions have been identified for these early time periods in the region. In the Petrified Forest paddle and anvil finished pottery was dominant at the earlier Flattop site (BMII), while scrape finished pottery was more common at the Twin Buttes site occupied in BMIII (Wendorf 1953:163). Adamana Brown was the only identifiable type at the Flattop site. A much wider variety of Anasazi and Mogollon pottery including the decorated types, Lino Black-on-gray and White Mound Black-on-white occurred in BMIII. In the Hopi Buttes area BMII was preceramic, while Lino Black-on-gray was the predominant type in BMIII (Gumerman 1968:113-114).

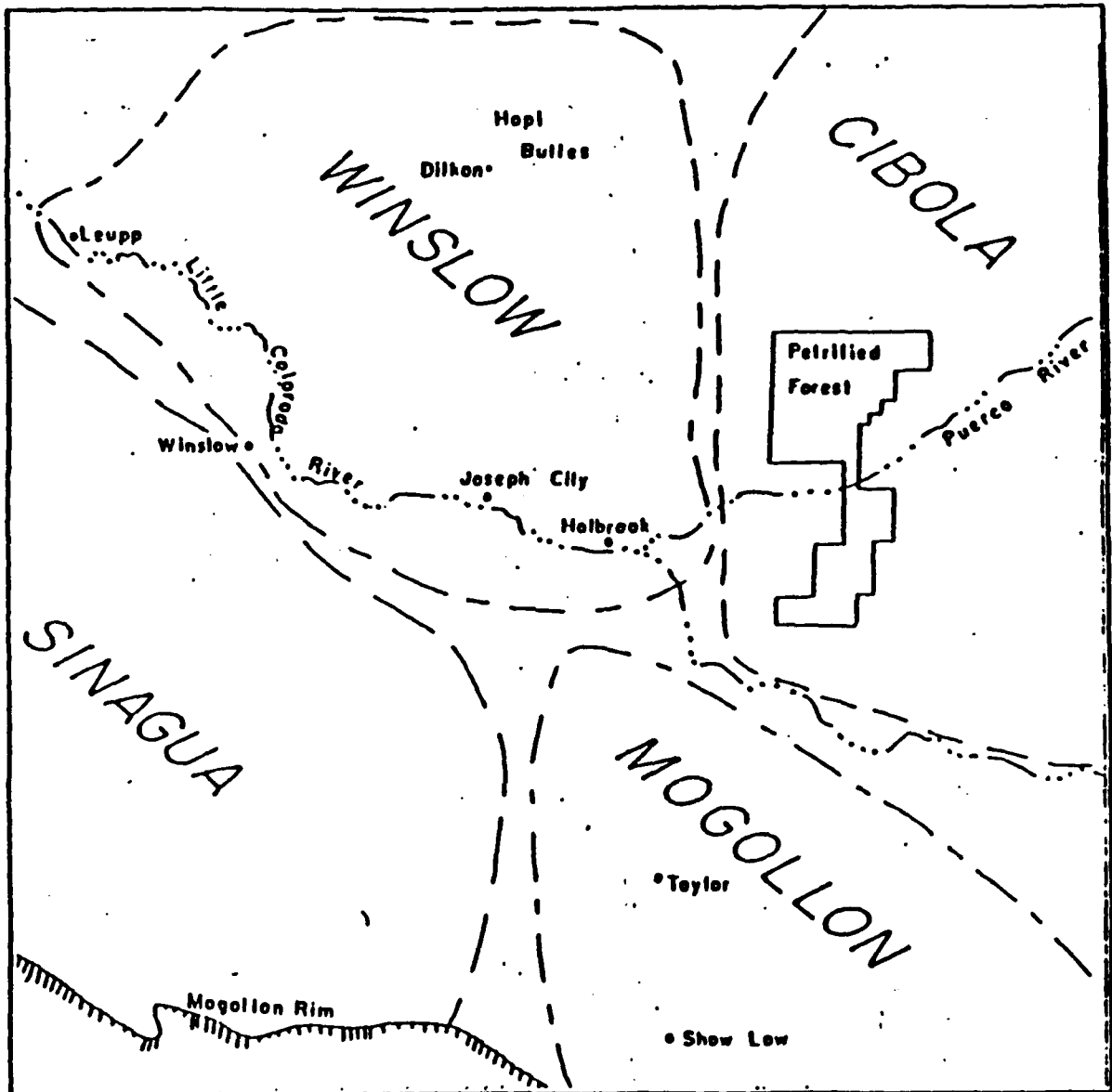
BMII architecture in the Petrified Forest consisted of small round to oval slab-lined pit houses with long lateral entryways and both interior and exterior slab-lined storage bins (Wendorf 1953:74). The absence of definable fire pits and evidence of a superstructure suggested to Wendorf that these small sites were only seasonally occupied. By BMIII permanently inhabited rectangular pit houses with definite evidence of being roofed interior fire pits, and other regular features occur. These structures were associated with isolated slab-lined cists, groups of cists, and deep adobe-lined granaries. Occupations remained small and scattered, however.

Early Pueblo

Beyond shifts in ceramic decorative styles, there is little to distinguish Basketmaker III, Pueblo I, or early Pueblo II sites in the central Little Colorado River area. The blending of Anasazi and Mogollon attributes is a common feature of most sites in the area, although most observers agree that Kayenta Anasazi influence predominates. At the Kol site in the Hopi Butte District, Gumerman excavated three pit houses dating to Pueblo I (Gumerman 1968:176; Gumerman and Skinner 1968:189). All three pit houses were different in terms of architecture and layout. Each was composed of traits common to the Kayenta Anasazi or Mogollon, but each pit house was characterized by a different mix of traits. The ceramics are dominated by Kayenta forms, Tusayan White and Gray wares, from BMIII to early Pueblo II (Gumerman 1968). Kana'a Black-on-white was the dominant decorated type in the Hopi Buttes during Pueblo I and Black Mesa Black-on-white was dominant in early Pueblo II.

Holbrook Phase

Colton (1939) used the introduction of Holbrook Black-on-white, the earliest Little Colorado White Ware, to define the Winslow Branch of the Anasazi Culture (Figure 1.3). This ceramic change reflected the increasing distinctiveness of the central Little Colorado River area in the late PII period. Gumerman and Skinner (1966:189) date the Holbrook phase to A.D. 1075-1100 (see also Breternitz 1966), an extremely short time period that is probably the product of the small sample of sites investigated. Significantly, none of the Little Colorado White Ware in the valley are associated with absolute dates. The phase dates are based entirely on the presence of Little Colorado White Ware in better dated peripheral areas (Gumerman 1968:103).



NORTH



Figure 1.3. Culture areas in the Holbrook region.

Prior to A.D. 1075, sites in the Hopi Buttes area were associated exclusively with Black Mesa Black-on-white, a Tusayan White Ware representing the Kayenta Branch (Figure 1.4). After this date, sites in the Hopi Buttes area were associated predominantly with Holbrook Black-on-white, a roughly contemporaneous and stylistically similar type.

The transition from Kayenta to the Winslow Branch during Pueblo II is revealed at the Wigwam site near Holbrook. This site contains equal numbers of Little Colorado and Tusayan white wares. Gumerman and Skinner (1968:190) recognize that the definition of the Winslow branch is based on limited data on pottery types and architecture and that its dominant characteristics are Kayenta Anasazi influenced by the upper Little Colorado area. Holbrook Black-on-white, for example, developed out of the Tusayan White Ware Black Mesa and Sosi black-on-whites and exhibited design styles transitional between these Kayenta types and Snowflake Black-on-white, a Cibola White Ware from the upper Little Colorado (Figure 1.4).

The Holbrook phase also reflects a great increase in population in the central Little Colorado River. Even as overall population increased, sites remained small and widely dispersed. Sites were distributed along low ridges or the edges of bluffs probably in association with small flood-water farming plots at the mouths of arroyos. These sites consisted of three or four pit houses and a surface storage room. Pit structures were shallow rectangular structures entered from the side. The surface structures were constructed with a basalt or sandstone foundation and mud or jacal upper walls (Gumerman and Skinner 1968:191).

McDonald Phase

The McDonald phase of the Pueblo III period was characterized by Walnut Black-on-white. Other common pottery types include Holbrook Black-on-white, which continued to be manufactured during the early part of this phase, and Flagstaff and Padre black-on-whites (Gumerman and Skinner 1968:191). Gumerman and Skinner believe that Walnut and, possibly, Padre black-on-whites are Little Colorado White ware that reflect new decorative styles developed from the Cibola White ware of the upper Little Colorado-White Mountain area and owe little to the Kayenta styles which influenced Holbrook Black-on-white. They attribute much of the temporal confusion between these two Little Colorado White ware types (Bliss and Ezell 1956:178) to a failure to recognize potential functional differences.

Gumerman's (1969) Hopi Buttes survey demonstrated a continued and progressive increase in the number of sites and presumed population size in the McDonald phase. Sites also continued to increase in size although almost all were still quite small. Most sites consisted of four to five pit houses, several surface structures, and an occasional kiva. The shallow, side-entered pit house continued in use although deep, square, roof-entered pit houses were more common. True masonry surface structures also were present at some sites. The previously mentioned Sundown and Plaza sites were among the largest sites of this time period. Settlements continued to be spread out, apparently to take advantage of small, scattered flood-water farm plots (Gumerman and Skinner 1969:192-193).

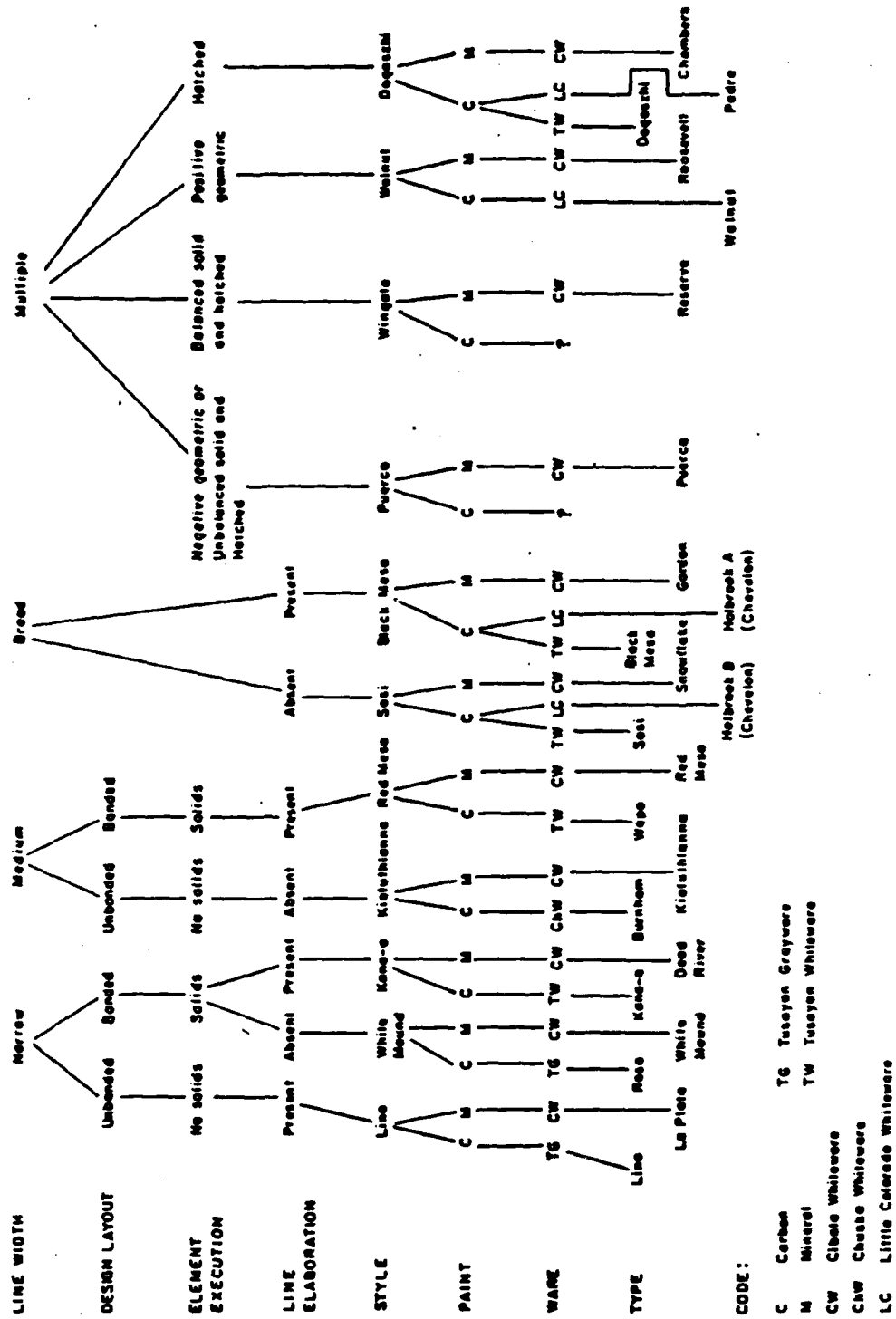


Figure 1.4. Whiteware design style taxonomy. From Sullivan (1984:80).

Pueblo IV

By A.D. 1250, the end of the McDonald phase, most of the central Little Colorado area was abandoned (Gumerman and Skinner 1968:195). It is not clear what happened in the Holbrook area, but no Pueblo IV sites are reported; suggesting that this part of the Little Colorado floodplain was also abandoned. At this time there appears to be an aggregation of population into large apartment type pueblos along the river in the vicinity of Winslow and probably the Hopi Mesas. Pueblo IV sites include the Homolovi Ruin group and Chevelon Ruin east of Winslow, an unexcavated site, NA10,569, west of Joseph City (Granger and Weaver 1977:14), the Puerco Ruin (Schroeder 1961) in the Petrified Forest (Stewart 1980:113), and the Chimney Butte site, a small shrine that represents the only Pueblo IV occupation in the Hopi Buttes area (Gumerman and Skinner 1968:195).

Gumerman and Skinner (1968:195-196) revert to the Pecos system in classifying the manifestations of this time period. Little Colorado White Ware apparently disappears from the assemblages and is replaced by Homolovi and Winslow Orange Wares. These series are viewed by Gumerman and Skinner as the locally made ceramic expression of Pueblo IV in the Winslow branch. Other investigators (Fewkes 1904:24; Pond 1966; Watson Smith (in Gumerman and Skinner 1966:196) point to the strong affinities between the ceramics of the Homolovi Ruins and contemporaneous Hopi sites, suggesting that the Winslow branch was all but obliterated by the developing Hopi culture in Pueblo IV. Gumerman and Skinner indicate that this major shift is also evident in settlement pattern and size, architecture, and burial patterns.

Ethnohistoric Period

As indicated above, the central Little Colorado River area was occupied by a people closely related to the Hopi during the Pueblo IV period (Colton 1956). The pottery and architecture of the large sites from this period are essentially indistinguishable from contemporaneous Hopi populations (Gumerman and Skinner 1968:196). Furthermore, the Hopi today recognize Homolovi I as an old Hopi site, a conclusion supported by their legends (Fewkes 1904:24). It is important to remember, however, that when the first Europeans arrived in the Hopi area, no Hopi resided in the central Little Colorado area.

Navajo Indians also lived in the area. Gumerman found recent Navajo sites and existing Navajo residents in the area when conducting the Hopi Buttes Survey (Gumerman 1969:20). Historic reports of Navajo residence or raiding in the area also exist (Jennings 1970:73; Johnson 1956:38; Westover and Richards 1963:7). Many Navajos were employed by local ranchers and loggers as well. There are also indications in the documentary record that Apaches occupied the area prior to 1850 (Goodwin 1942:66). There is no doubt that the Apache had contact with the Hopi during this period, no Apache sites, however, have been found in the area to date (Granger and Weaver 1979:16-17). After 1850, Western Apache territory did not extend beyond the north slope of the Mogollon Rim (Goodwin 1942:65).

Culture History - Historic Period

The historical events and activities of greatest importance in the Holbrook area were early military surveys, the construction of the Atlantic and Pacific Railroad, cattle and sheep ranching, Mormon settlement (Granger and Weaver 1979:17), and tourism. Brief sketches of these events are provided below. For those interested, a detailed history of Holbrook and adjacent areas is presented by Wayte (1962).

Early Travel

The Little Colorado River area was first visited in the historic period by Spanish explorers (Walker and Bufkin 1979:13). The Coronado expedition assigned Lt. Garcia Lopez de Cardenas to explore the area in 1540. He apparently first used the term Rio de Lino (Flax River) to describe the Little Colorado River (Granger 1960:244). The name was short-lived, for in 1604 Juan Mateo de Onate used the word colorado (red) for the river. Confusing the situation further was Fr. Francisco Garces who referred to the river in 1776 variously as either the Rio Jaquesila or the Rio San Pedro and termed the general basin the Valle de Lino (Wild Flax Valley) (Granger 1960:244).

As the confusion in names reflects, the area received little attention from Europeans until the middle of the nineteenth century. By this point, it became increasingly important for American interests to establish lines of communication between the east and west coasts. As a result, surveyors were sent out to find the best routes. Two general routes were sought across Arizona, a northern and a southern route. A number of military surveys were carried out along the northern route which generally followed the 35th Parallel. These surveys included the 1851 expedition of Captain Lorenzo Sitgreaves of the U.S. Army Corps of Topographical Engineers and the 1853-4 survey by Lieutenant Amiel W. Whipple of the U.S. Army, who both passed through the Holbrook vicinity (Granger and Weaver 1979:18; Walker and Bufkin 1979:23). When Whipple saw the Little Colorado in 1854, he called it the Flax River. By then, however, it was generally known as the Colorado Chiquito (Granger 1960:244), a name which was in common use until at least 1877 (Hinton 1970). Eventually the anglicized form, Little Colorado, took precedence.

The first practical east-west route, the Beale Wagon Road, was surveyed in 1857 by naval Lieutenant Edward F. Beale (Granger and Weaver 1979:18). Beale, who along with Kit Carson had helped save the Kearny expedition near San Diego in 1846, surveyed the route using camels from Syria and made a return trip in 1859 (McClintock 1985:33). Unfortunately, few shared Beale's zeal for the camels and they were turned loose on the plains. Beale, however, was rewarded for his achievements by being made minister to Austria in 1878. The Beale road served as the main route across Arizona for over twenty years until the coming of the railroad (Wahmann 1971:6). It followed the north side of the Little Colorado and Puerco rivers along the general route of the modern U.S. Highway 66 and Interstate 40. The precise route has not been identified although a historic marker for the road has been erected outside the Senior Citizens Center (see also below) on the north side of the railroad tracks in Holbrook. One famous traveler who probably took this route was Elliot Coues, a young assistant army surgeon and later famous ornithologist on a joint military and scientific mission to Fort Whipple in 1864 (Brodhead

1973).

The Holbrook area, located near the junction of the Puerco and Little Colorado rivers, soon became an important transportation node along this route. Camp Supply was probably the first historic settlement in the Holbrook vicinity. This temporary army post consisted of a tent camp and no permanent structures were built. It was established in 1863 on the north bank of the Little Colorado River about one or two miles east of the present site of Holbrook and near the junction of the Puerco River (Barnes 1988:433; Brandes 1960:67; Wayte 1962:71). Walker and Bufkin (1979:26) show Camp Supply located east of the junction. The camp was used as a relay station by Kit Carson and the California Volunteers in the campaign against the Navajos. One of Carson's men, Jack Conley "American Jack," then living in St. Johns told Barnes (1988:433) that he was in charge of the camp for some time.

Later all travel south to St. Johns, Concho, Fort Apache, Show Low, and Snowflake crossed the rivers near Holbrook (see Horsehead Crossing below) (Barnes 1988:211). A number of other important roads followed the Beale route or converged on the Holbrook area. The area was also an important point on the old Santa Fe-Prescott Star Mail Route (see Berados below) (Barnes 1988:44). Several maps show the Prescott-Wingate road, connecting Fort Wingate and the Zuni villages in New Mexico to Fort Whipple, passing through the area (Smith 1879; Eckhoff and Riecker 1880) (Figure 1.5). The Prescott-Wingate Road followed essentially the same route through northeastern Arizona as the Beale Wagon Road. These maps also show several different roads, connecting to Snowflake, St. Johns and Fort Apache, converging from the south and meeting the east-west route near the junction of the Puerco and Little Colorado rivers. Granger and Weaver (1979:18) also mention a second east-west road on the south side of the river known as the "old trails highway" (Westover and Richards 1963:32) or the Mormon Wagon Road (Peterson 1967:143-6).

The Atlantic and Pacific Railroad

The construction of railroads had a great impact on the development of the Holbrook area. The Atlantic and Pacific Railroad, later the Atchison, Topeka and Santa Fe, was carried west from the Rio Grande beginning in 1880 and had arrived in the Holbrook area by 1882. It closely followed the Beale Wagon Road (Wahmann 1971:9) and made Holbrook a major regional shipping center.

Holbrook was the name given to the new railroad station by John W. Young, a railroad grade contractor, in honor of Henry Randolph Holbrook (Granger 1960:240). Holbrook was the first chief engineer of the railroad and builder of the Rocky Ford Colorado Irrigation system as well as many other railroads (see Wayte 1962:95-100). The Atlantic and Pacific Railroad was completed as far as Holbrook on September 24, 1881, a date which Wayte (1962:97) regards as the founding of Holbrook. The name, however, was in use as early as March 25, 1881 when the grading work had been completed. There is no evidence to substantiate Barnes' (1988:208) statement that it was named in 1880.

As a result of the railroad, Holbrook became the major supply point for numerous ranches, trading posts, and lumber mills in the upper Little Colorado

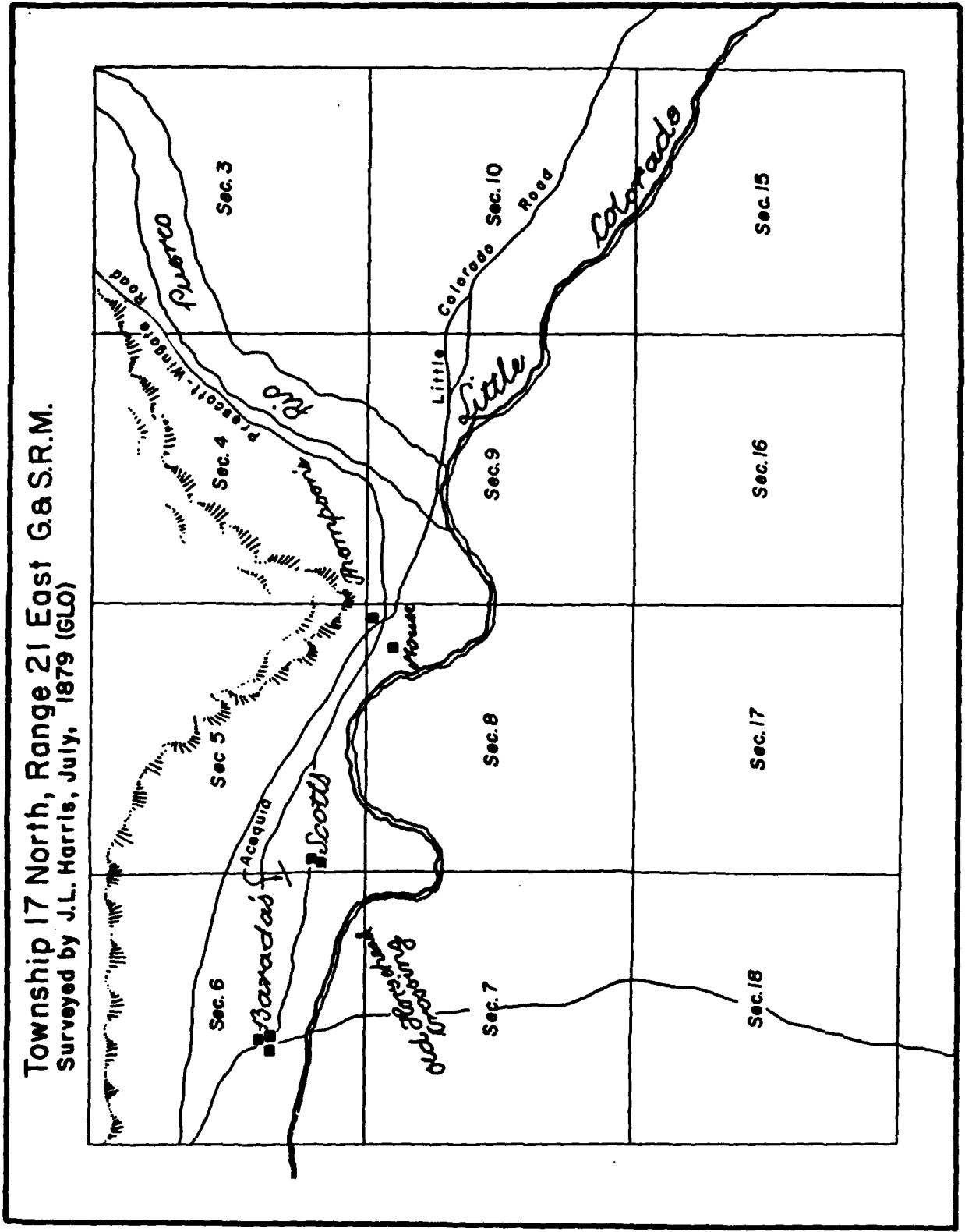


Figure 1.5. Surveyor's 1879 map of the northeast portion of T17 N, R21 E.

and White Mountain region. The town was also the distribution point for mail to a large surrounding area (Granger 1960:240; Dreyfuss 1972:Navajo County; Wayte 1962:106-107). A weekly mail route was established in the fall of 1881 between Holbrook and Fort Apache (Barnes 1982:36). The army also established a Quartermaster Depot at Holbrook from which the Mormons ran a prosperous freight business (Barnes 1982:144). The depot burned to the ground along with most of the Holbrook business district on June 26, 1888 (Wayte 1962:118), incidentally on the same night as the quartermaster storehouse burned at Fort Apache (Davisson 1977:72). The business district was rebuilt, but according to some accounts Holbrook was never again as prosperous as before the fire (Wayte 1962:121).

By the early 1880s Holbrook was a wild and woolly town of about 250 persons. "Three stores, a photograph gallery run by a Chinaman, a chop-house, and five saloons made up the business end of the hamlet" (Barnes 1982:136). Barnes also mentions at least one hotel, the Apache, and a schoolhouse. In recognition of its emerging importance, Holbrook became the county seat when Navajo County was split from Apache County on March 21, 1895.

Ranching

The Pleasant Valley War illustrates a recurrent theme involving cattle and sheep ranching. Although the focal point of the war was at some distance from Holbrook, some of the most important events of the war occurred in or near Holbrook and involved many of Holbrook's pioneer citizens. Several of these citizens were directly associated with the historic properties under investigation.

Cattle and sheep (and their wool) raised in the Little Colorado Valley and Mogollon Rim area were among the most important products shipped in the early years from Holbrook. Even the Mormons became involved in ranching (Granger and Weaver 1979:20). In the 1880s ranching was dominated by large cattle companies owned by eastern businessmen. The largest and most famous of these were the Hash Knife Outfit, owned by the Aztec Land and Cattle Company, and the Defiance Cattle Company. The Hash Knife owned much of the land in the valley and had its headquarters at Obed, an early Mormon settlement south of Joseph City (Jennings 1970:32). Many of the cowboys associated with this and other outfits resided in Holbrook. A number of sheepmen were also stationed in Holbrook.

The Hash Knife had a very colorful history and much has been written about it. By the end of the nineteenth century, the heyday of the Hash Knife was over. Burt Mossman, the manager of the outfit, attempted to hold the Hash Knife together and bring it into the twentieth century (Hunt 1951; Wayte 1962:228-238). But in 1900, beaten by a combination of over-grazing, drought, rustling, poor prices, and the severe winter of 1898-1899, the company finally sold out to Barney Stiles, Charlie Wyrick, and the Babbitt Brothers (Granger and Weaver 1977:20; Hunt 1951:139; Johnson 1956:39; Wayte 134-140).

The outfit is best known for its involvement with the Pleasant Valley War. The main battlefield of this war, believed to be the most violent range war between cattlemen and sheepmen (Dedera 1988), was in the Tonto Basin south of the Mogollon Rim. Many of the Hash Knife cowboys were allied with the Tonto Basin cattlemen and often rode down into Pleasant Valley to fight

alongside the local cowmen. On several occasions the hostilities overflowed the Tonto Basin into the Holbrook area. The presence in Holbrook of sympathizers for both sides led to a volatile mix. Holbrook in the 1880s was already known as one of the toughest and most lawless towns in the west, being frequented by the most notorious characters (Wayte 1962:152-153).

The Owens-Blevins Gunfight

The Pleasant Valley War, although initially a local feud between rival cattlemen, the Grahams and Tewksburys and their various allies, had important regional and even national repercussions. According to one contemporary correspondent, "Outside of the Apache Indian troubles, there has been in all the events of Arizona's history, no series of incidents that have attracted such wide attention, or has kept a good-sized section of the state in such a reign of terror as this Pleasant Valley feud during 1887 and 1888" (Dedera 1988:1). The feud was big enough and bloody enough to command national attention and was a major embarrassment to the territory. It helped persuade the rest of the country that the Arizona Territory was uncivilized and therefore unfit for statehood (Sonnichsen in Dedera 1980:ix).

It is with this kind of background that one of the most famous events of the war occurred in the town of Holbrook itself; the gunfight between the new Apache County Sheriff, Commodore Perry Owens (see Wayte 1962:154-159 for a biographical sketch) and Andy Cooper (aka Blevins or Blevans) on September 4, 1887. Andy Cooper was one of five sons of old Mark Blevins, one of the earliest ranchers in Pleasant Valley. Known as a rustler, gunfighter, and killer, he had adopted the name of Cooper in an attempt to evade felony warrants held for him in Texas. He was present at the first council of war at the Perkins' Store (see below) in Pleasant Valley where the local ranchers turned to Tom Graham to lead them against the sheepmen who were beginning to invade their valley. Though a staunch Graham supporter, Cooper was a "firebrand" who objected to Tom Graham's initial peaceful approach. It was Cooper who was alleged to have led the nightly attacks upon the Navajo shepherds herding sheep belonging to the Daggs Brothers of Flagstaff, thereby precipitating the conflict in the late summer of 1886 (Drago 1970:98-102).

His father, Mark Blevins, disappeared August 2, 1887 while searching for several horses that disappeared from his ranch. Believing that their father had been killed by the Tewksburys, a local ranching family that had taken the side of the sheepmen, the Blevins boys organized a posse led by Hampton Blevins and four Hash Knife cowboys. After a long day, the posse approached the Middleton Ranch, unaware that its owner, George Newton, had joined the Tewksbury faction which was present there in force. Caught by surprise, the posse was massacred, Hampton Blevins and John Paine, a Hash Knife cowboy were killed and several others badly wounded (Drago 1970:108-110).

The war changed dramatically with the ambush and death of Billy Graham at the hands of James D. Houck (see below). Enraged by the death of his young half brother, Tom Graham openly joined forces with Cooper and led an attack on the Tewksbury ranch leading to the death of John Tewksbury and Bill Jacobs. No one was ever indicted for any of these deaths, but two days later Cooper was in Holbrook boasting that he had killed Tewksbury and Jacobs (Drago 1970:113-116).

Between the disappearance of their father and the Middleton ranch fight, the Blevins boys had removed their women and children from their ranch to a house in Holbrook off of North Central Street and facing the north side of the railroad tracks. The house is still standing today and serves as the Holbrook Senior Citizens Center. It was here on September 4 1887 that Sheriff Owens came to arrest Cooper on an old rustling warrant (Barnes 1982:144-152; Drago 1970:117-122; Forrest 1979:109-138).

The reason the Owens decided to serve the warrant on this quite Sunday remains uncertain, particularly since Cooper had made it known that he would resist, but turn himself in at the next turn of the court in St. Johns (Drago 1970:120). The two had also apparently been compatriots at an earlier time (Wayte 1962:161). Drago speculates it was pressure from the Hash Knife and other large outfits to put an end to the rampant rustling, which was costing them fortunes (see also Wayte 1962:135), that inspired Owens. Barnes (1982:146-147), a contemporary resident of Holbrook and eyewitness of the fight, claims that it was direct pressure from the Apache County Cattle Growers' Association that forced a reluctant sheriff to arrest Cooper. Barnes was secretary and treasurer of the Association, as well as a county commissioner of Apache County.

In any event, Owens approached the Blevins house and demanded Cooper's surrender. As expected, a gunfight ensued on the doorstep of the house resulting in the death of Cooper, his young brother Sam Houston Blevins and brother-in-law Mose Roberts and the wounding of another brother John Blevins. The sheriff, who fought alone, remained unscathed and quietly rode out of town in a way that could only be scripted in Hollywood. The scene at the home, however, was a bloody and grizzly one:

Human blood was over everything. Two hysterical women, one the mother of two of the men, the other John Blevins' young wife, their dresses drenched with blood, were trying to do something for the wounded (Barnes 1982:151). Sam Houston died instantly but Cooper, with a mortal stomach wound, died a slow and painful death. Roberts lingered for ten days and the authorities were able to take several depositions before he died. John Blevins recovered quickly and, in a strange twist of fate, later served as Deputy Sheriff in Holbrook (Wayte 1962:238).

Many have felt that Owens' killings were unnecessary (Sonnichsen in Dederer 1988:xii), a point argued passionately by the Blevins' descendants in an exhibit in the Navajo County Museum in Holbrook. The exploit, however, cemented Owens' already well established reputation as a deadly and fearless fighter, despite his cavalier attitude for the safety of a large number of women and children in the Blevins House during the gunfight (Drago 1970:122). Although it did not end the war, the gunfight had a considerable effect by eliminating the staunchest supporters of the Graham faction and served notice to would-be rustlers that the laws would be enforced.

James D. Houck

Two other names from the pioneer history of Holbrook are important to this report and were involved, albeit in vastly different ways, in the Pleasant Valley War. The most notorious of these was James D. Houck, a bloodied Civil War veteran who, after being honorably discharged, hired out as

a civilian messenger for the army riding the grueling and extremely dangerous Fort Wingate to Fort Whipple route across northern Arizona (Carlson 19??:43-4; Dedera 1988:132).

In the process, Houck located and established a trading post and rail stop on Navajo land along the proposed railroad route. Houck ran the trading post between 1877 and 1885 (Barnes 1988:213, Carlson 19??:44-5), where he prospered with his bride, Beatrice McCarty. Within five years he had made enough money to buy cattle and sheep ranches along the Mogollon Rim (Dedera 1988:132). He moved his family first to Springerville, then to Heber (Carlson 19??:45), and finally to Holbrook. By then, Houck's rail stop had become the third station west of the New Mexico State line. A post office was established by the name of Houck in 1884, discontinued in 1895, and re-opened in 1930 (Barnes 1988:213). Houck's trading post is probably the same as the adobe trading post established in 1882 but owned by J.W. Bennett in 1913 (Arizona Highways 1987:92). Today, a town by the name of Houck can be found along Interstate 40.

Dedera (1988:133) describes Houck as a rabid Republican who represented Apache County in the legislature, known as the "Bloody Thirteenth" legislature (Barnes 1988:213). By May 1884, he was also the proprietor of the White House Billiard Parlor in Holbrook (Wayte 1962:109). Even at this early time, Houck was implicated in a number of violent events. He was arrested and charged with complicity in the murder of a doctor from Cincinnati at his station. He also helped form a citizen's committee that captured and hung a wagon train bandit. In 1885 he headed a posse of citizens which captured and hung two murderers five miles below Holbrook. This record of vigilantism continued in his involvement in the Pleasant Valley War.

Houck was a sheep and cattle rancher from Apache County who became a major partisan of the Tewksbury faction and in fact considered himself to be their leader (Dedera 1988:133). In the summer of 1887, he was commissioned a deputy of Apache County by Sheriff Owens. Although this commission was revoked later in the year, he continued to wear a badge and passed himself off as an officer of the law (Drago 1970:113).

Houck became directly involved in the hostilities when he killed Billy Graham, while claiming that he was seeking to arrest John Graham, another brother of Tom Graham, on an alleged warrant. In his role as officer of the law, he was also directly involved with one of the most controversial acts associated with the war; the triple lynching of James Stott, James Scott, and Billy Wilson at Stott's ranch midway between Pleasant Valley and Holbrook on August 11, 1888.

Houck claimed in one of three conflicting stories that he had arrived at Stott's Bear Spring Ranch with five deputies to arrest Stott and his companions for rustling. Shortly after serving the warrants a large party of masked outlaws rode up to the ranch, seized the prisoners, marched them off some distance into the trees, and lynched them. The warrants, however, did not exist and, although Stott apparently bought rustled stock, the evidence that he rustled stock remains contradictory (Dedera 1988:201-202; Drago 1970:133-137). In another story, Houck implicated Stott and his companions in the attempted murder of Jake Lauffer, an ally of the Tewksburys. The true course of events and reasons for the lynching remain a mystery, like many other important events of the war, shrouded in the persisting secrecy and

reluctance to talk by the witnesses and descendants of those involved (Dedera 1988:5,186).

Houck's actions and motives, however, remain suspect (see Wayte 208-210). Drago (1970:131) holds the most negative opinion of this character, describing him as a "black-hearted villain without a redeeming trait... he was a liar, braggart, coward and thief as well as a wanton killer." Dedera (1988:62) considers him a propagandizer and manipulator of press and politics. Although Houck has no defenders in being directly implicated in the triple lynching, there is some question as to whether he was the leader of the lynching party (see Dedera 1988:195). It is also patently clear that Houck stood to profit from Stott's death. Houck reputedly coveted Stott's Bear Spring ranch (as well as land in the Tonto Basin) since he ran a sizable band of sheep at the nearby Houck's Tank [Barnes (1988:213) states that Houck's Navajo trading post originally went by this name] where the water supply was limited. Houck boasted that he "would be running sheep on Bear Spring range before Stott made final proof on his claim and got U.S. title to it" (Drago 1970:132,135; Forrest 1950:209). When Stott's parents arrived at the ranch to investigate their son's death, they found Houck in possession. Houck did not prosper at Bear Spring and never took title.

The omnipresent Houck was also at another of the more notorious events of the war. This was the ambush and killing of John Graham and Charlie Blevins, the last fighting man of the Blevins clan, at the Perkins store by Sheriff Mulvenon of Prescott at the end of September 1887 (see below). This represented the last open hostile action of the war although individual murders and assassinations continued for years afterwards.

What became of Houck after these hostilities is contradictory. Drago (1970:136-137) claims that feelings against him were running high among the good citizens of Holbrook because of his involvement in the Stott lynchings. He left town and is reputed to have been killed in a brawl in a Bisbee saloon. Dedera (1988:256-7) presents a better documented story. Houck left the region to exploit the lucrative winter sheep pasturage north of Phoenix and is credited with killing another man in the Phoenix stockyards. Carlson (19???:47-60) presents a more complimentary picture of Houck's life and character, particularly after the Pleasant Valley war. He built a prosperous roadhouse, shearing station and stage line at Cave Creek in 1900 after moving to the Phoenix area. Here he served as a Maricopa County deputy sheriff and eventually was made justice of the peace. His prosperity and influence peaked in the early 1900s when a resurgence in mining activity in the area. He suffered declining fortunes in his last years after a series of setbacks. The mining boom dissolved and a period of drought led to a restructuring of sheep ranching in the region and the eventual collapse of his shearing business. The drought also led to the emigration of many of his neighbors to the detriment of his other businesses. The final blow came when the county rerouted Cave Creek Road, and Houck's various operations were bypassed. Separation and divorce added to his other problems. In March, 1921, in his seventy-fourth year, he committed suicide by taking strychnine (Barnes 1988:213; Carlson 18??:60; Dedera 1988:257).

Cephus F. and Charles E. Perkins

The Perkins brothers, Cephus F. and Charles E., were contemporaries of Houck and also pioneers of Holbrook. Cephus Perkins came to the region around 1880 as a carpenter building bridges for the coming Atlantic and Pacific Railroad (C.F. Perkins, Jr. personal communication:1988). He settled in Holbrook in about 1885 and for some years conducted a meat market. By the late 1890s, he was regarded as one of the most prominent citizens of Holbrook (Wayte 1962:331). At this time he owned 80 acres of land south of the river from Holbrook (the area of 50 standing structures) in addition to residential property in town and 160 acres west of town. He was also starting a large cattle ranch north of town.

Charles Perkins and his wife Mollie moved to Pleasant Valley where they owned and operated a store for 3 or 4 years at the height of the Pleasant Valley War. The store was a stone building erected during the Apache wars in the early 1880s as a fort for the settlers of Pleasant Valley (Forrest 1950:147).

It was at the Perkins store that the first council of war of the Graham faction occurred (Drago 1970:101). Because of its proximity to the Graham ranch, the store became the political and trading center of the Graham faction throughout the course of the war (Drago 1970:112). It was also a convenient meeting place for the lawmen that ventured into the valley. Unlike Houck, Perkins apparently remained neutral in the violence that surrounded him (Forrest 1950:364). He, however, was an important witness in several grisly killings.

Charles Perkins and either Ed Rose (Dedera 1988) or John Meadows, the local Justice of the Peace (Drago 1970:111; Forrest 1950:73,77), headed the party that went down to the Middleton Ranch to bury the bodies of Hampton Blevins and John Paine, the victims of the first major battle of the war. Perkins was also a member of the official coroner's jury and burial party that went to the Tewksbury Ranch to bury John Tewksbury and Bill Jacobs (Dedera 1988:136). Perkins told Will C. Barnes, the omnipresent observer of the the Pleasant Valley War, that he built the coffin for Harry Middleton out of boards from old packing boxes found at his store (Forrest 1950:143). Middleton, a Defiance Cattle Company cowboy, was killed in an abortive raid on the Tewksbury camp on September 17, 1887. Perkins also claims to have buried at least one other man, named Elliot, who had drifted in from nowhere and married the widow of W.H. Bishop, who had been an early member of the Tewksbury faction.

Perkins and his wife were also reluctant witnesses of the ambush of John Graham and Charles Blevins at their store by Sheriff Mulvenon and the posse that included J.D. Houck (Dedera 1988:164-9). The sheriff and the majority of the posse lay hidden behind the unfinished walls of the new house Perkins was building at the store, while other members of the posse led by Deputy J.T. McKinney of Apache County attempted to lure the Grahams from their nearby ranch (Drago 1970:124). They succeeded in attracting John Graham and Charles Blevins, who were surprised by the Sheriff when they came to the store. With little warning they and their horses were killed by a great fusillade of fire from the numerous guns hidden behind the unfinished walls.

Thus, in the space of two months from the beginning of August to the end of September 1887, the Graham faction lost most of its major partisans, including two of the three Grahams, Mark Blevins, and all five of his sons (John Blevins was only wounded but was sentenced to prison in Yuma for his involvement in the gunfight in Holbrook). Tom Graham stood virtually alone and was hunted by every lawman in the region.

The cowardly manner of this attempted arrest gave little credit to Mulvenon. It is unclear why Sheriff Mulvenon had decided to take such a secretive approach rather than the more obvious one of surrounding the Graham ranch and demanding the surrender of the entire band (Forrest 1950:146). But Mulvenon (and other law officers) apparently had made a secret understanding with the Tewksbury side (Forrest 1950:151), going so far as to include in his posse Houck, George Newton, and other avowed Tewksbury partisans.

The seat of Arizona's territorial government had just been returned to Prescott from Tucson. Political pressure to take vigorous steps to resolve the violence in Pleasant Valley, taking place in the state government's own county, may have been behind Mulvenon's action (Drago 1970:123). Dedera (1988:158-159) reveals that prior to leaving for the Perkins Store, Mulvenon met with Governor Conrad M. Zulick and District Attorney J.C. Herndon in a virtual council of war. Until then, the law and courts had completely failed to stem the violence that ran rampant along the Mogollon Rim (Dedera 1988:204). The rustling and killings were not only an embarrassment to the whole territory, but were spreading to surrounding areas.

Immediately after Mulvenon left the valley, Sheriff Owens led another large posse down into the valley in search of Tom Graham and any remaining supporters. For better or worse, the law had come down squarely on the side of the Tewksburys and Graham's remaining allies began to rapidly desert him (Dedera 1988). Rather than ending, however, the war entered a new and more insidious phase of quiet ambushes and mysterious disappearances.

Despite his neutrality, Perkins suffered from the war. He had difficulty obtaining supplies for his store because of the reign of terror that spread throughout the valley. His brother, Cephus, became involved when he led a pack train of supplies from Holbrook to the store. He camped on his way out near the Rim. His camp was raided at night and all his mules were stolen. The mules returned to Holbrook some time later on their own (C.F. Perkins, Jr. personal communication:1988).

Although Charles Perkins and his wife lived in the midst of the conflict, they had little to say even to their own nephew about the many events they witnessed or learned second hand. The veil of secrecy noted by the war's many chroniclers was strong and persistent. According to their nephew it was the war that eventually drove Perkins and his wife out of the valley. The store as well as the Graham ranch was purchased by Silas W. Young, who came to the valley to look after the livestock interests of Tom Graham who had earlier moved to Mesa to escape the war (but where he was eventually murdered by the last Tewksbury in the last and one of the most cowardly acts of the war). His daughter Miss Ola Young was an early chronicler of the war and served as the first postmaster in 1890, a post she held for 50 years.

Mormon Settlement

The Mormons began exploring the Little Colorado for potential settlement in the early 1870s. By 1876 four groups of colonists arrived in the area (Granger and Weaver 1979:21; McClintock 1985:138). One group, led by William C. Allen, first settled three miles east of Joseph City at Allen's Camp. Several months later they moved two miles west to Allen's City. A second group led by George Lake went downstream and across the river from Joseph City to establish Obed, originally known as Lake's camp. A third party under Lot Smith went further downstream to Sunset Crossing near Cottonwood Wash where they established Sunset. The fourth party under Jesse O. Balinger established Brigham City southwest of Sunset near what became Winslow (Granger and Weaver 1979; McClintock 1985; Westover and Richards 1963:7). These early settlements, particularly those near St. Joseph, were very unstable due to the unreliable and treacherous nature of the Little Colorado River (McClintock 1985:141-142). Dams were washed out repeatedly (St. Joseph alone built eight dams by 1894), costing great fortunes to rebuild; a financial burden that the small communities could not bear despite help from the Church.

By 1878 the first Mormon settlements were established along Silver Creek in the upper Little Colorado River valley and along other permanent streams draining north from the Mogollon Rim (see Walker and Bufkin 1979:27-28). Snowflake, located 28 miles south of Holbrook, was the most prosperous of these towns. The first settler in this area was James Stinson in 1873. By 1878 he was irrigating 300 acres of land with water taken from Silver Creek. In July of that year Stinson sold his ranch to William J. Flake, who founded the Mormon settlement (McClintock 1985:164).

An interesting aside to this tale is that Flake paid Stinson with cattle to acquire the ranch. Stinson used these cattle to start the first large ranch in Pleasant Valley. Widespread rustling of this herd in the early 1880s, allegedly by the Grahams and Tewksburys who were then partners, led Stinson to forge an allegiance with the Grahams. Dederer (1988:51-76) argues that this betrayal by the Grahams was the underlying cause of the animosities that were to explode into war in 1887. In addition, Flake sold a large starter herd of cattle to the Grahams in 1882 (Dederer 1988:73-74). Flake was also in the party that went to bury Stott, Scott, and Wilson and later bought Stott's personal property including books that allegedly proved he was up to his elbows in rustling (Dederer 1988:199,202). His son, Osmer D. Flake enlisted in the Apache County posse and wrote an important eyewitness account of the ambush at the Perkins store by Sheriff Mulvenon (Dederer 1988:164-168). The Pleasant Valley War is obviously an important historic theme in which the lives of many if not most of the important pioneers of the region were interwoven.

More germane to the story of Mormon settlement and history of Holbrook was the arrival of Joseph Fish in Snowflake in 1879. Fish, a long-time resident and patriarch of the Mormon Church (McClintock 1985:166) was an accredited historian of the day (Dederer 1988:199). He wrote an extensive, albeit unpublished regional history. Dederer (1988:61) terms Fish the "war correspondent" who lived in the midst of and reached the height of his reportorial powers at the height of the Pleasant Valley War. But Fish's involvement in and recording of the early history of Holbrook is equally important.

Economic difficulties in Snowflake in the late 1870s forced Fish to seek work elsewhere. As a result, he went to work for John W. Young, the contractor for the Atlantic and Pacific Railroad. According to Wayte (1962:62), John W. Young was a first counselor to Brigham Young and came to Sunset on January 26, 1878 to establish the Little Colorado Stake. Fish served for seven months in early 1881 as Young's accountant in Gallup, New Mexico (Fish n.d.; McClintock 1985:166). He returned to Snowflake and became one of the organizers of the Arizona Cooperative Mercantile Institution (ACMI) on June 27, 1881. The store was established under local Church control primarily to serve the Mormon communities in the upper Little Colorado Valley. On November 1, 1881, Fish was placed in charge of the newly completed store at the end of the railroad track being constructed across Arizona (McClintock 1985:133-4). Young operated a store in this same location but ran into financial difficulty. The ACMI bought out Young, acquiring his stock and assuming his debt.

Another Mormon resident of Snowflake and organizer of the ACMI was John Henry Standifird. His journals reveal that he visited the early settlement of Holbrook on several occasions beginning March 10, 1881. More important, he himself constructed the ACMI store in October of that year. The Holbrook station, however, was moved early in 1882 to its present site leaving Fish and the ACMI isolated in the desert (see below). As a result, the store was abandoned and moved to Woodruff (Fish n.d.).

Logging

Logging was another major economic enterprise that developed in the Mogollon Rim area. Holbrook became involved in this activity as a major transshipment point when the Apache Railroad was completed in 1919 to haul lumber out of the forests of the Mogollon Rim and White Mountain area (Wayte 1962). This railroad originally ran from McNary in the White Mountains, through Snowflake, and terminated at Holbrook (Walker and Bufkin 1979:46-47). For many years logging filled some of the economic gap created by the gradual demise of the cattle industry beginning with the collapse of the Aztec Land and Cattle Company.

Originally it was believed that logging was a significant historic theme that might be relevant to the historic properties under investigation. The Apache railroad, however, runs on the west edge of Holbrook far from any of the historic properties. Archival research also failed to uncover any evidence that historic characters associated with these properties were involved in logging.

Archival Research

The investigation of the two historic properties involved in this testing and evaluation program, the Thompson House and area of standing structures known as the Perkins Addition, required that title and tax records be checked and historic research be conducted. The information gathered in this research provided important information about the early history of Holbrook and, specifically, the early history of the Perkins Addition.

Old Holbrook

Archival research revealed that, contrary to what was presented in the Research Design (Ciolek-Torrello and Altschul 1988), there is considerable confusion about the origins of the town of Holbrook. Contradictions in the location and makeup of what is known as Old Holbrook (also known as Horsehead Crossing and Berados) were found. Important evidence, however, was found suggesting that the historic foundation (AZ P:4:23 ASM) represents the site of the Thompson House and was part of Old Holbrook.

According to most authorities, the present site of Holbrook was established in 1882 as a station along the recently completed Atlantic and Pacific Railroad (Granger 1960:240). The first post office was established at this point in September 18, 1882 (Barnes 1988:208). In 1881 and prior to the establishment of the new station, Young, the railroad contractor, had maintained his headquarters at Horsehead Crossing, then the main crossing point of the Little Colorado for travelers to the White Mountain and Silver Creek area. The first mention of Horsehead Crossing was made in May 1870 by Albert F. Banta who was serving as a guide, scout, and dispatch carrier under General George Stoneman and was to search for a wagon road. At that time there was not a settlement or single sole living in the area (Wayte 1962:74-75). Until the mid 1870s, Horsehead Crossing was used to cross the Puerco River by east-west traffic which stayed on the north side of the Little Colorado River (Wayte 1962:74-75). However, with the establishment of Fort Apache, St. Johns, and the Silver Creek settlements, travel went south across the Little Colorado River below the junction of the Puerco.

The precise location of this important crossing is unclear. Most authorities place Horsehead Crossing two miles east and up river from the present town of Holbrook. Granger (1960:240) places this point above the junction of the Little Colorado and Puerco rivers, while Barnes (1988:211) puts it just below the junction. Wayte (1962:74) agrees with Barnes and places it on the north side of the Little Colorado River just below the point where the Puerco joins it. There is some evidence, however, that Horsehead Crossing was located south of the present townsite (McClintock 1985).

Most authorities believe that the early community of Berado's Station (variously spelled Berada, Berrando, Berardo, Brudos) and Horsehead Crossing were one and the same. Barnes (1988:211) and Granger (1988:240) place Berado's Station at the confluence of the rivers while McClintock (1985:134,163) places both Berado's and the crossing two miles west at the present townsite. Hinton (1978:296) describes Horsehead Crossing in an early travel guide to Arizona as a settlement above Allen's Camp which in 1876 contained two stores, neither of which were owned by Mormons. Granger, however, claims that the Mormons built two additional stores at Berado's, although these could have been built after Hinton completed his travel guide. This is probably true since the ACMI store was not built until 1881 (McClintock 1985:133). Barnes uses Hinton's description in reference to the ruins he himself visited in 1882, but McClintock's view is supported by an 1879 Government Land Office map of Township 17 North, Ranch 21 East by J.L. Harris (Figure 1.5).

Barnes provides a more complete description in another account (Wayte 1962:84). Berado's place (i.e., Horsehead Crossing) was a state station on

the overland mail route between Santa Fe and Prescott. It consisted of a general store, frontier saloon, stage station and corrals, and a half dozen rough adobe dwellings scattered around in a grove of grand old cottonwood trees. Three or four Navajo hogans were also located off to one side.

Both Berado's place and Horsehead Crossing are indicated on early territory maps (Smith 1879; Eckhoff and Riecker 1880), but the scale of these maps is too small to identify their precise locations. Local residents interviewed describe two different crossings; one was on the Puerco about a mile or two north of the confluence and the other was directly below the confluence. Wayte (1962:31) believes that Horsehead Crossing was on the Puerco, just above (perhaps 300 or 400 yards) the confluence. According to Wayte, Beale records crossing the Puerco where a sandstone rock comes down to the banks of the river. However, a brief survey of this stretch of the Puerco by the project geomorphologist and principal investigator revealed such an outcrop was present only at or directly below the confluence (see below). These two crossing points probably represent the two different routes used by east-west and north-south travelers.

Local Residents also claim that adobe ruins are present on the Padilla ranch near the Puerco crossing. This has only added to the confusion. Granger (1960:240) claims that Juan Padilla built the first house above the junction in 1871, but after a short time put Berado Freyde in charge of this place; which then came to be known as Berado's (see also Wayte 1962:77). The Padilla family, ostensibly the oldest continuous residents of Holbrook, still reside on their ranch above the confluence of the Little Colorado and Puerco rivers.

Wayte (1962:90,96,100) presents yet another version of the location of the early settlements at Holbrook. Although Wayte agrees that Horsehead Crossing was located near the confluence of the two rivers, he places Old Holbrook (the early train depot founded by the railroad contractor, Young) two miles east and up river of Horsehead Crossing and four miles east of the present town site. He maintains that the railroad depot was then moved twice; first to Horsehead Crossing and then to the present townsite although he provides no evidence for this unusual view.

A review of the authorities reveals at least three major contradictions about Old Holbrook. It was located either above or below the confluence, or at the present townsite; it was owned by either the Padilla family or Berado; and it contained either two Mormon stores or none. These contradictions can be resolved if it is realized that Horsehead Crossing, Berado's, and the Padilla ranch were three distinct places. Old Holbrook was located at Horsehead Crossing in 1881 and moved a year later to Berado's place where the present townsite was established.

Horsehead Crossing was located just below the confluence of the rivers as indicated by Barnes. Historically, crossing the Little Colorado River was extremely dangerous because of quicksand conditions. There were only a few possible crossing points along the river where it passed over a bedrock shelf. One such shelf was present at Sunset Crossing and another at Horsehead. Such a shelf does not occur south of Holbrook where Harris and McClintock place it. However, there is a bedrock narrows just to the west of the confluence. The floodplain on both sides of this point appears to be underlaid by Moenkopi sandstone covered by Pleistocene gravel. This bedrock floor eliminates the

quicksand conditions common in areas floored with recent alluvium (Tom Kolbe 1988). This spot is the most likely place for the historic Horsehead Crossing. Furthermore, this same bedrock outcrop rises at the edge of the floodplain to a butte referred to by some local residents as Horsehead Butte because of its former shape. The realignment of the railroad in 1938 cut through the butte drastically changing its shape. The Thompson House and the junction of two major historic roads occur at the foot of this butte (Figure 1.5). [Wayte (1962:32) attributes the name of the crossing to local informants who claim that all that could be seen of a horse crossing the river at high water was its head.]

Berado's place was in fact located as early as 1873 (Barnes 1988) at the present site of Holbrook in the NE quadrant of the SE quadrant of Section 6 as indicated by Harris and McClintock. Summerhayes (1979:105-109) passed through the area in April 1875, but does not mention Berados. Instead, her party stayed at Walker's Ranch (see below) on the site of old Camp Supply (Summerhayes 1979:107). Wayte (1962:78) places the arrival of Berado in 1876 and numerous sources prove Berado had a well-established business by 1877. He closed his business and left for Albuquerque in 1882 at about the time the railroad arrived. Wayte (1962:88-91) provides two reasons for his departure. The stage station at Berado's place was abandoned with the establishment of the railroad depot at Old Holbrook. At the same time, Berado lost his wife and family to a wealthy local rancher, Henry Huning.

The adobe ruins identified by local residents on Padilla's ranch probably represent a third settlement of unknown age. No early maps were found showing a settlement in this location although buildings are shown on the Sun Valley U.S.G.S. 7.5' Quadrangle (1986) in the vicinity indicated by local residents and north of the present Padilla homestead. The ruins on the Padilla homestead are possibly those seen by Barnes in 1882. Barnes' account, in turn, probably led to Granger's claim that the store was owned by Padilla and Berado was merely his manager. Barnes, probably more accurate in this instance, claims that Berado was the owner. Berado Freyde was a member of the Peoples' Party that made the first major gold discovery (Rich Hill) near Prescott in 1863 (Wayte 1962:37-39) and, as a result, was a man of some wealth.

Incontrovertible evidence for this reconstruction is provided by the autobiography of Joseph Fish. Fish provides an eyewitness account of the events of Old Holbrook that are backed up by his reliability as an observer and independent evidence. Old Holbrook was founded in 1881 by John W. Young at the site two miles east of the present town site. Young had a store there along with his construction headquarters. This may have been one of the Mormon stores mentioned by Granger. The Mormons from Snowflake bought out Young and established the second store built by Standifird and operated by Fish. Fish paid Young \$500 for clear title to the lot and \$250 for store buildings of canvas and frame. Included in this price was an agreement to put in a side tract to the lot (Wayte 1962:102).

This store, however, was abandoned when the railroad authorities decided to move their depot two miles west to Berado's place, which became the present town of Holbrook. On February 16, 1882 the books were removed to Woodruff where a new store was established; the wooden store was pulled down and the tracks removed. Fish's (1881:182) account of the store and its demise is presented here.

I returned to Holbrook the next day after conference where I again took up my labors. About this time a very disagreeable thing came up or made itself manifested. Intimations were made that the railroad would move their depot or make their permanent depot at the Berardo place, about a mile and a half or two miles below. It was stated that they had some trouble with John W. Young and as he owned all the ground at this place they moved below where Superintendent Smith had an interest in the land. But later on I was led to believe that the place for a Depot was better for them below than where they had their temporary siding and that they never intended to have a depot at this place which was on a curve and a steeper grade. Brother Young ought to have known that they would never build a permanent depot on this curve. I did not know anything about this but understood the reason for the move later on. The moving of the depot would place us in a bad situation and we would be left out on the desert two miles from the depot, and we would be compelled to move our place of business. They had nothing to move but their box car and we had nothing but a tent building and a little frame one. These conditions worried me some and on January 10th, 1882 I went up to Snowflake mainly to consult Brother Smith upon the matter. We talked the matter over but did not come to any definite conclusion. After this interview I returned to Holbrook. On January 28 the railroad moved their telegraph office, etc. down to the Berardo place. After my visit to see Brother Smith I commenced to try and get a place for our store at the depot or near it. In this I had many obstacles (sic). I tried to buy a piece of land from Pedro Montano, he and Supt. Smith owned it. Montano stated that he and Smith had made an agreement that neither one would sell any without the others (sic) sanction and this he had not as yet been able to get from Smith. I wrote to Supt. Smith to see if I could rent a piece not being able to buy, he stated that they did not care to rent any. I was barred out on every endeavor to get in here and I believed that this was a plan to keep us out. Supt. Smith and John W. Young, it was stated, had some difficulty about their business affairs and Smith believed that Young had some interest in the store and so made this arrangement so as to keep us out. Brother Smith wrote to the authorities of the Church and explained the situation and asked their advice, and they thought that it would be as well to move our business to Woodruff, so I understood afterwards.

Despite their problems, the Mormons eventually returned from Woodruff and built an A.C.M.I store from stone in Holbrook in 1888. This was still in operation in the business district on the south side of the railroad tracks in 1913 (Arizona Highways 1987; Rosenberg 1984). This became Burk's Glass and Lock Shop and was razed sometime between 1984 and 1986 (Rosenberg 1986).

Fish's account is consistent with other evidence. It is supported by Harris's 1879 map which locates Berardo's at the present townsite (Figure 1.5). A check of title records reveal that the Pedro Montano mentioned by Fish patented the land where Berardo's is located on February 10, 1883 (Deed Book 2, pg. 315, Navajo County Courthouse). Montano had arrived on the scene in 1881 and in 1882 probably claimed the property abandoned that year by Berardo. There is no evidence that the depot was moved twice as suggested by Wayte.

Instead Fish went directly to Montano who was at Berado's place rather than to some intermediate location. The only property owned by Pedro Montano was that which he patented at the present townsite. He sold this parcel in 1884 to Francis M. Zuck who is generally considered the founder of Holbrook (Wayte 1962:108). Wayte, however, gives credit to Berado for founding Holbrook; a position that is more consistent with this reconstruction than with the position of Wayte, who believes that Berado's place was two miles east of the present townsite.

The modern Santa Fe Railroad also makes a sharp curve, corresponding with that mentioned by Fish two miles east of the modern townsite. This spot is also the location of the Thompson House and is in the vicinity of where the preponderance of evidence indicates Horsehead Crossing was.

A later undated map of Township 17 North Range 21 East (Figure 1.6) shows the original track of the old Atchison and Santa Fe Railroad making an even sharper curve around Horsehead Butte. It also shows the same settlements and location for Horsehead crossing as noted on Harris's 1879 map although several errors are readily apparent. The small townsite of Holbrook and the railroad tracks are shown in the north part of Section 6, about a quarter mile north of the present tracks and the historic part of downtown Holbrook. The confluence of the Puerco and Little Colorado rivers is also located almost a mile east of where Harris placed it and its present location. Although these rivers could have migrated considerably in the last century, this location is not possible since the Little Colorado River is entrenched in a deep canyon at this point.

This map also places the buildings identified by Harris as the Thompson House on the south side of the old tracks which run along the southern corners of Sections 5 and 4. The historic foundation at AZ P:4:23, however, is located on the north side of an old railroad bed which runs across the northern corners of Sections 6 and 9. The foundation may not be Thompson's House; but given the other errors, it is more likely that the placement of the old tracks on the map is in error.

In conclusion, the old Horsehead Crossing community mentioned by the earliest chroniclers was probably a dispersed settlement consisting of Berado's in Section 6 and Padilla's original homestead east of the Puerco with Scott's and Thompson's houses in between (Figure 1.5). The actual crossing of the Little Colorado was probably located at the bedrock outcrop just below the confluence of the two rivers. Fish's account corroborates that the original site of Old Holbrook was probably near the confluence of the Little Colorado and Puerco rivers at Horsehead Crossing. A survey of the old rail bed between the Puerco and modern townsite suggests that the location of Thompson's house fits best with Fish's description of the location for the original depot at Old Holbrook. No evidence of another historic occupation was noted along the old bed, although the south side of the tracks are covered by recent aeolian deposits. The almost completely buried remains of a foundation were identified several hundred meters east of the Thompson House, but no diagnostic artifacts were associated.

Township 17 North, Range 21 East G. & S.R.M.
Range Conservation Program

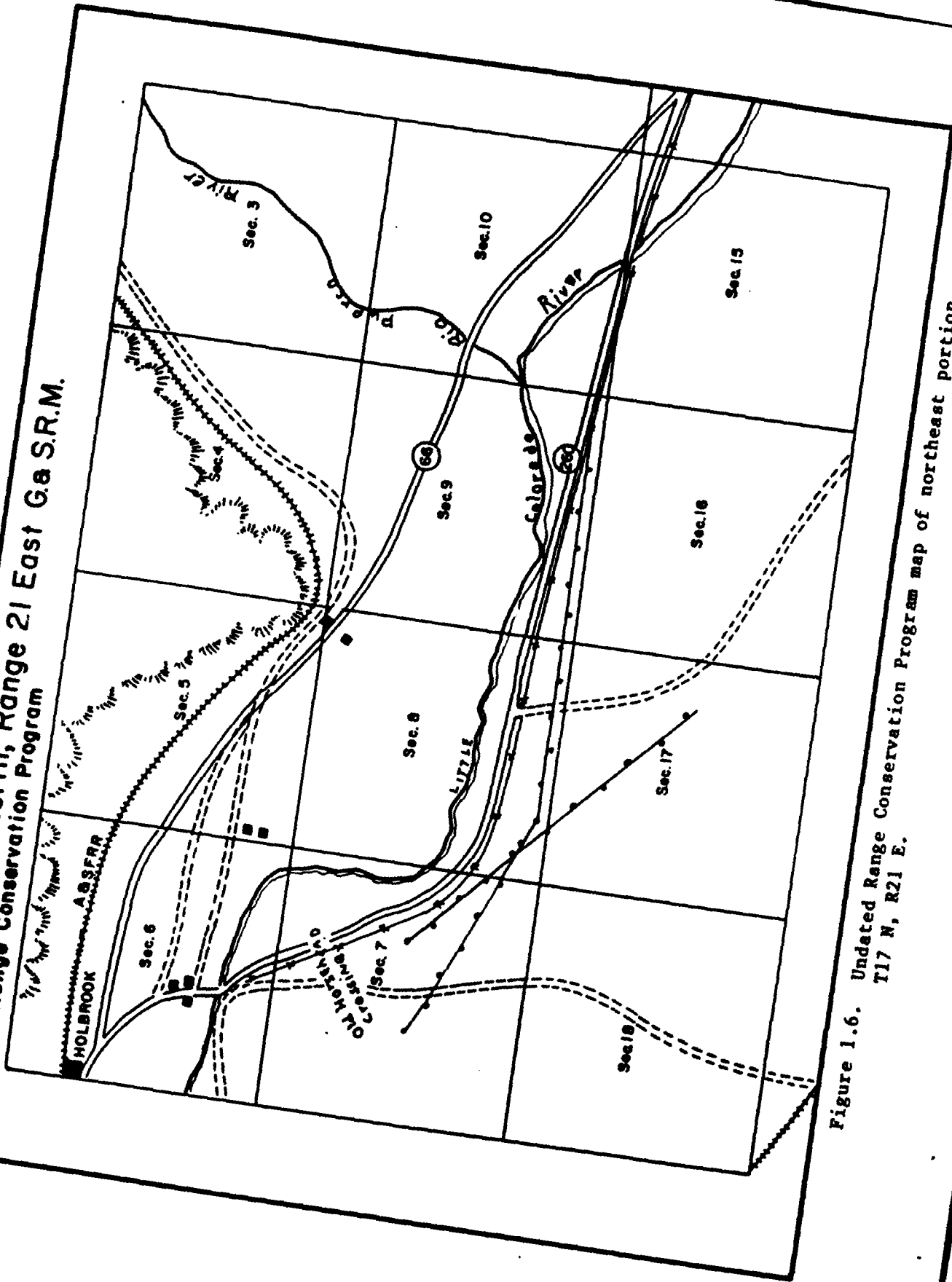


Figure 1.6. Undated Range Conservation Program map of northeast portion T17 N, R21 E.

Perkins' Addition

Most of historic and modern Holbrook lies on the north bank of the Little Colorado River. A portion of the town, however, occurs on the south side. The area within the floodplain on the south side of the river is the area of standing structures that were assessed as part of this investigation. This area is known as the C.F. Perkins Addition to the town of Holbrook. It was surveyed in 1910 by Charles E. Perkins, brother of Cephus F. Perkins and owner of the Pleasant Valley store. A map of this survey was filed and recorded in the Navajo County Recorder's Office in 1922.

The area, legally described as the S1/2 of the SW1/4 of Section 6 in Township 17N, Range 21E of the Gila and Salt River Meridian, was patented by Jose Montano on January 7, 1890. Jose Montano, however, claimed ownership at a much earlier date since he sold a deed to the property to Alfrides (or Alfredes) O. Montano, Pedro's wife. The sale was recorded in the Apache County Deed Book 3 (pg. 51) on February 2, 1886. Shortly thereafter on June 16, Alfrides and her husband Pedro recorded a sale of a portion of this property including an adobe house to Pauline Barth (Deed Book 3, pg. 292). Pedro Montano, presumably Jose's brother, patented the N1/2 of the SW1/4 of Section 6 on February 10, 1883. It was this latter property on the north bank of the Little Colorado River that Fish had attempted to purchase from Montano early in 1882. It was this same property that Pedro Montano sold to Zuck in 1884 and which became the business district of Holbrook.

The Montanos then sold the majority of the south half property to J.O. Adamson and others. This was recorded in Deed Book 5 (pg. 437) on October 23, 1890. Adamson turned around and immediately sold the land to J.D. Houck, the infamous would-be lawman and combatant of the Pleasant Valley War. This sale was recorded on the same date in Deed Book 5 (pg. 440) although an earlier possible filing date of October 8 1888? [the exact year of the transaction is not legible] is indicated in the records. It is interesting that many of these transactions occurred prior to the actual date of patent by Jose Montano.

Although J.D. Houck would clearly qualify as an important local and regional historical figure, his association with the Perkins' Addition appears to have been minimal. He apparently did not reside at the property as there is no mention of standing structures within the property description recorded in the deed books. Houck sold the property to C.F. Perkins on May 18, 1896 (recorded in the Navajo County Recorder's Office Deed Book 1, pg. 249). At least two houses, however, were present on the original Montano patented land that were not part of the sales to Adamson, Houck, and Perkins. These included the Juan Baca or Montano place and the Burbage residence. Thus, there were at least two homesteads in the area that were not on the land eventually sold to Perkins. At least one of these apparently was a homestead retained by the Montano family.

Like Houck, Perkins did not reside on the land but intended to use it as a horse pasture for his packing business (C.F. Perkins personal communication, 1988) (see Pleasant Valley War). Perkins returned to his family home in Connecticut to get his mother. Upon his return to Holbrook, he found several Mexican families squatting on his land. Rather than evict them, he decided to sell. Perkins had the land surveyed and between March 4, 1910 and 1924 he disposed of almost all the property at about \$10 a plot. Some of the notable

buyers included the Ortega and Armijo families and Juan N. Padilla. The length of Perkins' absence from Holbrook is unknown, but the area was already known as a Mexican town in 1910 (Wayte 1962:267).

Juan and Ambrosia Armijo purchased Lots 11-13 and 16-18 in Block 115 from Perkins on June 22, 1914. It is unknown when they constructed their home on this property, but according to Garnette Franklin, the home was present in 1919 when she first arrived in Holbrook. Ambrosia Armijo sold the property to Milton Malone on August 1, 1946. Subsequently it came into the possession of the Ortega family. Although it is now known as the Ortega House (Rosenberg 1984) the house was built by the Armijos and served as their residence for many years. The Armijos may have resided on the property as early as the 1890s. The water tower associated with the house is much older and stylistically dates to this early time (Graham 1988).

Thompson's House

No information regarding a Thompson or Scott living on the Little Colorado River during the 1870s and 1880s was uncovered during the archival research, although a Scott's ranch was identified on Silver Creek in 1878 in the Journals of John H. Standifird. Summerhayes' 1875 reference to the Walker Ranch on the site of old Camp Supply, however, is intriguing. Although the precise location of Camp Supply is unknown, most authorities place it one or two miles east of the present townsite of Holbrook as indicated above. Summerhayes (1979:108) describes the Walker place as an old sheep-ranch without windows (just open spaces covered with muslin).

Barnes (1988:474) describes the Walker ranch as a stage station. He attributes the name to Asa C. Walker who located on the Little Colorado river near the junction with the Puerco in 1874. He ran cattle there for several years, raised a large family and moved up to the White Mountains about 1882. Wayte (1962:76) finds evidence that a person named John Walker was in 1874 a resident of Horsehead Crossing along with Berado and George Bryant. Thus, the Walker Ranch could be the same place as what Harris later identified as the Scott or Thompson House.

Coming north from Fort Apache, however, Summerhayes does not mention crossing the Little Colorado until her party arrived at the Sunset Crossing. If she had crossed the Little Colorado at the Horsehead Crossing, she probably would have mentioned it since she devotes considerable effort to the discussion of the difficult crossing at Sunset. Thus, it is unlikely that the Walker Ranch is on the north side of the Little Colorado in the vicinity of the Thompson House. It is unclear what the implications are for the location of Camp Supply. It is possible that the camp was located on the south side of the Little Colorado, but this is unlikely since the soldiers would have had to cross the river to get to the main east-west supply route.

CHAPTER TWO RESEARCH QUESTIONS AND STRATEGIES

Given the historical contexts discussed above, we can proceed to present a series of research questions designed to alleviate gaps in our present understanding of this region. Our research questions are presented in a two-step process. First, general research domains are defined which are germane to all archaeological and historic resources in the Holbrook area. We then present site specific questions for each domain and for each component. We have directed the following discussion into two sequential sections; the first dealing with the prehistoric site and the second with the historic site and buildings.

Prehistoric Research Domains

Although archaeological research has been conducted in the Holbrook area for almost a century, the area ranks among the most poorly understood in Arizona. Until recently, the predominant interest of most researchers in the area has been on time/space relationships and the definition of cultural phases. Despite this fact, the chronology of the area remains poorly developed as a result of the paucity or absence of absolute dates. Most chronological inferences have been based on ceramic cross-dating, often using very small collections. This problem has been exacerbated by the lack of reporting of basic data. In addition, most of the work was carried out over 20 years ago. Advances in archaeological theory and data recovery technology have been considerable since that time. Thus, the basic archaeological understanding of the area has lagged far behind other areas in Arizona and, as in the adjoining Petrified Forest (Stewart 1980), is sadly out of date.

Culture Chronology

Chronology remains one of the most important problem domains that need to be addressed in the Holbrook area. Chronology provides the basic framework for addressing virtually all other research domains. Although the development of chronologies for the central Little Colorado are beyond the rudimentary stages, there are many chronological problems that need addressing.

Dating the Tolchaco focus is probably the most significant temporal problem in the early part of the sequence. This situation is a result of the general lack of excavation at these sites. Although Tolchaco sites are primarily surface artifact scatters, extensive testing could reveal subsurface features, such as fire pits, that would produce material for absolute dating. Tolchaco sites are usually multi-component sites with evidence of later Anasazi occupation. Excavation would also assist in determining the extent of Anasazi use of these lithic resource areas.

The Pecos Classification and subsequently developed phase systems in the Colorado Plateau probably provide some of the best temporal frameworks available to archaeologists anywhere. The mixture of ceramic types and styles in the central Little Colorado Basin, however, has led to problems in the

application of this framework resulting in a confusion of phases and periods.

The definition of the Holbrook phase within the Pueblo II period appears to be particularly problematic, especially since the span of this phase is so short (25 years). The small number of excavated Holbrook phase sites and the absence of reported absolute dates are contributing factors to the problem. Much more excavation aimed at the recovery of absolute dates in association with ceramics is necessary to confirm the existence of this phase and specify its exact relationship to preceding and following periods. For example, Holbrook Black-on-white, the diagnostic of the Holbrook phase, continued to be common in the following McDonald phase. Thus, the question remains as to whether these two phases are discrete temporal units or if the Holbrook phase represents a functionally distinct subunit of the McDonald phase (compare Gumerman and Skinner 1968:191-192).

In addition, no definite evidence of a Pueblo I occupation has been found in the central Little Colorado Basin or the adjacent Petrified Forest. Pueblo I material in these areas has only been found in Basketmaker III sites and there is some question as to whether this period has any validity outside of the San Juan heartland (see Stewart 1980:96-98).

The ongoing studies at the Homolovi Ruin group are producing absolute dates that should provide a solid basis for dating the end of Pueblo III and PIV in the area. Unfortunately, suitable samples for dendrochronology, the most precise dating method, have not been recovered in the early excavations (Hays and Adams 1985:6). Similar data are necessary for the earlier time periods which are fraught with more temporal problems.

Subsistence

Subsistence in the central Little Colorado is even less well understood than chronology. With the exception of the recent Homolovi studies, subsistence remains have not been recovered or reported from sites in the central Little Colorado creating a situation where there is a complete lack of basic data about subsistence. It is not clear to what extent early Anasazi populations in the area were farmers.

Gumerman and Skinner (1968:191) have proposed that the inhabitants of the area farmed small widely scattered plots in the mouths of arroyos. However, it is not known what inspired the large population increase that characterized the Holbrook and McDonald phases and how this might have been affected by changes in subsistence practices or even genetic changes in corn. It has also been suggested that hunting played an unusually important role in subsistence as a result of the diverse faunal inventory of the area. None of these propositions, however, has been investigated with subsistence data.

Social Organization and Village Layout

Information regarding the internal organization of prehistoric villages in the central Little Colorado Basin is minimal and superficial. Little data are available on issues such as social status, internal activity areas, or the

structure of domestic groups. This situation differs dramatically from our understanding of some of the more intensively studied Anasazi areas, particularly where preservation has been ideal.

What is known is that prior to Pueblo IV, settlements were very small and widely scattered. This pattern even applies for the preceding Pueblo II and III periods when population densities were at their zenith. Dispersed settlement was characteristic of most of the Anasazi area during Pueblo I and II, but the absence of any population aggregates in the central Little Colorado Basin from Basketmaker to Pueblo III is not characteristic. Most of the sites were apparently occupied by single nuclear or extended families although no in-depth analyses have been conducted to determine the size and permanence of these occupations.

Gumerman and Skinner (1968:194) believe that the small size of settlements was a response to the unusual aridity of the area. "Small groups could have been self-sufficient in areas along intermittent streams and arroyos, but large settlements would have been difficult to support except along the Little Colorado." They also view the unusual number of ceremonial structures at the larger Plaza and Sundown sites as providing ceremonial participation and social cohesiveness for the many dispersed families.

Trade and Intergroup Relations

Holbrook and the central Little Colorado Basin lie at a strategic point in northern Arizona. The Puerco and Little Colorado valleys were apparently a natural and important route between the lower Little Colorado-Flagstaff area and west-central New Mexico. The upper Little Colorado also provided easy access into the central Little Colorado area. As Gumerman and Skinner (1968:185) point out, it is no accident that Interstate 40 and the Santa Fe railroad follow the Little Colorado-Puerco route between Arizona and New Mexico. They also suggest that the extreme aridity of the central Little Colorado area made communication across this area difficult. As a result, it remained as a boundary between the major culture areas and branches in the surrounding higher elevation and better watered areas. Gumerman and Skinner, among others, attribute the development of local cultures in this boundary area to such factors.

Beyond the changing distribution of ceramic and architectural traits, little is known about the interaction of the central Little Colorado and adjacent areas. It is reported that the Chevelon Ruin contained large amounts of shell indicating strong ties to the Hohokam area (Gumerman and Skinner 1968:196). However, important details such as whether shell artifacts were manufactured at Chevelon or if it was a distribution point for Hohokam shell into the Colorado Plateau country is not known. The occurrence of shell in the central Little Colorado prior to Pueblo IV is also unknown.

Recent work at Homolovi does provide some details although the sample is very limited. Apparently, shell was a highly desirable item at the Homolovi sites although the amount of shell was relatively small due to the great distance from the source - the Gulf of California (Urban 1985:6). There is also evidence of local manufacture of locally available freshwater species and reworking of broken specimens; however, most shell was obtained in finished

form, probably from the Hohokam to the south.

Obsidian was another important trade item in prehistoric Arizona. The nearest source areas are in the Flagstaff region. Beyond its presence, little is known about obsidian use and exchange in the central Little Colorado area (Hays and Adams 1985:Appendix H).

Prehistoric Research Questions

The prehistoric site to be investigated as part of this project is a moderate sized artifact scatter situated on a low gravel-covered ridge overlooking the floodplain of the Little Colorado River (Wells 1985). According to Wells, artifacts include a moderate density of flakes made from a variety of chert, a few pieces of ground stone, and a small number of ceramics. The latter include plain gray ware, corrugated gray ware, and black-on-white ware (COE 1985). Prior to fieldwork, we inspected the site and identified ceramic types indicative of Pueblo II or Pueblo III.

No surface architecture was observed but several small unshaped sandstone slabs were noted. Wells (1985) also reports a depression full of loose soil next to the slabs, which is interpreted as a pothole. As noted earlier, slabs were often used in the foundations of surface structures or to line storage pits. Thus, there is a potential for the presence of structures at this site.

Although small PII and PIII habitation sites are the most common site type in the central Little Colorado area, few have been investigated in such close proximity to the river. Still fewer earlier sites have been investigated. The presence of ceramics indicate that it is not a Tolchaco site, although the concentration of ceramics and wide distribution of lithics suggest that a Tolchaco component may be present. Furthermore, due to the lack of reporting of basic archaeological data, detailed analyses of data from any site would be a significant addition to our knowledge of the prehistory of the area.

The following site specific research questions are derived from the research domains discussed above:

Culture Chronology

1. How extensive is the prehistoric scatter? Are discrete spatial or temporal components present?
2. What is the local geomorphic setting and how does this affect the site's formation and preservation?
3. Are there any subsurface cultural deposits? If so, how deep are these layers and what is their areal extent?
4. To what time period/periods can this site be assigned?
5. Can this site contribute to a refinement of local or regional chronologies, especially ceramic or projectile point sequences?

The first three questions primarily concern the integrity of the site, whereas the fourth and fifth deal with the cultural assemblage. Basically we need to determine at the testing level the size of the site and the nature of the deposits (stratified, mixed, etc.).

The first step in appraising a site's integrity is to gain an understanding of the local geomorphology, and the site's relationship to the paleolandscape. Since the site is located on the first terrace of the Little Colorado River, the site probably has been affected by fluvial processes, for example erosion or burial by flood sediments. If the latter process predominated, it is possible that the observable surface remains reflect the presence of much more substantial subsurface remains.

Once we have determined the integrity of the site, we need to assess its potential for providing chronological data. In this case we will want to know the range of pottery types and projectile point styles, and if these diagnostic artifacts are found in features or other deposits that might yield absolute dates.

Subsistence

1. Are there any floral or faunal remains, and if so what is the temporal and spatial variation in the distribution of these remains?
2. What was the basic focus of the subsistence strategy? For example, did the prehistoric users of the site take advantage of the riparian resources at the site, or were they there to exploit the lithic or faunal resources that might be associated with the river?
3. Does this strategy (or strategies) differ substantially from the strategies proposed for other prehistoric or protohistoric sites in the region?

Subsistence questions are listed from specific to general. At the most basic level we need to determine whether subsistence related data can be obtained from the site. If the answer to this question is 'yes', then we will want to know what types of cultural deposits (e.g., houses, middens, storage pits, etc.) are likely to contain subsistence remains. Beyond questions of presence and context, we want to discern whether the results will yield a well-rounded picture of subsistence practices or are limited to certain activities which may skew our interpretations. Finally, we need to evaluate whether the data from the Archer site will add significantly to our knowledge of prehistoric resource utilization patterns in general. Thus, we need to compare the results with those of other sites in the region.

Social Organization and Village Layout

1. Are all areas of the site characterized by the same artifact assemblages, or are there differences in the assemblages which might reflect differences in social organization or function

represented by a given part of the site?

2. Are there any subsurface features present, and if so what are the functions of these features? Are these features differentially distributed across the site, and does this reflect function or social differences?
3. Are features randomly distributed or is the site "front" oriented with pit houses backed by surface structures facing a plaza?
4. Is this site a farmstead, hamlet, or village? Is there any evidence of ceremonial features?

At the testing level we are not attempting to analyze site structure, only determine whether this line of inquiry would be profitable to pursue at this site. Basically, we will want to answer two questions about the site with the testing results; (1) is there spatial variation in the distribution of artifacts, and (2) are habitation and extra-mural features present? If the answer to the second question is 'yes', then we clearly will be able to address at least some aspects of social organization. However, even if the answer is 'no', we may be able to study certain aspects of site structure as long as the spatial patterning of artifacts represent cultural behavior and not natural processes (i.e., artifact distributions do not simply reflect erosional patterns). Data to address these questions must come from controlled collections of the surface and subsurface (see Research Strategies).

Trade and Intergroup Relations

1. Are there any non-local trade items at this site? What types of trade items are represented? What was the source of these trade goods? Is there any evidence of craft activities involving non-local items or local items that may have been exchanged?
2. Do Mogollon, Anasazi or Sinagua ceramics occur? Are ceramics Kayenta, Little Colorado, or Cibola types?
3. Are any social ties with groups outside of the region indicated in the materials present, and with whom are these ties?

The study of trade relations at the testing level will center primarily on the presence or absence of exotic goods. It is unlikely that testing will allow us to examine the social context of trade (i.e., the relationship between exotics and social status, power, and access to other materials). The testing results, however, should provide the data to determine the nature and direction of trade. Specifically, what local items were being traded out and what non-local items were being traded into the site. We will be looking specifically for materials known to be prized by prehistoric Southwestern groups (e.g., shell, obsidian, turquoise, etc.). We will also examine non-

local goods found at the site, such as pottery and lithic raw materials, to determine where the items originated, and, if possible, to determine the function of the trade items (e.g., determine what was in a Hohokam pot by performing a pollen wash of the interior).

Historic Research Domains

Transportation

During the later half of the 1800s and the early 1900s Arizona was being incorporated into the greater United States political, social and economic system. Radical changes in the state's ethnic composition, economy and social structure occurred as various innovations in technology and transportation were introduced into the region. Probably the most important theme in this development was transportation. In fact, much of the region was viewed by Eastern politicians as being good for only one purpose - to establish railroad routes to southern California (Meinig 1971). Changes in transportation were the engines of many of the other changes in the region.

Transportation has been a key to the development of Holbrook throughout its history. Its location near Horsehead Crossing made Holbrook an important location as early as 1863 when Camp Supply was constructed. The development of the Beale Wagon Road and its replacement by the railroad were two events that had a tremendous impact on the early history of Holbrook. The railroad and Interstate 40 continue to play a key role in the survival of this town.

The Thompson House may also have been extremely important in terms of transportation. Its location near Horsehead Crossing and the junction of the Little Colorado Road and the main east-west route suggest that it served as a way station for early travelers prior to the construction of the railroad. Its location on the curve of the old railroad tracks suggest that the Thompson House may have also been at the headquarters of J.W. Young where the railroad terminated in 1881 and Old Holbrook was first situated.

The Perkins' Addition was involved in transportation in a less direct way. Perkins, who was involved in the construction of the railroad, used the land as a pasture for the animals he employed in his freight business, a common occupation of the early residents of the area.

Ranching

Between 1881 and 1883, the construction of railroads through Arizona brought numerous and rapid changes to the state. The railroads had an immediate impact on the regional economy, providing a more efficient means of transporting bulk items such as cattle and lumber. Holbrook, with its railroad station, became a central distribution point for supplies and transshipment point for cattle and sheep for the entire upper Little Colorado and White Mountain area. As a result, large scale cattle and sheep operations were developed along the Little Colorado and ranching became one of the most

important economic activities in the region. The profound social impact of this event is typified by the Pleasant Valley Wars which regularly overflowed from their battleground in the Tonto Basin to the Holbrook area.

The Thompson House may have been a ranch house. Several of the settlers concerned with the Perkins' Addition were ranchers and some were even directly involved in the Pleasant Valley War in one way or another.

Historic Research Questions

The historic site has been described as a roughly rectangular foundation made of cut stone with mud mortar (Wells 1985). It is about a foot high and 70 feet long from east to west. The east side of the structure is approximately 24 feet wide, while the west side is narrower. No artifacts are associated with the structure although a narrow raised roadbed with a cinder-covered surface is located about 30 feet south of the structure. This roadbed extends at least 600 feet northwest and an unknown distance southeast and roughly parallel to the modern railroad.

The isolated location of this foundation and the close association of the elevated roadbed suggest that the site is strongly linked to transportation. The Beale Wagon Road and other historic roads passed through the immediate vicinity. The location of the structure two miles east of Holbrook places it near the location of Old Holbrook and Camp Supply. It is likely that the Thompson House represents an early rest stop or store for travelers. Many of these early stops were also ranches; thus, sheep or cattle ranching cannot be excluded as a possible function of the house. The location east of Holbrook also suggests little likelihood that the site was directly involved with the Apache Railroad, which brought lumber to Holbrook.

Thus, early transportation and ranching serve as the major domains from which research questions are devised for the Thompson House. The basic themes are the role of transportation in the development of the Holbrook area, and the integration of this region into the large Southwestern and national economies and social system. The most important theme that the historic site can contribute to is an elucidation of the early settlement of Holbrook, its location and composition. We know the broad outline of how these various themes interacted to change the region, but not the specifics or the effect that they had on everyday life in the Holbrook area. The historic site seems to offer an opportunity to study one of these thematic research questions.

Transportation

1. What is the age of the structure and roadbed and how might they be related in time to the Beale Wagon Road, Horsehead Crossing, Camp Supply, or the historic train station in Holbrook?
2. Is there any evidence for other structures such as corrals or water towers that might be associated with a stage stop or railroad stop/station?

3. Are there any buried trash deposits or privies associated with the structure?
4. Is there a floor or any interior features preserved within the structure?

The first two questions are aimed at determining the function of the historic features and their potential significance for our understanding of local history. The other two questions are aimed at determining the integrity of the site. The fact that only the foundation of the structure is remaining suggests little or no potential significance relative to Criterion "c" in Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800. The possibility exists, however, that significant information regarding historic construction techniques or artifact use may be recovered from this site. If little or no trash is found and the foundation represents just that, then the bulk of information about the site may be derived from archival sources.

Ranching

1. Is there any physical or documentary evidence that a ranch existed at the site?
2. If so, when was the ranch in operation?
3. Who owned the ranch?
4. What did the ranch produce, and what markets did it supply?
5. Why did the ranch cease operation?

Ranching in the Little Colorado and Mogollon Rim areas are among the better documented economic pursuits. Until the 1870s when the Army finally subdued Native American groups, ranching was generally so hazardous that few people tried to maintain herds. Initially, most of the herds in Arizona supplied the military forts and Indian reservations. Shipping cattle to markets outside of Arizona did not become important until the advent of the railroads.

If the site did represent a ranch, it would be informative to know who owned the ranch. It is possible that some person, or their descendent, who lived or worked at the ranch might still be alive. Such people, if they could be found, might provide useful data. Interviews with such informants could provide interesting and useful accounts of everyday activities on ranches in the Southwest, as well as provide specific data on the ranch in question.

Probably the most interesting question is what did the ranch produce, and what were the markets for its products. Historical accounts of ranching in the region at this time would indicate that the ranch would have produced cattle for shipment out of the state. Meat, however, was also delivered to the lumber mills and forts in the White Mountains and Fort Apache Reservation.

The question is whether the ranch supplied the local area, or did it ship its products by rail to markets outside of the Southwest. During the testing phase archival research will be needed to address many of the microeconomic questions, while historic artifactual data from surface and subsurface contexts must be obtained to determine whether the nature of ranching activities can be reconstructed.

Research Strategies

Once the questions upon which eligibility will turn have been posed the next step is to devise and execute a research strategy that will obtain data pertinent to these questions. There are three basic classes of data needed to address the research questions: (1) archival and informant data; (2) surface data; and (3) subsurface data. The first class of data relates primarily to the historic site, although information concerning changes in the landscape, land-use, and any private collections could be extremely valuable in assessing the prehistoric site as well.

Surface data will take the form of systematic artifact collections from the both site areas. Surface collections provide the best method of obtaining an extensive look at a site. Unlike test excavations, which tend to be small, surface collections generally cover the entire site. The goals of such collections are to define the boundaries of the site, and within the site to define the extent of any potential components. In addition the surface collection may provide data on intrasite spatial patterning and variability in artifact classes. These data are critical in determining whether or not the prehistoric site could be used to address questions pertaining to social organization, village layout, trade or intergroup relationships.

Subsurface testing provides the final critical pieces of data. From subsurface tests we can determine whether intact cultural deposits and features exist; the types and numbers of these deposits; whether these deposits are buried, and if so, how deeply; and the impact that natural processes, such as erosion and flooding, have had on the sites. From these data we will be able to document whether future archaeological work at either site can profitably address the research questions posed.

Field Procedures

Archival Research and Informant Interviews

Archival work was initiated prior to conducting testing in the field so that the data collected from documentary sources could be used to assist in directing excavations. A number of sources were checked, including county courthouse records, the local museum in Holbrook, the Arizona Historical Society, the Arizona State Museum library, and books on local and regional history. This research uncovered historic maps of the site areas, ownership records, early photographs, accounts of life in early Holbrook and the types of activities that might be expected to occur at the sites, and information on the types of material remains that might be encountered. Interviews with

local informants were also conducted to gather information on both the historic and prehistoric sites. Finally, the National Register of Historic Places was checked to see if any structures in the area had previously nominated.

Surface Collection

Contour maps based on aerial photographs flown in 1982 were obtained from the City of Holbrook for both archaeological sites. The original maps were scaled at one inch to 100 feet with a contour interval of two feet. The site areas were enlarged from these base maps to a scale of one inch to 20 meters. The foundation at the Thompson house was located beyond the edge of the aerial photograph and, as a result, the contours were interpolated for this feature.

Once maps were obtained, a grid of 20 x 20 m square units was superimposed on the surface of the Archer site. The unit size represented a compromise between spatial control and level of effort. Our goal was to determine if spatial variability in artifact distribution existed, and if so, whether this variability correlated with subsurface features or deposits. Using a 20 x 20 m unit size, we expected to sample between 35 and 40 units; a total more than adequate to discern spatial variability at this site.

Two crew members each collected a 2 m wide transect in each grid unit. Thus, we collected two 2 x 20 m swaths; or 80 sq m. of collection out of a 400 sq m. total unit (i.e., 20%). A random element was an essential part of the design, thereby allowing parameter estimates to be computed in a straightforward manner. The approach we used was to randomly select the starting location of each 2 m swath within each 20 x 20 m unit by selecting a number between 1 and 20. All swaths started along the east-west baseline and were oriented north-south.

This sample was augmented in several ways. Diagnostic artifacts encountered outside transects during the surface investigation were collected by grid provenience. The core area of the site was also carefully examined at several stages of the investigation and all ceramics observed were collected by grid unit. Finally, areas on the periphery of the site, where densities were extremely low or, as in one case, where artifacts were concentrated along a steep bank where transecting was impractical, were selectively collected by grid unit.

The surface artifact density around the foundation at the Thompson House was extremely low and a handful of diagnostic artifacts were first point provenienced and then collected. Two large collection units were established around two concentrations of historic trash west of the foundation. Diagnostic artifacts such as the bases and necks of bottles and metal artifacts of discernable function were collected from these areas. Scrap metal, wire, and fragments of glass were not collected.

Subsurface Testing

Subsurface testing was aimed at accomplishing three basic goals: (1) an assessment of the integrity of each site; that is, whether the site contains intact subsurface deposits; (2) a determination of whether cultural deposits are deeply buried by alluvium from the Little Colorado River; and (3) an evaluation of the nature and condition of cultural features and deposits.

The first goal is best obtained through an analysis of soils and sediments. By examining river bank profiles as well as excavated trenches, the paleolandscape can be reconstructed and the effects of post-occupational processes on site formation and destruction assessed. These data are among the most critical in determining the research potential, and hence eligibility of the site.

Given the close proximity of both sites to the Little Colorado River, the possibility of flood deposits burying cultural layers is fairly high. It is quite possible for such sites to have successive layers of cultural deposits separated by layers of sterile flood deposits. In the case of the prehistoric sites, these deposits can be several meters thick, and thus not amenable to study through the use of hand held augers, soil probes, or test pits.

The most economical means of obtaining data to address the first two goals is to excavate backhoe trenches. The goal of these trenches is to provide sufficient subsurface exposure to determine if there are any buried features, or deeply buried cultural layers that may be intact. The trenches also provide an assessment of the areal extent of such deposits. Trenches were placed on the site so as to provide an adequate sample of the various geomorphic situations in which buried cultural remains might be expected, and to provide adequate coverage of the activity areas or artifact distributions determined by the surface collection.

Our final goal was to document the types and probable numbers of intact subsurface cultural deposits at both sites. The current sample of excavated prehistoric features in the region is not low, but detailed reports are rare or absent. Thus our knowledge of excavated features is poor and skewed in favor of general architectural data. Several features found within test trenches or visible on the surface were partially excavated during the testing. The primary goal of feature testing was to determine what kinds, and how many of such features might be found at the site, and whether or not they are likely to yield important data necessary to address the research questions. We desired to know the state of preservation of the features, their size, function and the types of artifacts they might contain.

Test pits were used as the means of obtaining information on subsurface cultural features and deposits. The size of the test pit depended primarily on the anticipated depth of excavation. Small test pits, such as 1 x 1 m units, can only be excavated to a depth of about one meter below ground surface. Below this point they become unworkable, and depending on the soil matrix, the walls can collapse. The historic site was expected to contain shallow features which could be tested with small test pits. The features in the prehistoric site, however, were expected to be potentially deeper requiring the use of larger test pits, such as 1 x 2 m units. Initial test pits and backhoe trenches revealed that bedrock was just below the surface in

much of the site area and prehistoric features did not extend below a meter below the surface where bedrock was not present. As a result, the work plan was altered to excavate a larger number of smaller test pits in order to cover a larger area of the site. In only one situation was a larger test unit employed. Two 1 x 2 m test units were used to explore an enigmatic feature (Feature 3) found in what was originally a 1 x 1 m unit.

All test pits were hand excavated in 10 cm levels, following natural strata whenever possible. Strata measuring over 10 cm in depth were subdivided into 10 cm levels. All fill was screened through 1/4 inch mesh hardware cloth. Soil samples were taken from all strata bearing cultural deposits and from all features found. Where multiple strata were encountered in a feature, samples were taken from each stratum. At least two walls of each unit with multiple strata were drawn in profile, and photographs in black-and-white and in color were taken of all stratigraphic anomalies discerned.

Features encountered in the test pits were drawn in plan and photographed. They were also sectioned, and the profiles drawn and photographed. The remainder of the feature was preserved for subsequent excavation. All appropriate samples, including soil, flotation, carbon, etc., were taken from tested features.

CHAPTER THREE RESULTS OF FIELD INVESTIGATIONS

The Archer Site

The Archer site is a small prehistoric Anasazi hamlet composed of two clusters of structures dating from as early as BMIII to the Holbrook phase of PIII. These structures represent a farmsteads or field houses (see Ciolek-Torrello 1987; Ward 1978 for definitions) and were associated with a much larger prehistoric lithic and historic artifact scatter. The lithic scatter represents long term quarrying and rock testing activity utilizing local river cobbles. The age of this activity is unknown and is possibly of an older age than the associated houses. The historic scatter dates to the 1910s and early 1920s and appears to represent the remains of typical domestic refuse from this period. No features were associated with this historic material and it may merely represent historic dumping activities. Two heavily disturbed areas were found near historic concentrations suggesting the possibility that historic structures may have been present at one time.

Surface Distributions

After the entire surface of the site was carefully inspected, a grid system composed of 20 x 20 m grid units was superimposed over the observed artifact scatter (Figure 3.1). A total of 40 of these units were sampled; many on the north and east edges were only partially investigated since the artifact scatter did not extend beyond the fenced area. The total area systematically collected amounted to approximately 14,800 m². Artifacts were recovered from all but two of these units. Additional collections of diagnostics were obtained from nontransected areas in three units near the site center and from seven units in areas outside the grid bringing the total collected area to approximately 18,000 m².

A total of 64 sherds was found in sampled units and 105 additional sherds were recovered from the augmented collections. In all, 1717 lithics were found in sampled units and 78 were from augmented collections. The different artifact classes were not evenly distributed over the site area. Virtually all of the ceramics were found in two locations: one at the center of the site which corresponded with the highest point of the ridge on which it was located and the other on the edge of the bench at the southwest corner of the site (Figure 3.2a). Interestingly, the fish net map of the ceramic distribution shows this second concentration as increasing towards the site edge and being sharply truncated. This illustrates well the situation in this area, where the edge of the bench has collapsed into the floodplain, presumably removing the center of this concentraion.

Lithic debitage was much more widely distributed over the site. Two major concentrations can be distinguished (Figure 3.2b). One corresponds with the large ceramic concentration at the center of the site and the intervening area between the two ceramic concentrations. The other is a very dense concentration in the northeast part of the site. This also appears to be truncated in the northeast corner at the railroad right-of-way. The lithic

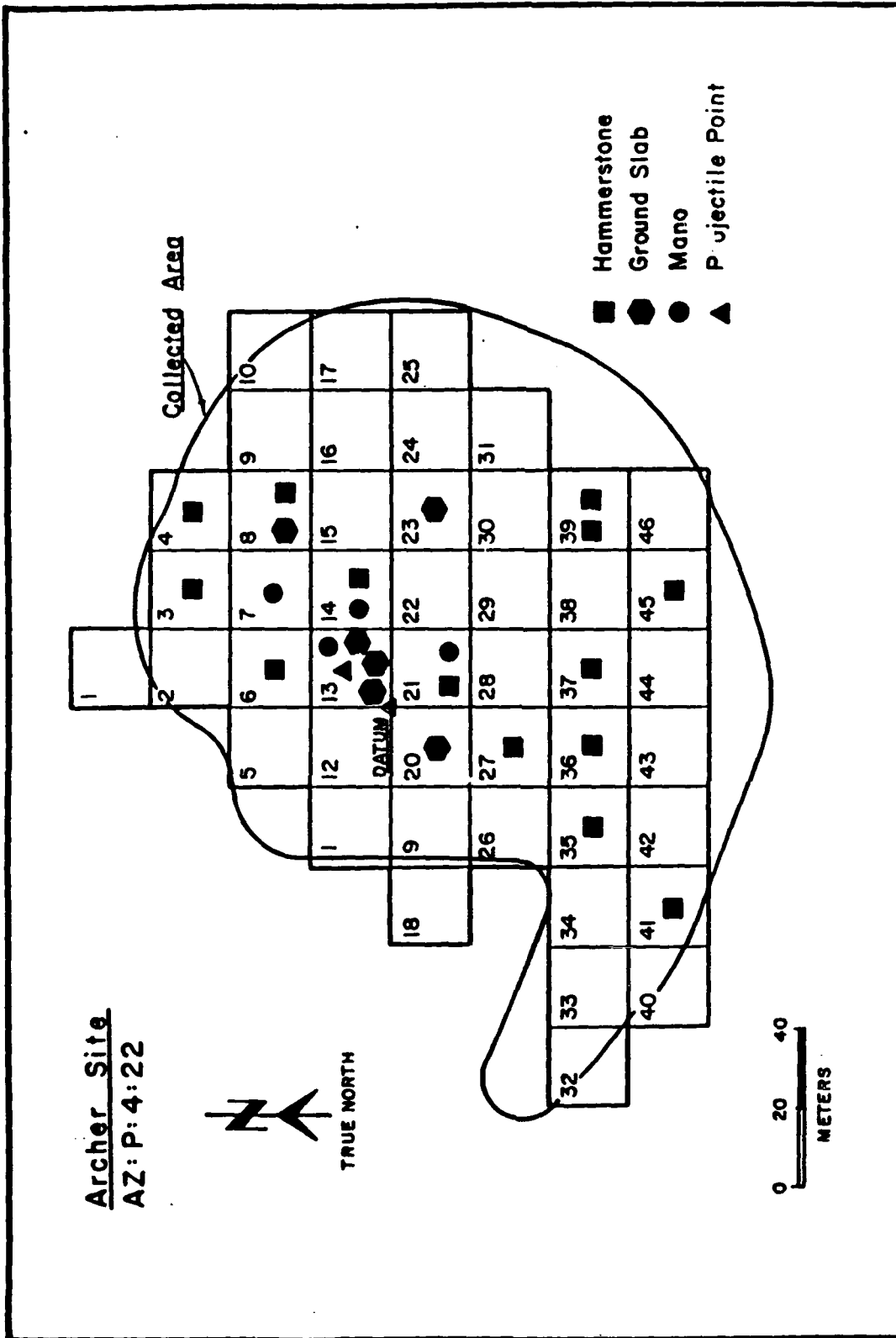


Figure 3.1. Collection grid units and distribution of miscellaneous artifacts at the Archer site.

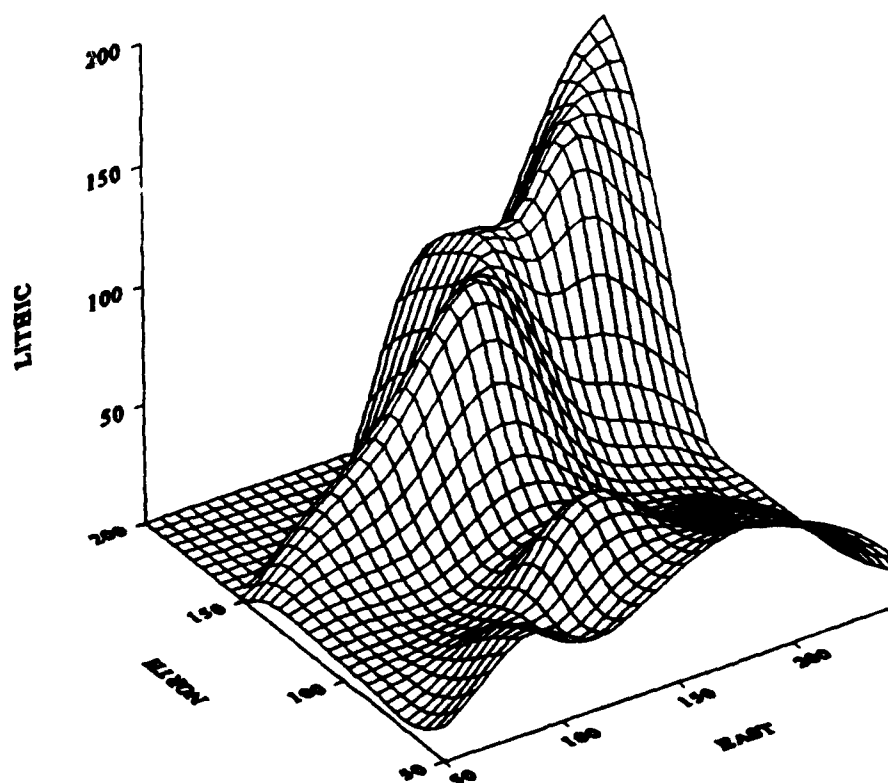
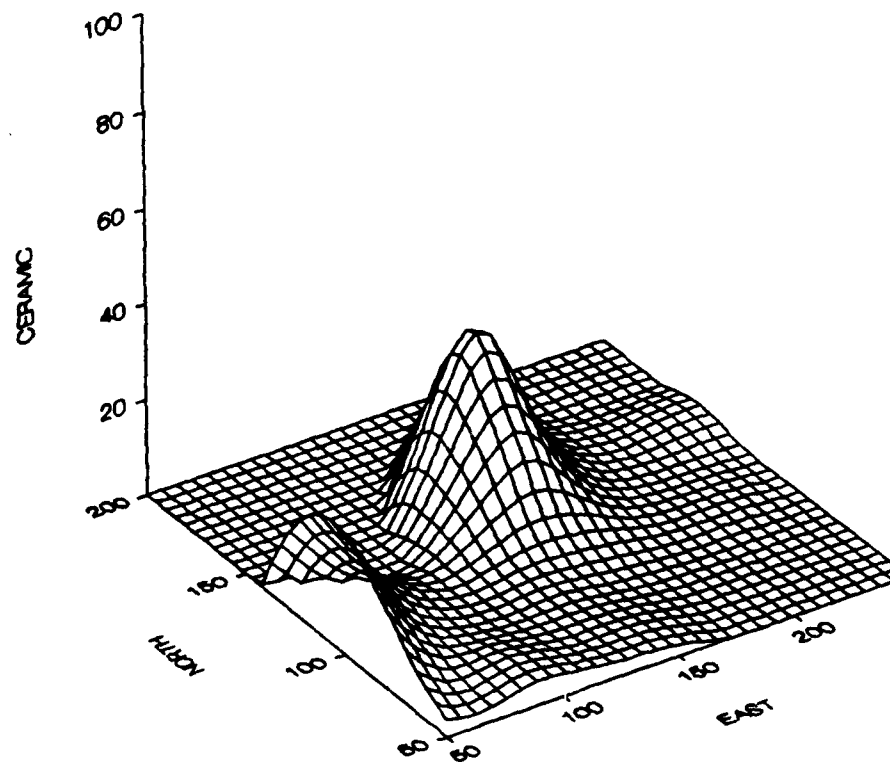


Figure 3.2. Fish net map of ceramic and lithic distribution at the Archer Site.

concentration, however, dropped off rapidly as it approached the right-of-way fence and probably did not continue northeast before the railroad's construction.

The surface archaeological and geomorphic assessment indicated that areas outside of the eastern and southern boundaries of the site (corresponding with the railroad right-of-way) had been subjected to historic flooding and erosion. These areas had no surface indications and held little potential for subsurface remains. The northern boundary of the site was formed by the railroad right-of-way and was completely modified. No surface indications of archaeological remains were found north of the right-of-way. The western edge of the site was less distinct, but generally corresponded with the lower slopes of the ridge. The southwest boundary was not precisely identified. Concentrations of artifacts were found eroding sporadically along the entire length of the terrace edge above the Little Colorado floodplain for an indefinite distance. Most of these, however, were associated with a high spot or bench along the edge of the terrace. Unfortunately, these artifacts were only found on the edge of the terrace, suggesting that the subsurface remains with which they might have been associated had been largely destroyed by river bank erosion.

Subsurface Testing

Ten 1 x 1 m test pits were excavated at the Archer site (Figure 3.3). These were judgementally located based on artifact distributions and topographic diversity. A summary of these test pits and their contents is presented in Table 3.1. In general, test pits were excavated until bedrock or a similar nondepositional natural stratum was encountered. In two cases decomposing sandstone bedrock was encountered within 10 cm of the surface and no subsurface artifacts were found. Subsurface lithics were recovered from all other test pits, although they were usually restricted to the uppermost stratum, usually the top 10 to 20 cm. Subsurface ceramics exhibited a similar but narrower distribution as the surface ceramics. Ceramics were recovered from three test pits, usually at deeper levels than the lithics and in association with features. Bone was found only in one test pit.

Two features were found in the course of test excavation. Feature 3, located in test pit 1, was an enigmatic feature consisting of a fire pit and associated cultural remains. Due to the enigmatic nature of this feature, the original small test pit was expanded to a 1 x 2 m test unit. A second 1 x 2 m unit was then excavated to a shallow depth adjacent to the first. These tests revealed that Feature 3 was the remains of a pit house (see below). Features 2a and 2b, shallow pits associated with a burned surface directly below the modern surface, were found in test pit 9. Two additional features, Features 4a and 4b, were observed eroding along the edge of the terrace above the floodplain. These were also tested with small 1 x 1 m excavation units.

Based on these initial tests and surface observations, seven backhoe trenches were positioned to test the most likely locations of subsurface features. These were placed in two groups: one near the center of the site at the top of the ridge and the other on top of the flat bench along the terrace edge. Each trench was excavated to a depth of 1-1.5 m. The first trench was excavated over 2 m deep into subsurface Pleistocene cobbles, but this

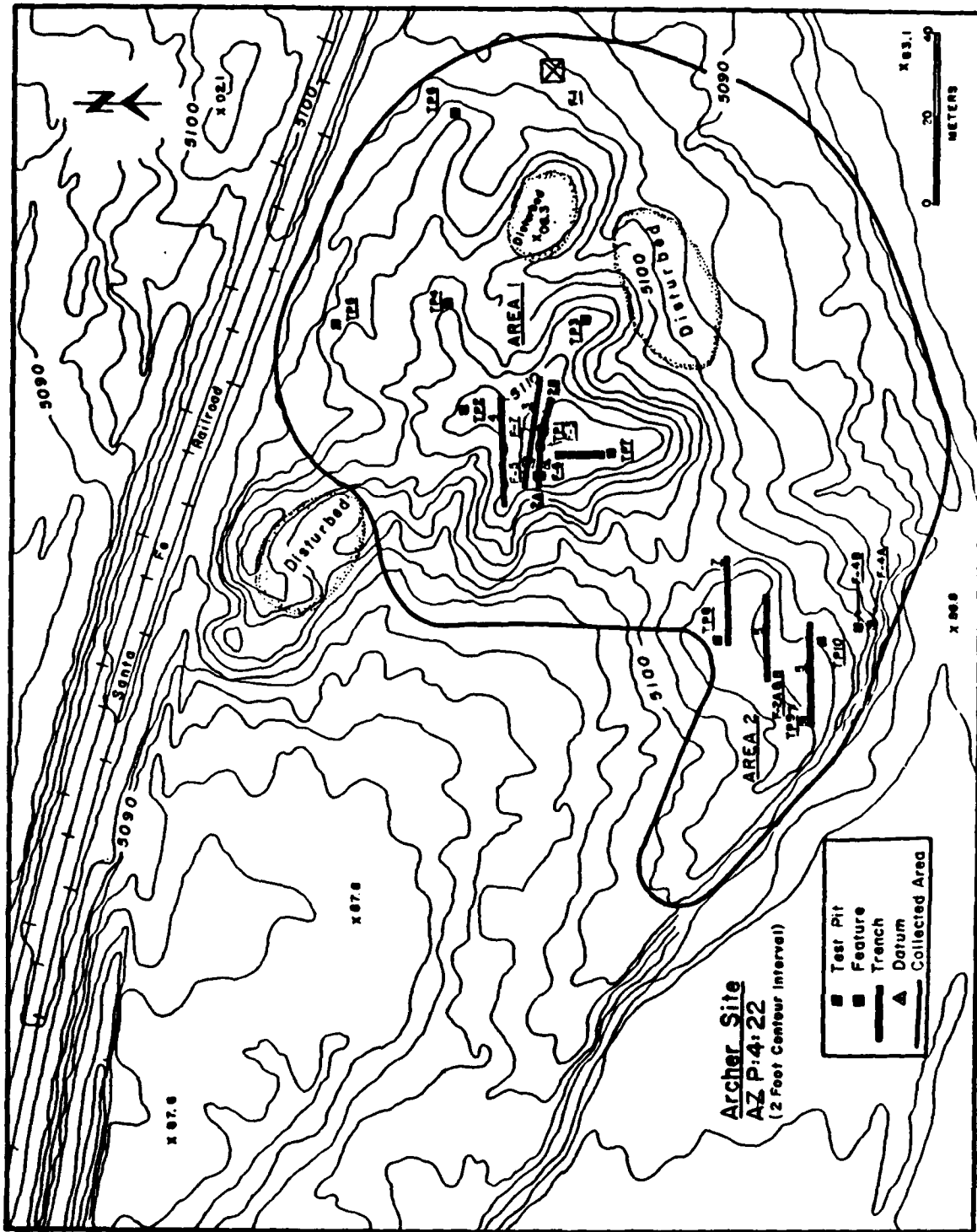


Figure 3.3. Archer Site plan showing excavation units and features.

Table 3.1. Summary of Test Pits at the Archer and Thompson House Sites.

SITE AZ:P:4__	TEST LOCATION PIT	SIZE (m2)	DEPTH (cm)	LITHICS	SHERDS	BONE	FEATURES
22	1	151N 151E	4	84	+	+	Pithouse
22	2	169N 160E	1	20	+	-	-
22	3	139N 180E	1	50	+	-	-
22	4	173N 184E	1	13	+	-	-
22	5	200N 180E	1	5	-	-	-
22	6	169N 229E	1	8	-	-	-
22	7	134N 150E	1	35	+	-	-
22	8	109N 91E	1	30	+	-	-
22	9	88N 71E	1	50	+	+	Pit
22	10	84N 90E	1	50	+	+	-
23	1	NW corner structure	1	30	metal, bone, charcoal		Architrl fill
23	2	NNE corner structure	1	72	metal, bone, glass, etc,		Hearth
23	3	NE corner structure	1	30	metal, bone		Architrl fill
23	4	SW side exterior	1.5	18	glass, metal		Architrl fill
23	5	Area A	1	100	metal		Pit

stratum proved to be much too unstable for such deep excavations and the sides of the trench crumbled rapidly.

A total of 141 m of trench were excavated, revealing two additional pit houses and two small pits. All these features were found on top of the ridge. No subsurface cultural materials were found on the bench at the terrace edge. This result supports the earlier suggestion that the cultural remains in the latter area were restricted to the extreme edge of the river bank and the majority of features probably have been removed by bank erosion. A summary of the features is presented in Table 3.2.

Cultural Features

Feature 1

Feature 1 was an historic artifact concentration covering an area of about 5 x 6 m and located on the flat portion of the terrace at the northeast edge of the site. The concentration consisted of glass, metal, and china and was completely collected. Analysis of these remains indicates that they represent typical domestic refuse dating largely to the 1910s and early 1920s.

Feature 2

Feature 2a was a small pit identified in the west wall of Test Pit 9. It was located on the small bench at the edge of the terrace above the floodplain. There were no surface indications of this pit although it was directly associated with a surface represented by a large charcoal stain 3 cm

Table 3.2. Summary of Features at the Archer Site (AZ P:4:22).

FEAT.	TYPE	LOCATION	DEPTH (Range in cm)	WIDTH (cm)	LITHICS	SHERDS	BONE	OTHER
1	Historic artif. scatr.		Surface		-	-	-	+
2	Pit	TP9	20-65	90	-	-	-	-
3	Pithouse	TP1	10-85	200+	+	+	+	-
4a	Slab-lined hearth		0-14	100	-	-	-	-
4b	Slab-lined cyst		0-74	70	-	+	-	-
5	Pithouse	BHT2	61-86	240	+	+	-	-
6	Pithouse	BHT5	60-118	280	-	-	-	-
7	Pit	BHT4	10-40	53	-	-	-	-
8	Slab-lined pit?	BHT4	10-45	?	-	-	-	-

below the surface. This pit was investigated only in profile. It was an irregular basin-shaped pit 90 cm wide by 45 cm deep (Figure 3.4). The fill contained several strata; the uppermost consisted of a 20 cm deep lens of disturbed sand and gravel. A lens of charcoal-stained and oxidized sands extended from the northern half of the fill to a depth of 30 cm at the center of the pit. Charcoal flecking occurred throughout the fill. This feature exhibited little evidence of disturbance except for the uppermost stratum and a small rodent run at the center.

A second smaller pit was located in the north wall of the test pit. This was associated with the same charcoal-stained surface. No artifacts were found in association with either pit, although concentrations of ceramics occurred on the surface 5 m to the south and west.

Feature 3

A pit house, originally identified in Test Pit 1 and located on top of the finger ridge at the center of the site, was designated Feature 3. This feature was not fully explored and because it was initially located in a 1 x 1 m test pit, it required several additional test pits before it could be characterized with any confidence.

The structure was a subrectangular, semisubterranean pit house over 2 x 3 m in diameter (Figure 3.5) and about 50 cm deep. The western edge of the structure was found in the east end of Backhoe Trench 2a and the southern edge was located in Test Pit 1b. The northern and eastern edges of the structure were not located, however.

The top of the structure was located about 10 cm below the surface with a floor pit extending over 20 cm below the floor. The fill consisted of about 20 cm of overburden overlying the roof fall (Figures 3.6 and 3.7). The latter consisted of redder and more compact silts containing nodules of oxidized clays, cobbles and sandstone slabs. A distinct lens of charcoal with areas of oxidation was visible in the north face profile and extended upwards into the east profile (Figure 3.7). This stratum was interpreted as part of the roof but the distinctive shape may represent an intrusive pit. The roof fall, in turn, overlaid a consistently thick ash-laden silt layer with charcoal flecks and occasional sherds. More flat-lying slabs and cobbles were found within this layer.

The floor was irregular and severely disturbed by rodent runs and burrows. It was best preserved along the southern edge of the structure, where it had apparently been excavated into the soft sandstone bedrock (Figure 3.6). The remainder of the floor overlay old riverine gravels and sands. No cultural remains were found in this gravel stratum. Despite the disturbance, several features were found on the floor (Figure 3.8).

A fire pit was found in the northwest corner of Test Pit 1A. This was 20 to 30 cm deep and appeared to be completely lined with small sandstone slabs and flattish cobbles. The pit was filled with a dense black ashy silt with many chunks of charcoal and small heat altered rocks. Two small burned slabs overlay the fill at the northern end of the pit. Directly west of this fire pit was a shallow pit about 35 cm in diameter and 8 cm deep that was filled with an almost pure deposit of compacted grey ash. Several vertical sandstone

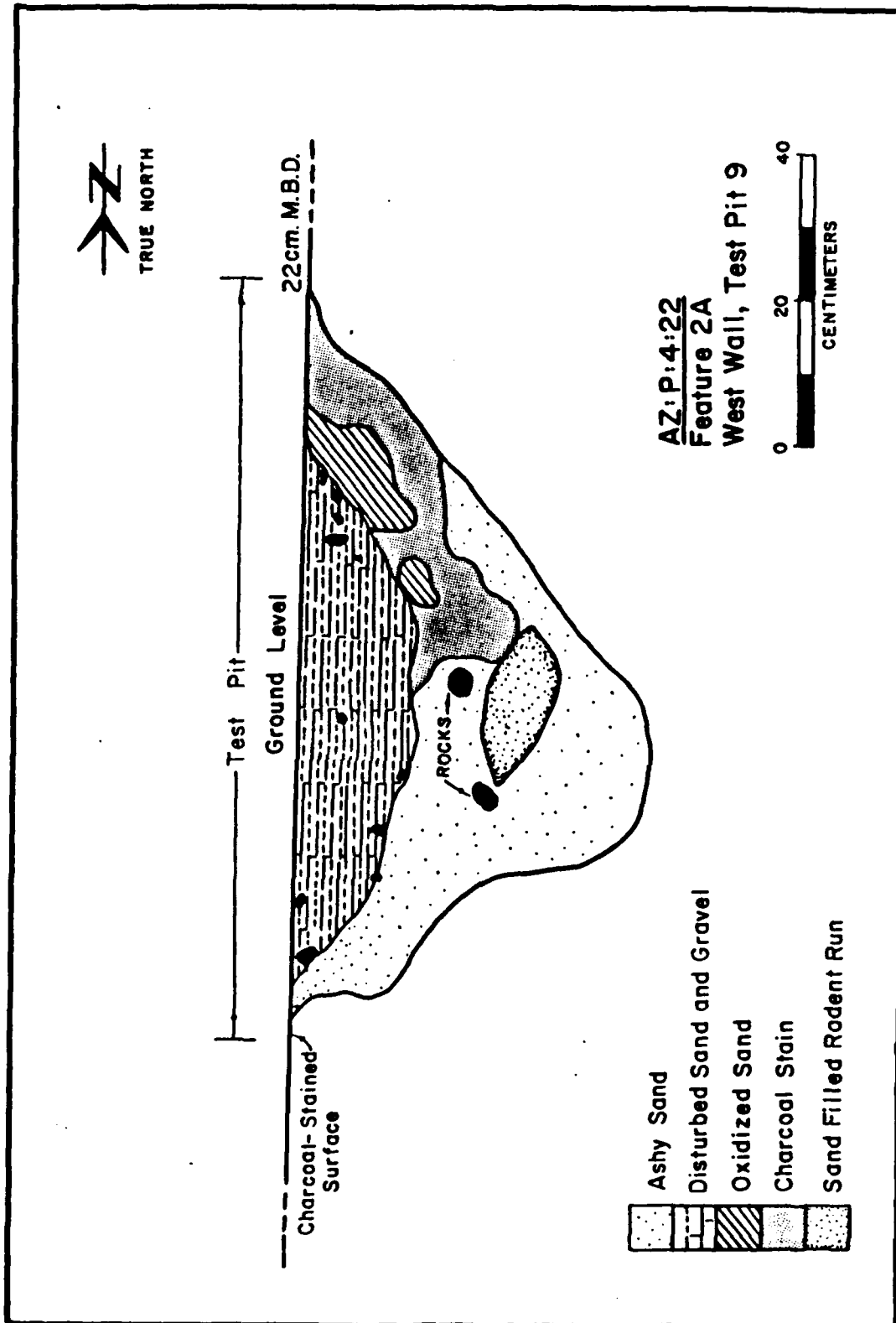


Figure 3.4. West face profile of small pit, Feature 2, at the Archer site.

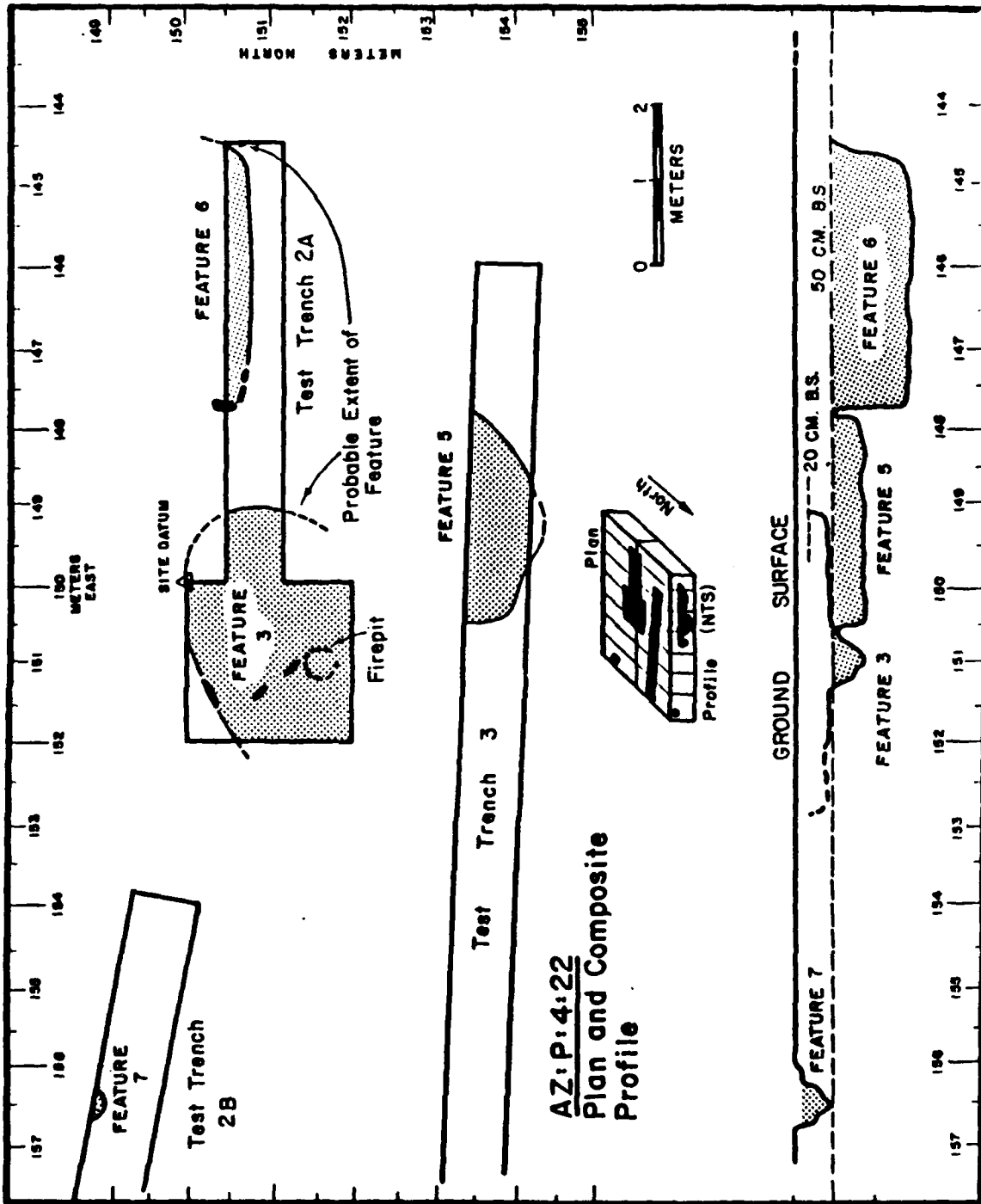


Figure 3.5. Composite plan and profile of concentration of features at center of Archer site.

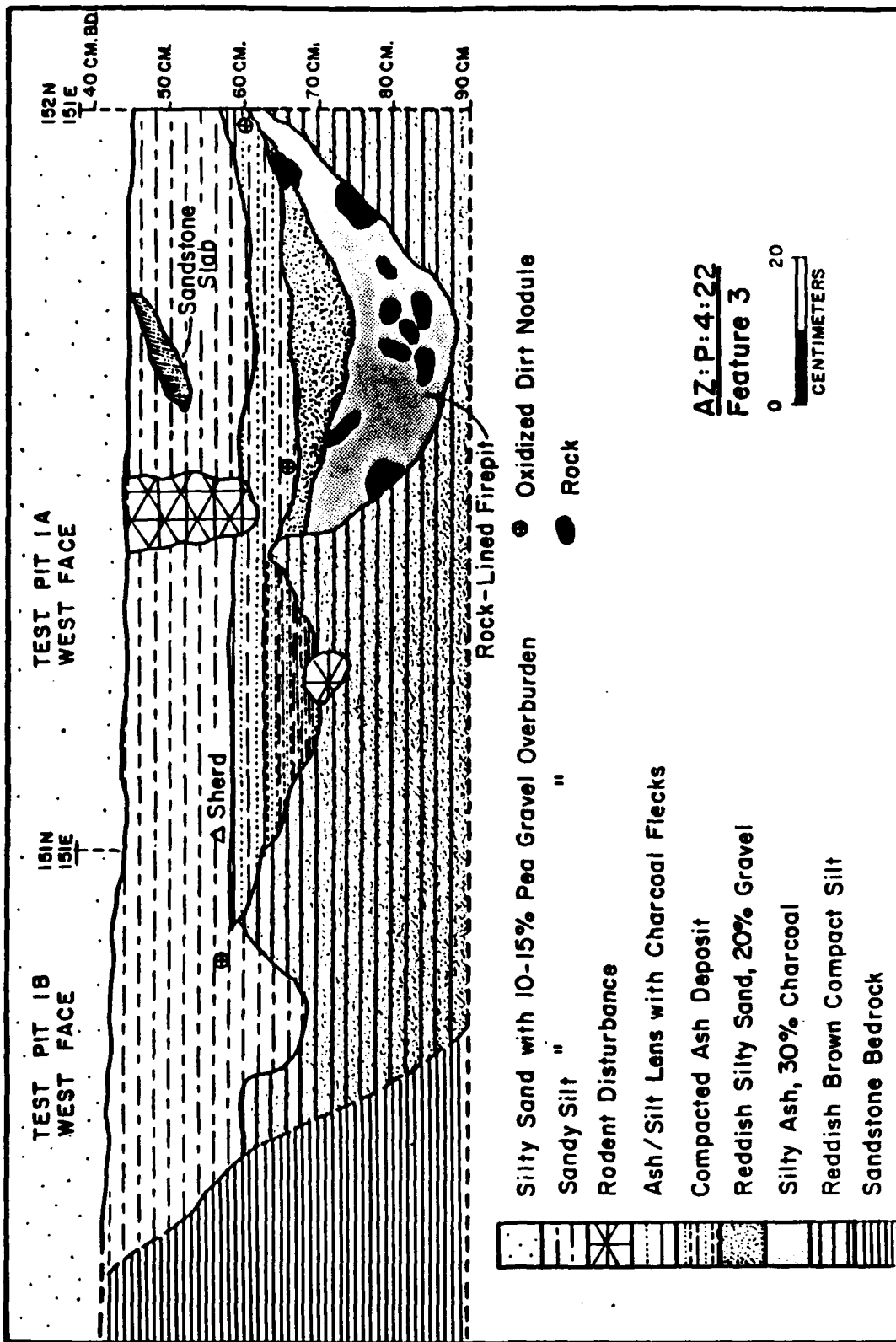


Figure 3.6. West face profile of Feature 3 in Test Pits 1a and 1b.

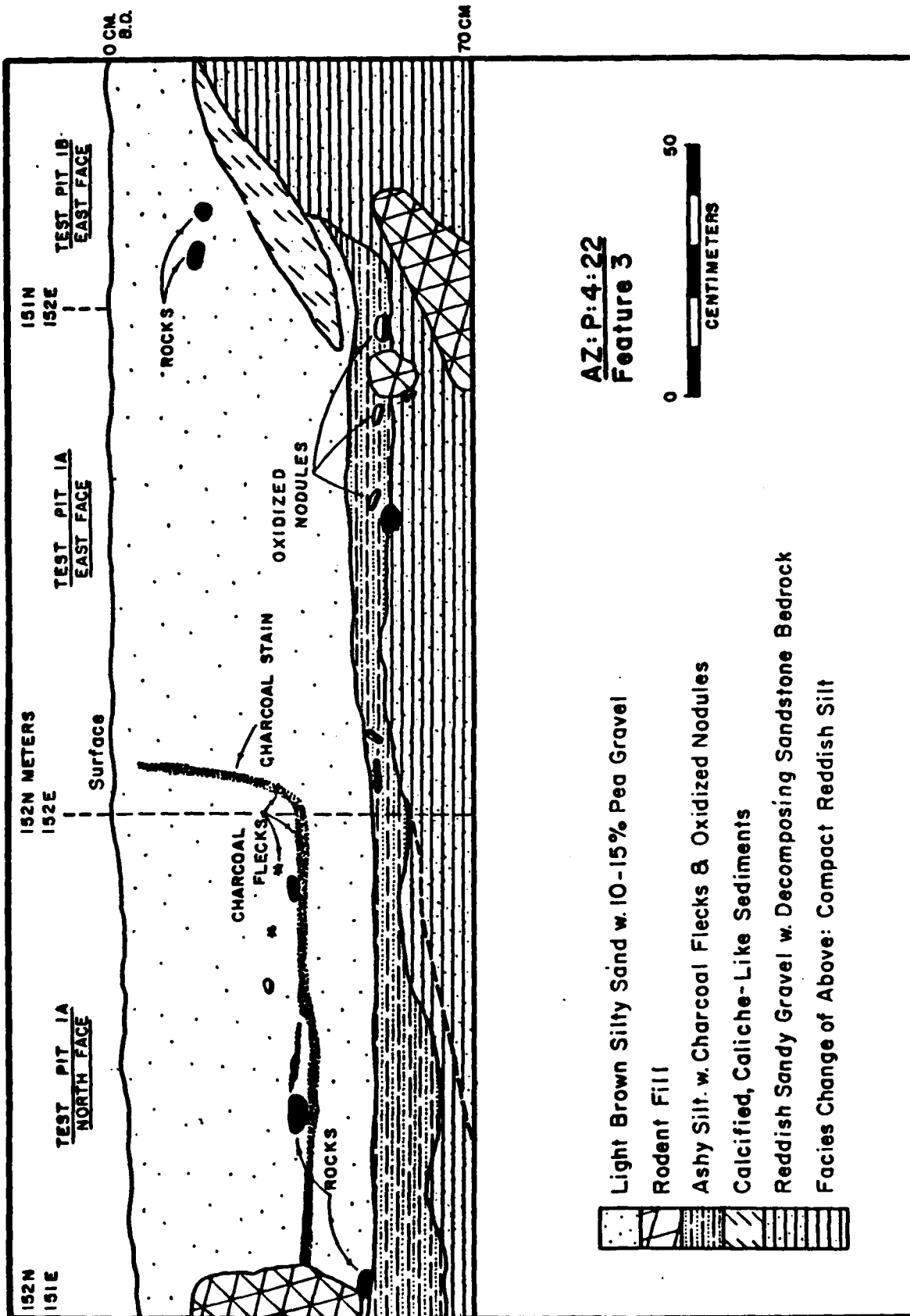


Figure 3.7. North and east face profiles of Feature 3 in Test Pit 1a and 1b.

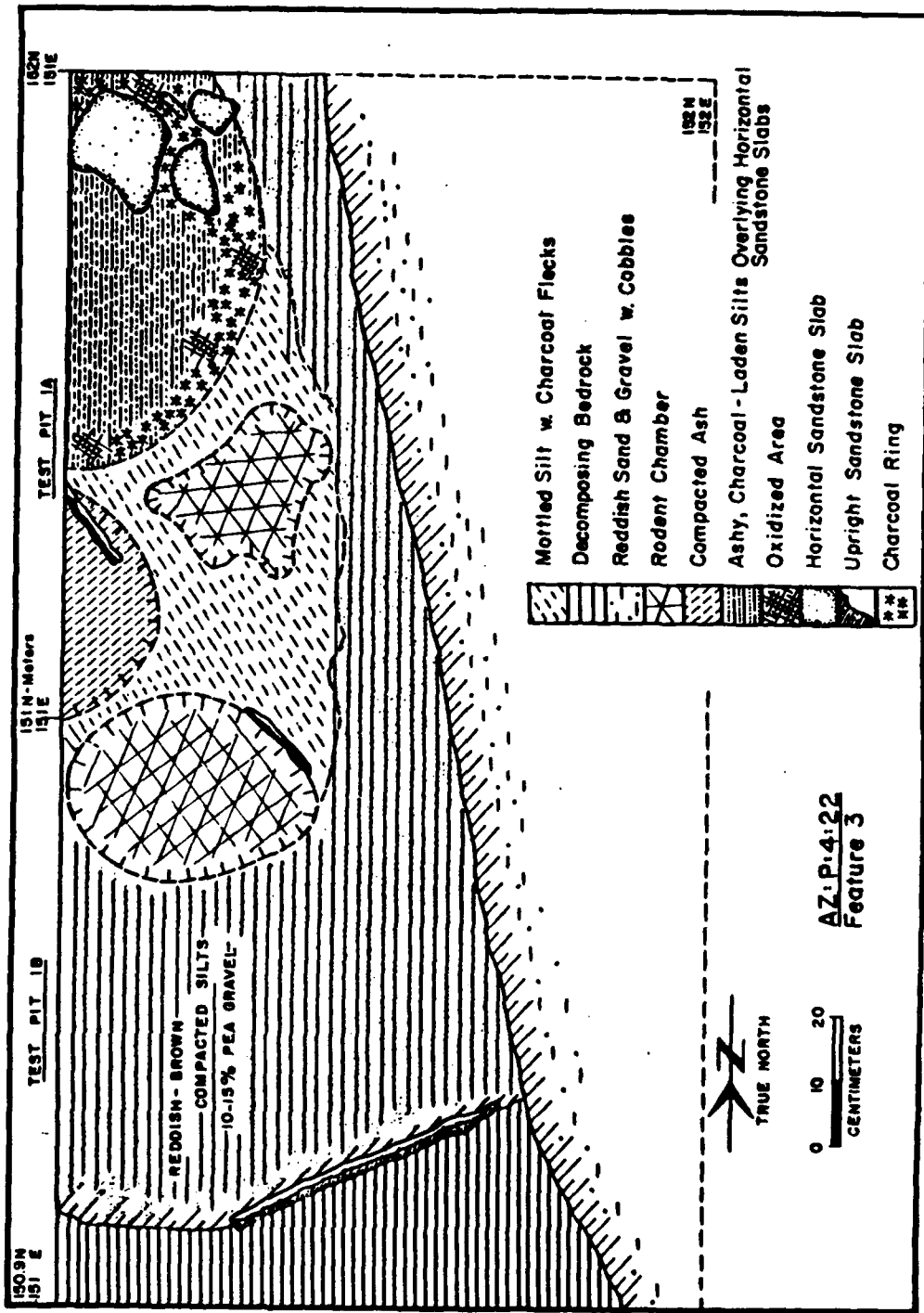


Figure 3.8. Plan of Feature 3 floor exposed in Test Pit 1 at the Archer site.

slabs were found embedded in the floor. The largest was propped against the bedrock face at the west edge of the structure. Two smaller slabs ran diagonally from between the edge of the fire and ash pits towards this large slab. Several smaller and almost vertical slabs were found just above the floor and may have been part of this alignment.

Feature 3 was difficult to interpret because of the extensive disturbance by rodents and, possibly, pot hunters and because a complete profile was not obtained. It appears to be a small semi-subterranean, partially slab-lined pit house typical of the Basketmaker III to early Pueblo III period in the region. Despite the disturbance, intact floor features were found together with a wide variety of artifacts, indicating potential for addressing a variety of research questions. The considerable amount of charcoal found in the fill and floor features suggests preservation is adequate for obtaining subsistence data. It may also be possible to obtain tree-ring dates from roof charcoal; however, the only datable charcoal found in testing was from firewood which is not appropriate for this purpose.

Feature 4

Feature 4 consists of a pair of slab-lined pits, designated Feature 4a and 4b, respectively. These pits were found about 9 m apart at the top of a steep erosional rill at the edge of the terrace. The presence of the pits was indicated by the top of vertical sandstone slabs protruding 2-3 cm above the surface. The surface around each feature was scraped and brushed in an attempt to identify other slabs and expose any associated surface. Each was then sectioned along the face of the terrace to expose a profile.

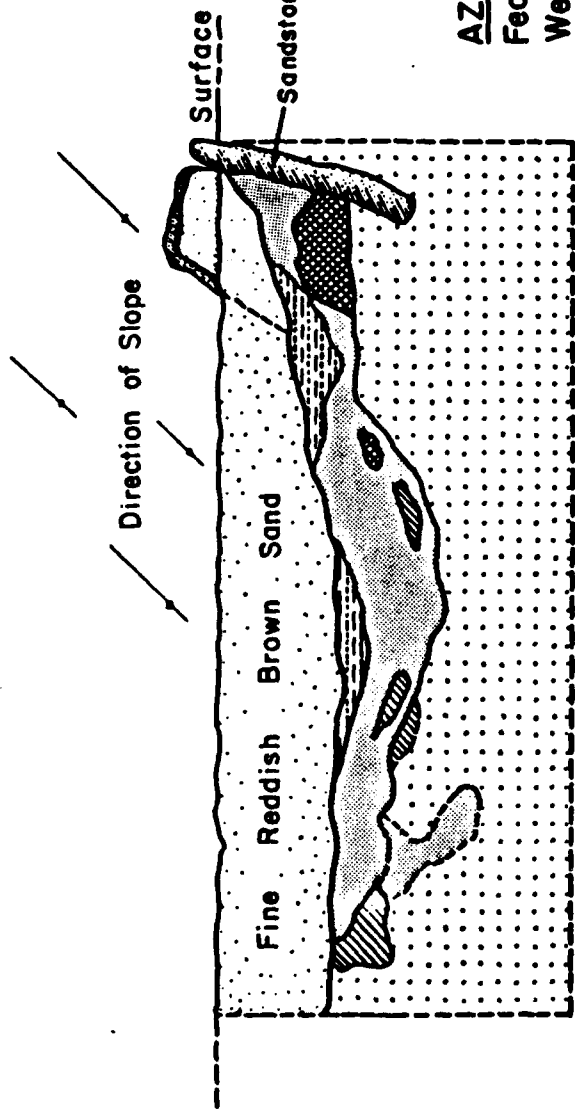
Feature 4a was a large rectangular slab-lined hearth at least 90 cm in length and about 35 cm deep (Figure 3.9). Only the west half of the hearth remained, thus its eastern extent is unknown. Two small, shaped sandstone slabs were preserved in the northeast corner of the hearth. A large shaped rectangular slab was found on the slope of the terrace below this feature and may have originally been part of it.

The fill consisted largely of fine, clean sand. The northeast corner and bottom of a shallow, basin-shaped pit, however, contained oxidized and charcoal stained sand. The stratigraphy indicates that the hearth had been eroded and filled on several occasions with only the basal portion and northeast corner of the original hearth preserved. No artifacts were found in direct association, although a number of sherds were eroding from the terrace in the immediate vicinity.

Feature 4b was a small, deep, slab-lined cyst (Figure 3.10) located north of Feature 4a. It was identified by a single large, north-south oriented slab just barely protruding from the surface. Other smaller slabs were found upon exposure of the profile. This feature was better preserved than Feature 4a, probably because it was further from the edge of the terrace and less exposed to erosion. Still, the eastern edge of this feature was lost although it was possible to estimate the pits maximum dimensions. It was roughly square-shaped in plan, 54 cm wide by 74 cm deep.

N72.5M
E88.9M

AZ: P: 4:22
Feature 4A
West Profile








-  Sterile Tan-Brown Fine Sand
-  Mixed Coarse and Fine-Grained Sand
-  Oxidized Sand
-  Dark Charcoal Stain
-  Charcoal Stain in Sand

Figure 3.9. West face profile of extramural slab-lined firepit, Feature 4a, at the Archer site.

AZ: P: 4: 22
Feature 4B

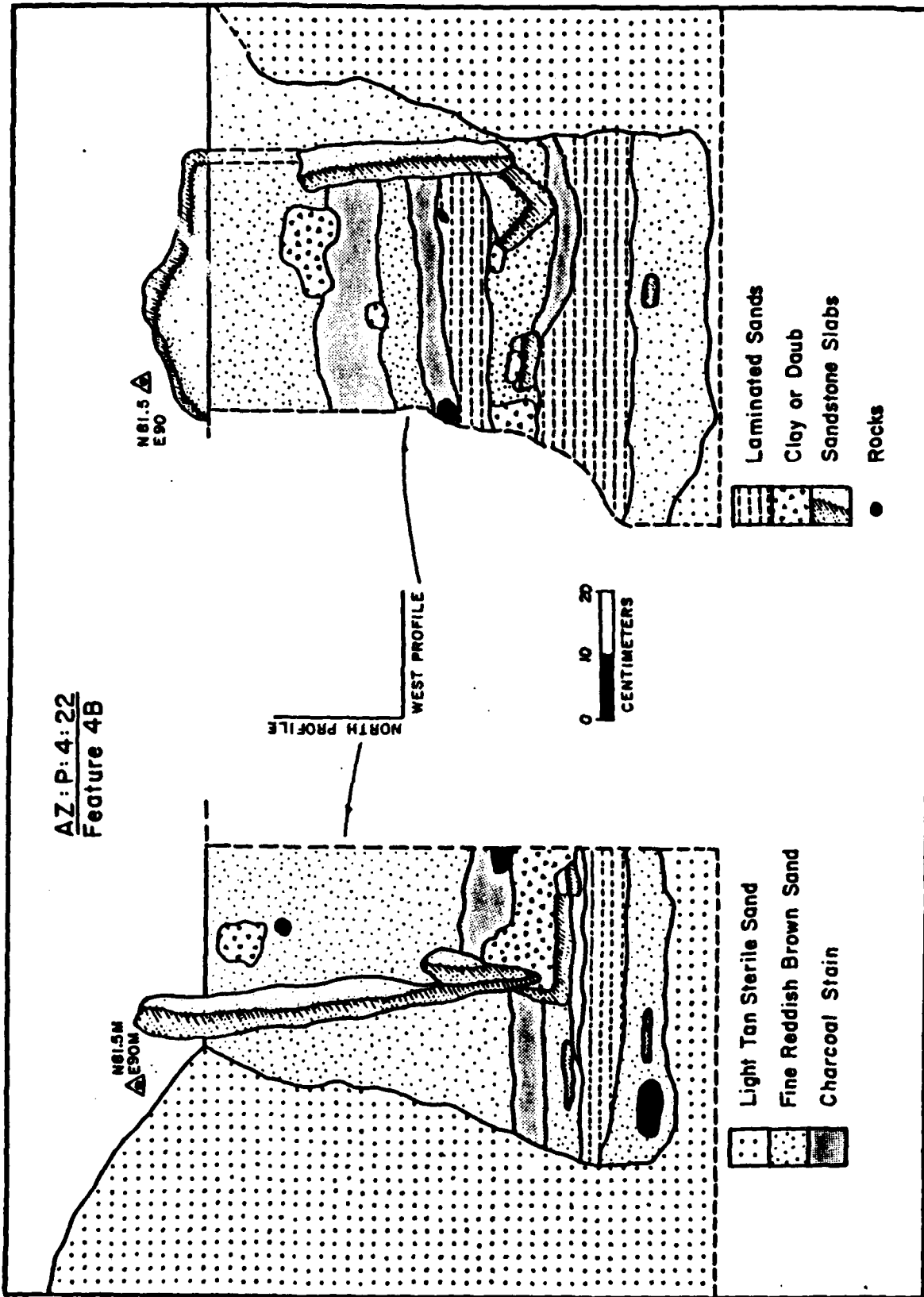


Figure 3.10. West and north face profiles of extramural slab-lined storage pit, Feature 4b, at the Archer site.

The fill was well stratified. The upper fill, like in Feature 4a, consisted of a layer of fine reddish, clean sand of variable thickness. Lying below were alternating layers of ashy charcoal stained sands and clean sands. Small slabs and chunks of burned clay or daub were found at the base of the vertical slab with more daub scattered in the fill. The slab-lined cyst rested in a matrix of reddish fine sand identical to the fill. The base of the cyst rested on more alternating bands of ashy and clean sand. A sharp demarcation between the sandy matrix surrounding the cyst and a clean, tan-colored natural sand was observed.

The following reconstruction can be made from this stratigraphic record. Feature 4b was originally a typical bell-shaped pit measuring over 60 cm in diameter at the base. This pit apparently had several episodes of use and abandonment as indicated by the alternating bands of clean and cultural fill. At some point in its use-life, a smaller slab-lined cyst was built within it and resting directly on cultural deposits. This later cyst had a similar use-history of periodic use and abandonment. A single Holbrook Black-on-white sherd was found in the basal fill of the original bell-shaped pit.

Feature 5

Feature 5 is a pit house found in the western half of Backhoe Trench 3 near the site center. The trench cut through the north end of the structure leaving a small segment on the north side of the trench. The majority of the structure was on the south side. Thus, the width (2.35 m) of the east-west profile of the structure in the trench (Figure 3.11) probably does not represent its maximum width. The structure was located only 1.5 m northwest of Feature 3 and the two may overlap.

The structure was well defined with hard packed silty-clay walls and floor. The best preserved wall was the western one which was 35 cm high and merged into the floor. The walls were overlaid by about 25 cm of overburden which extended an additional 20 cm into the fill. The remainder of the fill consisted of a fine, reddish silty sand with charcoal flecking, similar to that filling Features 4a and 4b. This probably represents a wind-blown sand. A well-defined stratum representing the collapsed roof was located within this wind-blown sand. The roof stratum contained large chunks of melted daub resting on top of a black ashy lens with small chunks of charcoal. (Because of the proximity of Features 3 and 5, this lens could be the same as the lens noted in the northern end of Test Pit 1a in Feature 3.) The daub could represent either collapsed wall segments or the roof coating. The stratigraphy suggests that the structure had been abandoned before the floor was covered with wind-blown sand; the roof then collapsed and additional sand blew in.

The structure was apparently built on top of older features as a small pit about 55 cm wide and 30 cm deep was directly below the floor. A few artifacts were found as much as 20 cm below the floor as well. These cultural deposits were cut into a silty clay stratum with caliche inclusions.

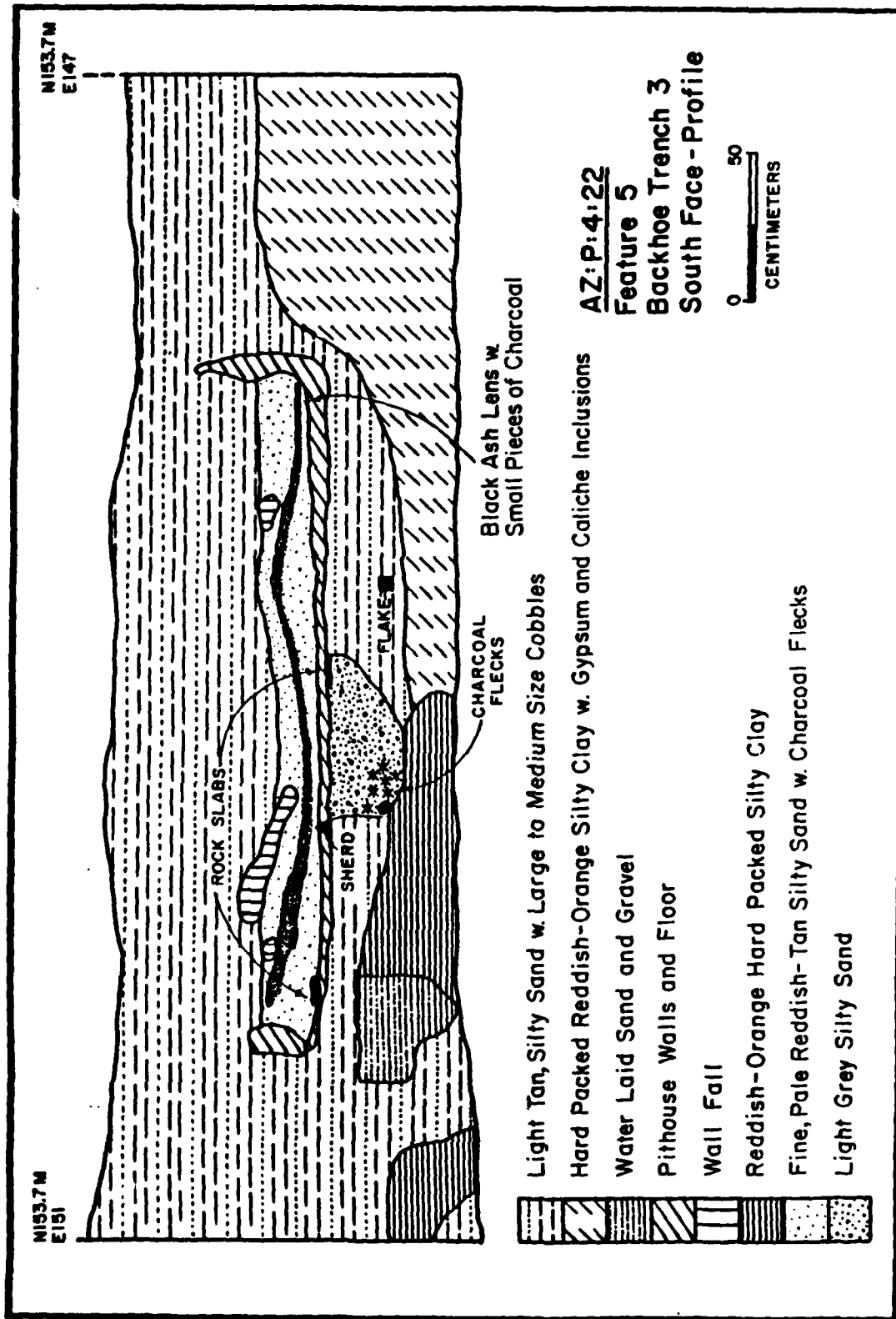


Figure 3.11. South face profile of pit house, Feature 5, in Backhoe Trench 3 at the Archer site.

Feature 6

Feature 6 was another pit structure located only 1 m southwest of Feature 3 and 2 m southwest of Feature 5 (Figure 3.12). This house was found in the southern profile of Backhoe Trench 6a and extended only 30 cm north of the south face of the trench. Almost the entire house extended south of the trench. This was the deepest feature found at the site. The backhoe trench extended to a depth of 1.18 m where the floor of the house was identified.

The top of the house remains was about 25 cm below the surface indicating a preserved depth of about 85 cm. The eastern end of the structure was defined by a massive vertical slab. Two smaller vertical slabs form a right angle with this large slab at the bottom of the trench marking the corner of the floor. This alignment continued along the bottom of the trench with a number of very small rocks marking the northern periphery of the floor. The western boundary was not as well defined and the length of the feature in the profile can only be estimated at about 2.25 m. This dimension represents a minimum width, since it is unknown whether the trench transects the center of the structure or just a corner.

This structure does not appear to be as well preserved as Feature 5. The area circumscribed by the three vertical slabs is filled with a deep homogenous stratum of fine sand with small pebble inclusions and charcoal flecks apparently representing a single depositional episode. Most of the remainder of the floor surface is covered with a 15-25 cm thick deposit of alternating lenses of water-laid or aeolian deposits and cultural material. This stratum of bedded deposits becomes much thicker at the western end of the feature. The gradually upward sloping nature of the floor at this point suggests the presence of an entry ramp although the corner of the structure would be an unusual location for an entryway.

A large basin-shaped pit intrudes into the fill of this structure truncating both the sand and bedded deposits covering the floor. The base and western edge of this pit is firmly packed suggesting that it may represent an intrusive house or trash pit. A charcoal lens and daub rests on the eastern edge of the pit indicating a collapsed roof fragment. Local informants indicated, however, that the site had been heavily pothunted for many years until its most recent use as an archery course. This intrusive pit may represent an old filled-in pothole. Thus, the nature and preservation of Feature 6 remains problematic.

Features 7 and 8

Feature 7 is a small basin-shaped pit located in Backhoe Trench 2b about 4.5 m southeast of Feature 3. The top of the pit was located 10 cm below the surface (Figure 3.13). The pit itself was 50 in diameter and 30 cm deep. The top 10 cm of fill consisted of an ashy sandy silt; the remainder consisted of a similar silt stained black by charcoal. There is no indication of oxidation either within the pit or on its edges. This evidence suggests that it was not used as a fire pit, but instead was filled with ash.

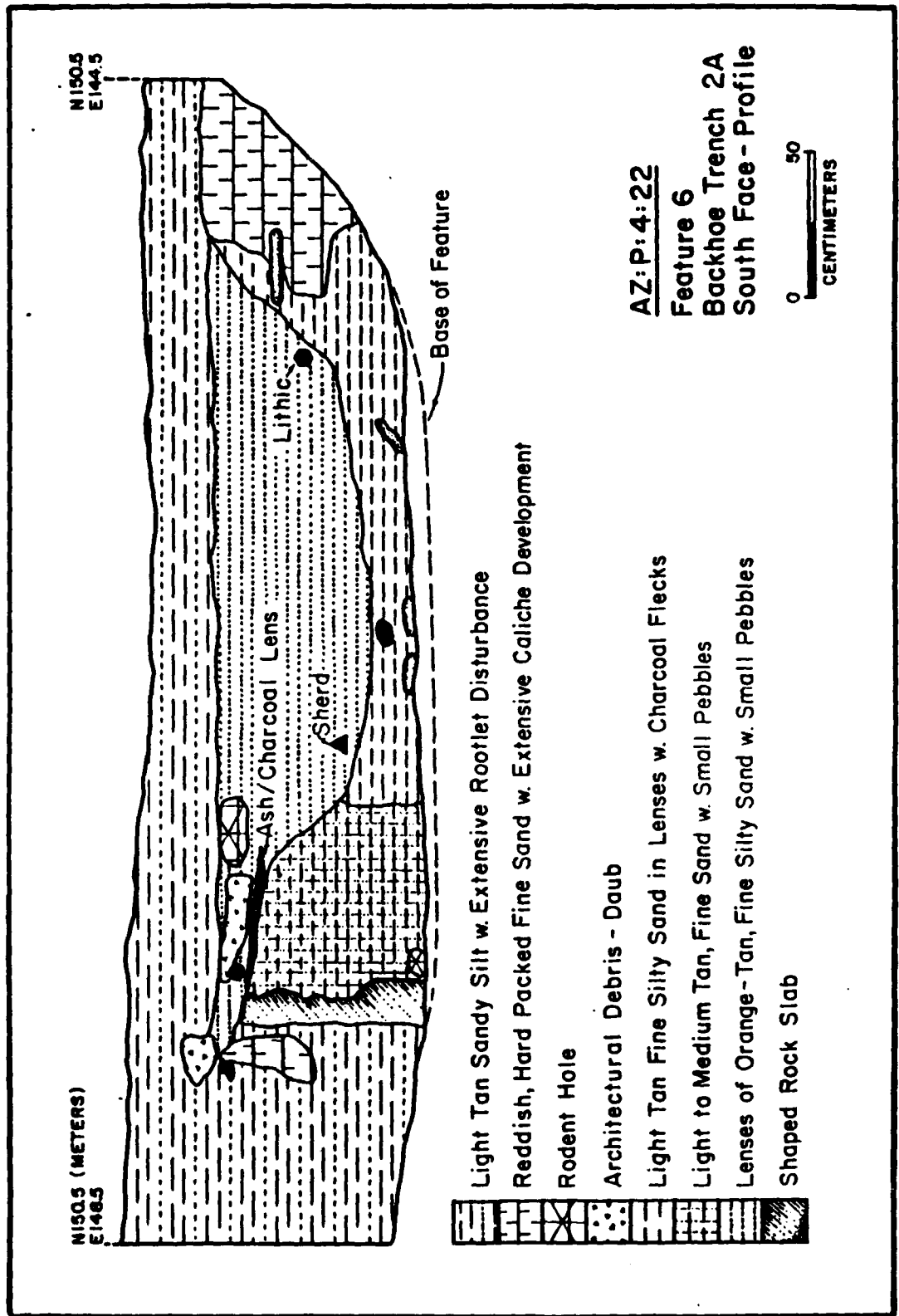


Figure 3.12. South face profile of pit house, Feature 6, in Backhoe Trench 2a at the Archer site.

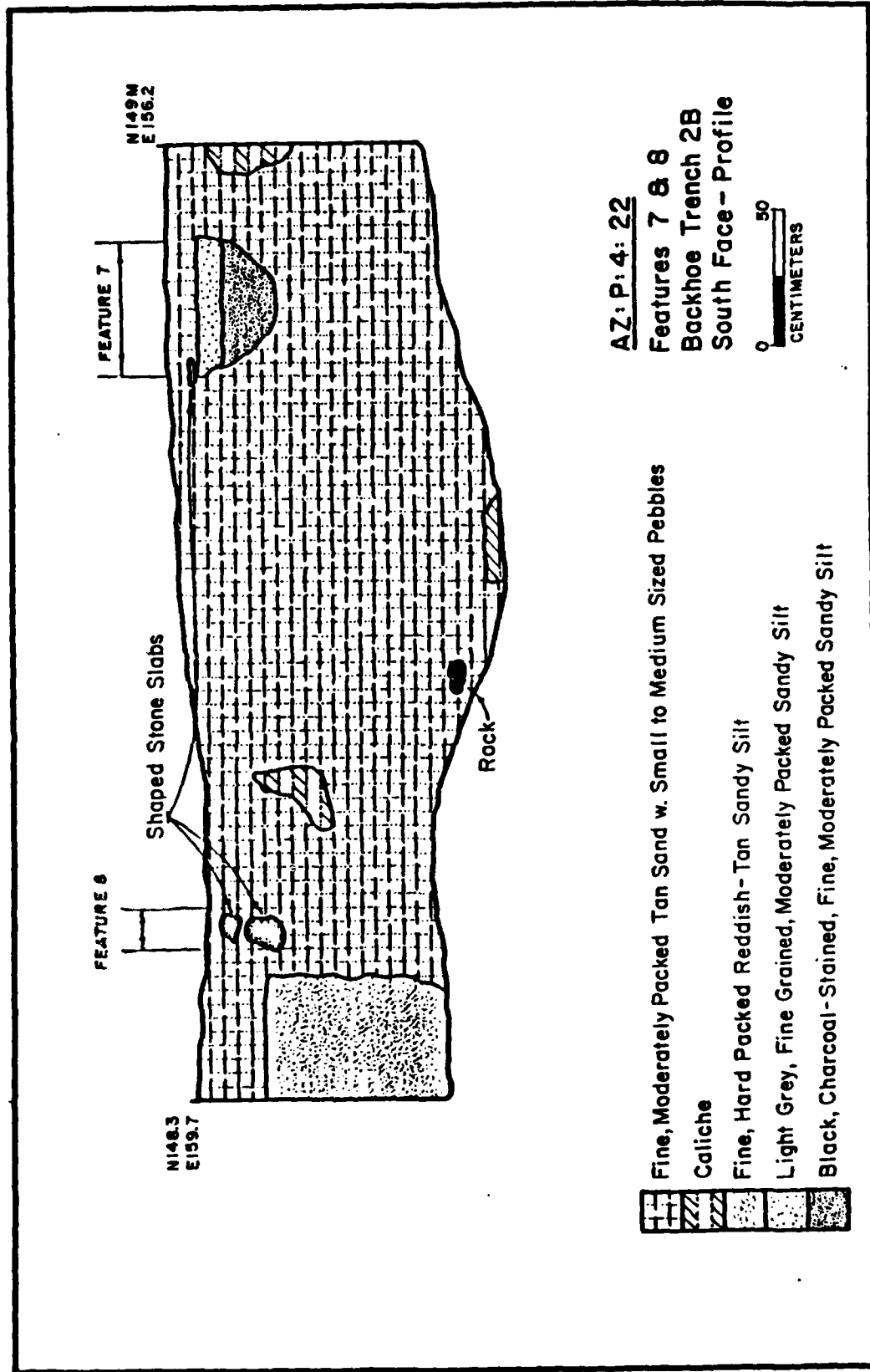


Figure 3.13. South face profiles of Features 7 and 8 in Backhoe Trench 2b at the Archer site.

Feature 8 was originally believed to be a second small pit feature. It was located in the same backhoe trench about 2 m east of Feature 7. Feature 8 consisted of a vertical shaped slab surrounded by a small deposit of charcoal stained silt. Closer inspection, however, failed to reveal any pit outline and the nature of this feature remains unknown.

Features 7 and 8 represent the highest (in stratigraphic terms) features in this area. These are probably extramural features but no associated occupational surface was evident. No artifacts were found in association with either feature.

Summary and Conclusions

Archaeological testing reveals that the Archer site is a multicomponent site consisting of a large lithic scatter surrounding two small but discrete habitation loci. The most extensive habitation area occurs on top of the finger ridge that dominates the site. Concentrated in a small flat area less than 10 x 10 m were three pit houses and at least one small extramural pit. Given the proximity of features (often less than 2 m apart) and the spacing of test trenches, additional features can be expected in this area. Subsurface cultural deposits, however, do not extend beyond this small area. The extent of these deposits is apparently constrained by the presence near the surface of bedrock or ancient unstable river deposits in surrounding areas of the ridge.

Although the area of cultural deposits is small, it was intensively used. The concentration and, in some cases superposition, of features indicates that few were contemporaneous. Two pit houses, Features 5 and 6, appear to have been excavated from the same surface (Figure 3.5) and may be contemporaneous. In contrast, the top of the third pit house, Feature 3, is at a higher level and possibly partially superimposed over Feature 5. Thus, the various structures may represent sequential occupations involving at most one or two structures. Some permanence to these occupations is indicated by the presence of well constructed houses and interior firepits. This type of occupation can be best characterized as a small farmstead (Ciolek-Torrello 1987; Ward 1978).

A second similar habitation area was identified on top of the small bench located at the southern edge of the terrace. Substantial numbers of ceramics and two small slab-lined pits were located along the extreme edge of this area. Testing, however, revealed no evidence of features or other subsurface deposits on the bench itself. The two pits represent substantial construction efforts that are usually found in association with permanent residences. A multicomponent storage cyst, such as Feature 4b in particular, is not expected in a temporary camp site. It is possible that these two pits and the surrounding material represent an extramural activity area associated with the structures on top of the ridge. This hypothesis will be tested with the ceramic analysis. The possibility remains, however, that these features were associated with structures on the bench, especially along the extreme edge of the terrace, that either were destroyed by river bank erosion or missed in the testing phase.

Thompson House

The Thompson House is a small historic site consisting of the stone foundation of an adobe structure adjacent to the bed of an old section of the Santa Fe Railroad and a large historic artifact scatter. The foundation is situated at the foot of a large rocky promontory (Horsehead Butte) that projects southwestward into the floodplain of the Little Colorado River (Figure 3.14). The old railroad bed lies less than 10 m south of the foundation and runs about 300 m northwest of the foundation at which point it disappears under the existing railroad track. The bed also extends about 1.1 km northeast past a second promontory where it is truncated by the Puerco River. The remains of an old concrete bridge were observed along the old railroad bed and about 145 m east of the foundation. Northwest of the foundation and Horsehead Butte was a large artifact scatter covering an area of approximately 2500 m².

Historic Foundation

The foundation represents the remains of roughly rectangular shaped structure with maximum dimensions of about 60 x 27 feet (Figure 3.15) (feet and inches are used for measurement of the foundation because of the use of a known scale by the builders). Jogs in the foundation alignment created two approximately 15 x 15 foot spaces, one projecting west and one projecting north. All but the northern third of the foundation was exposed on the surface by erosion and previous wall trenching (probably by treasure hunters since two small potholes were located in the interior). The foundation consisted of two to three courses of shaped limestone slabs removed from nearby bedrock exposures. These slabs were generally laid two rows wide. Only a handful of artifacts were found on the surface in the vicinity of the foundation.

The northern part of the foundation was buried by a 60 cm thick deposit of colluvium eroded from the adjacent butte. These deposits preserved the remains of an adobe wall resting on a single coursed foundation. The wall was made of unfired adobe blocks about 3 feet long and 9-10 inches wide cemented together by a thick reddish-brown mortar. Evidence of at least one doorway was found in the south wall, but this was not conclusive.

The structure was investigated by trenching the buried northern wall segments and excavating three 1 x 1 m test pits in the interior corners and one on the exterior near the presumed doorway. The pits were excavated to the base of the foundation or to sterile deposits if these were deeper. Each was excavated according to standard procedures.

Test Pit 1

This test pit was placed in the northwest corner of the western extension of the foundation and excavated to a maximum depth of 30 cm (Table 4.1). The first 10 cm of fill consisted of a loosely compacted fill of sandy silt containing oxidized soil, charcoal flecks, caliche inclusions and a few small

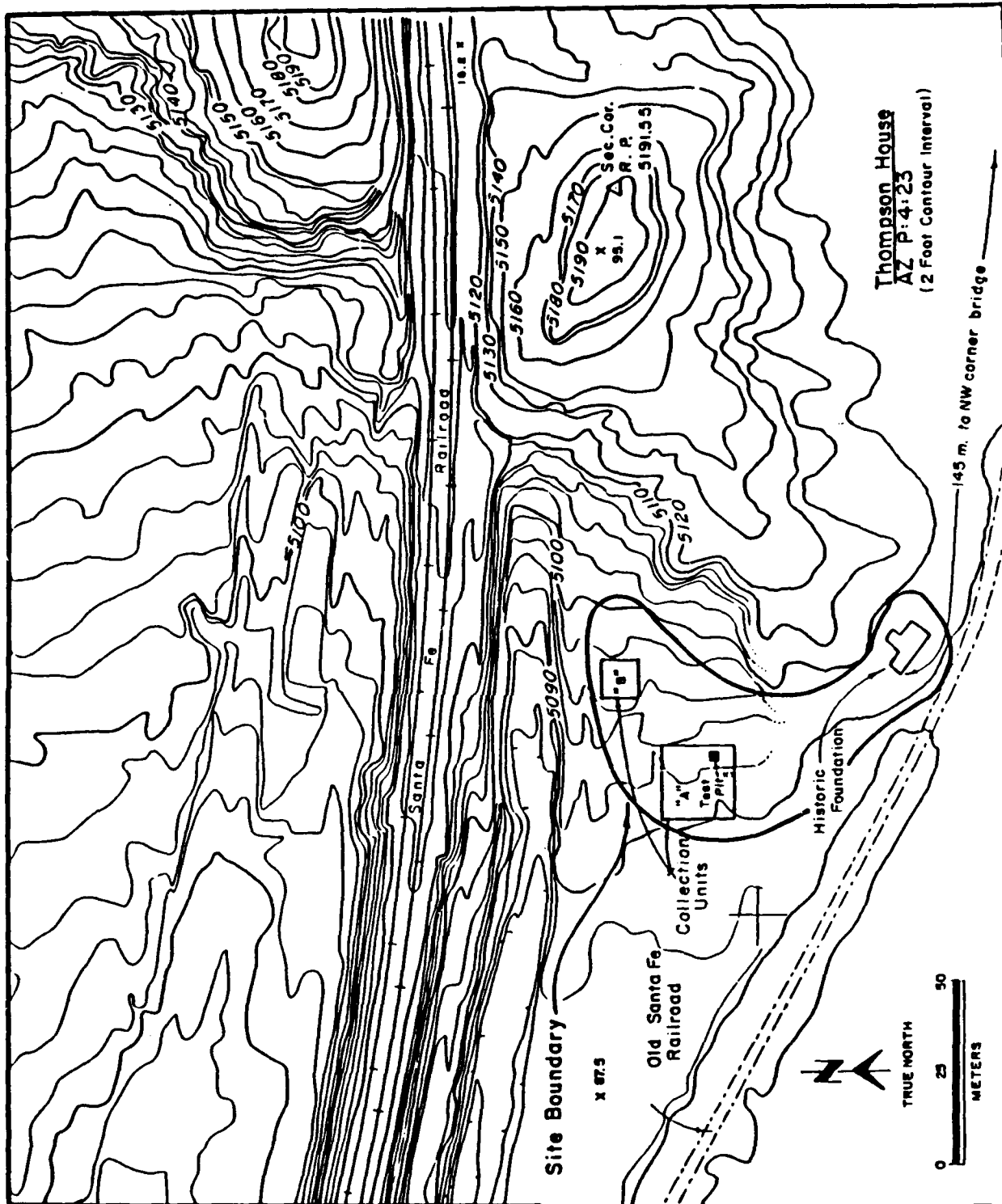


Figure 3.14. Plan of the Thompson house site and associated historic features.

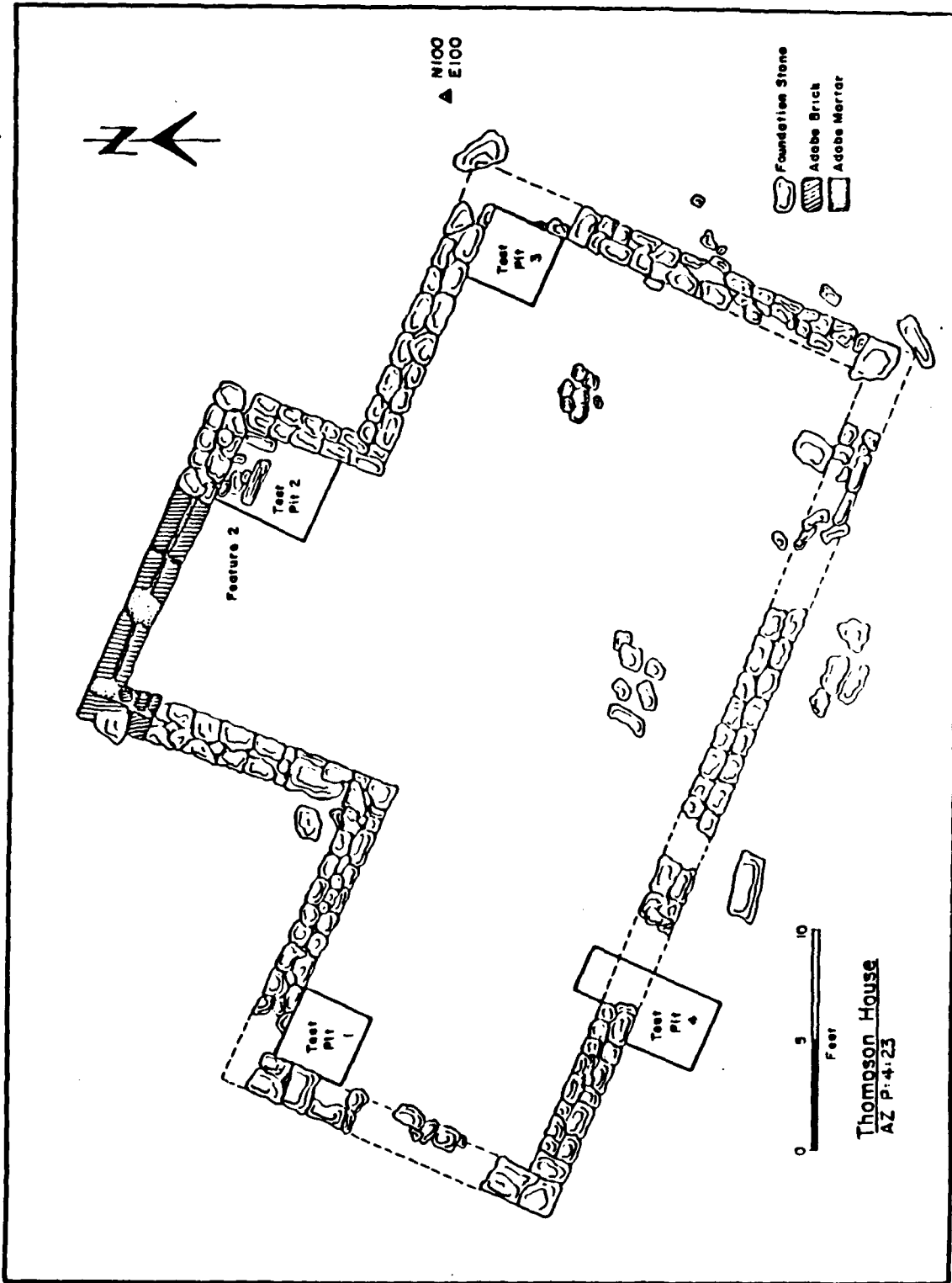


Figure 3.15. Plan of the historic foundation at the Thompson house site.

pieces of decomposed iron and bone. A brass grommet and iron nail were recovered. A shallow oval ash pit (20 x 40 cm in diameter) occurred at the base of this level. Below was a 10 cm thick layer of constructional debris (wall or roof) consisting of a layer of small chunks of adobe resting on a layer of charcoal chunks. Also present was a small 8 cm deep ash filled depression. These layers rested, in turn, on a firmly compacted surface of sandy silt. Decomposing bedrock was encountered 10 cm below this surface.

Test Pit 2

This unit was excavated into the northeast corner of the northern extension of the structure. This area had the deepest fill in the structure due to the colluvial cap. The stratigraphy, however, was uncomplicated with an overburden of massive sandy silt and silty sands overlying a zone of compact silts. The former represents the colluvial deposit and the latter probably represents adobe wall melt as it contained chunks of adobe. These strata capped the remains of the adobe wall and a thick zone of cultural deposits.

The cultural deposits consisted largely of ashy sediments with tremendous quantities of charcoal and artifactual remains, primarily faunal remains and corroded iron. A small number of artifacts were also found in the compact silt stratum above. Numerous fragments of plate glass, probably representing window glass, were found wedged against the interior and exterior along the entire length of the adobe wall. These various strata sloped downward to the south following the natural contours at the base of the butte. For example, only 30 cm of overburden occurred in the north half of the unit, while 45 cm of overburden was in the south half. As a result, the northern section of the adobe wall was better preserved than the eastern section. The walls and cultural deposits rested on hard compact reddish silts flecked with gypsum representing the sterile basal stratum at about 60 cm below the surface. This stratum was excavated to a base of 70 cm, but no cultural remains or changes in stratigraphy were noted.

The northern half of the test pit contained a rock-lined pit (Feature 2) within the cultural stratum 38 cm below the surface. This feature consisted of a large upright slab forming the south boundary of the pit and several smaller rocks in a semicircular arrangement between the slab and the wall. The bulk of the charcoal and artifactual material in the test unit was recovered from the interior of this pit. In fact, the bone and corroded iron within the pit formed almost a solid deposit with very little soil in the matrix. The lack of a floor below Feature 2 and the informal arrangement of rocks that comprise it suggest a post-occupational use long after the structure had fallen into disrepair. Apparently Feature 2 was constructed with stones robbed from the foundation.

Cultural deposits in this unit were extremely dense and varied, apparently representing household hardware and kitchen debris (see Historic Artifact Analysis). A large amount of very corroded iron was present. Most pieces were unrecognizable; what could be identified included various square nails, cabinet and door hinges and hasps and copper rivets. The bone consisted of large mammal bone, both wild and domestic, and large bird bone (see Faunal Analysis). Also found in the test pit between 40 and 50 cm below the surface were a decorated black glass, mother of pearl, and ceramic

buttons. A U.S. dime dated to 1854 was also found in this level outside of Feature 2.

Test Pit 3

This unit was located in the northeast corner of the largest enclosure formed by the foundation. Much of the foundation in this corner was missing (Figure 3.15). The uppermost level consisted of a loose to moderately compacted fill with small bits of bone and corroded iron including two nails. Directly below was a stratum of adobe melt resting on a 3 cm thick lens of charcoal stained and flecked soil. Three nails, two pieces of porcelain, and a few bits of bone were found in this stratum. This, in turn, rested on a stratum of firmly compacted alluvium that graded into decomposing bedrock flecked with gypsum. No cultural remains were found in this last stratum.

Test Pit 4

This unit was located along the south exterior edge of the foundation, the pit was placed to test the possible location of an entry way, suggested by a 1.2 m gap in the foundation bounded by well finished stones. A second gap of similar size, but without definite edges was located equidistant from the opposite end of the south wall. The unit was situated so that half of it abutted a possible corner stone in the foundation and half was in the opening past this stone.

Cultural deposits were very shallow along the southern edge of the structure. Typical sterile soil was encountered 8 cm below the surface and the unit was excavated to 20 cm. The foundation stones rested on this sterile soil. Two centimeters above the base of the foundation was a 3-5 cm thick lens of adobe melt flecked with charcoal, indicating that this gap was present when the structure deteriorated; that is, foundation stones were not removed from the area after the superstructure deteriorated. The test pit was expanded northward into the structure's interior to explore the relationship between this cultural lens and the foundation stones. This lens was found to continue along the edge of the stones into the structure interior, verifying the previous conclusion.

It remains unclear whether this gap represents a doorway. It is not certain whether the compacted surface found in the test pits below the cultural strata represents an earthen floor or merely a prepared construction site. The floor could have been a wooden floor raised on joists and placed between the foundation and adobe superstructure. The abundant charcoal found in the cultural fill and the lens found resting on the compact surface in all the test pits could represent either a burned roof or floor. This problem can be resolved only by exposing larger areas of the basal surface and looking for the remains of floor joists, either as postholes or actual in situ post charred posts.

Old Santa Fe Railbed

The bed of the old Santa Fe Railroad runs less than 10 m south from the foundation. It makes a sharp turn around Horsehead Butte as described in Fish's account. The bed consists of a raised bed of cinders about 2 m wide and less than a meter high. About 145 m east of the foundation is a small reinforced concrete bridge traversing a small drainage. The bridge consists of two low concrete piers running parallel to the route of the railbed. They are connected by two concrete drainage pipes.

This railbed is not the original bed of the Atlantic and Pacific Railroad constructed in 1881. The original railroad used wooden bridges built by carpenters such as Cephus Perkins. Concrete bridges were not constructed until after World War I (Tom Kolbe, personal communication 1988).

A variety of glass, porcelain, and other artifacts including many oyster shells were found along the entire length of the route suggesting they had been dumped from the rolling kitchens and dining cars. The only diagnostic artifacts were several china fragments (see Historic Artifact Analysis) that indicate the railroad bed was in use between the late 1910s and the early 1920s. Informants indicated that this track was abandoned some time in the 1930s when the roadbed currently in use was constructed. No evidence of an earlier railbed that might correspond with the original Atlantic and Pacific railroad was found in the area. It is most likely that the old Santa Fe railbed represents a reconstruction and modernization of the earliest route and completely obscures all evidence of the latter. Search of railroad archives and testing of the old roadbed would elucidate this problem and contribute to our understanding of the temporal placement of the foundation.

Artifact Scatter

A large historic artifact scatter was found northwest of the foundation. Two concentrations were noted within this scatter. A 10 x 10 m and 20 x 20 m collection grid was arbitrarily established over these concentrations and all diagnostic artifacts were collected. Artifacts included a variety of colored glass, corroded iron, sheet metal, wire, cans, and china. Analysis of the diagnostics (see Historic Artifact Analysis) suggests a non-domestic type of assemblage (primarily male oriented artifacts) dating primarily to the 1880s and early 1890s (with some modern material).

If the archival data regarding the Thompson House is correct, this assemblage is not contemporaneous with the house but post-dates it by about ten years. The scatter, therefore, does not appear to be associated with the foundation. Instead the scatter fits temporally with the construction of the Atlantic and Pacific railroad and may represent the remains of the construction crew camp at Old Holbrook. This interpretation may also account for the presence of Feature 2 within the foundation. The Thompson House may have been abandoned as the railroad was being built. The railroad crews then may have used the abandoned house as a kitchen or dump area.

Test Pit 5

A small depression with a slight berm around three sides was noted in the southeast corner of the 20 x 20 m collection unit. A single 1 x 1 m test pit was placed in the center of the depression and excavated to a depth of 1 m before decomposing sandstone bedrock with gypsum and clay inclusions was encountered. This excavation revealed the presence of an irregular shaped (but generally basin-shaped) pit about 1 x 0.8 m deep.

The uppermost stratum consisted of a 10-15 cm deep deposit of aeolian sands and silts. This overlaid a 5-10 cm deep deposit of hard-packed reddish silts with charcoal flecks and small caliche inclusions. A thicker stratum of less well packed silt mottled with charcoal was immediately below. A 1 cm thick lens of fine cinders (from railbed construction?) partially separated this stratum from the more firmly packed clayey silt below. Silt lamina were common in this stratum. The lowest stratum in the unit consisted of even more firmly packed silt. Both of the silt strata contained abundant charcoal flecks. A large corroded horseshoe fragment found in this lowermost stratum was the only artifact found in the pit.

The number of depositional events indicated in this stratigraphy suggests gradual filling of the pit. The presence of the lens of cinders midway in the stratigraphic sequence also suggests that the pit was excavated and partially filled before the construction of the nearby railbed.

Summary and Conclusions

The Thompson House represents a multicomponent historic site with potential dates of use between the mid 1870s and 1930s. The dating of the foundation remains uncertain. Harris's map of 1879 places two houses, one of which he calls the Thompson House, on either side of the old east-west stage road passing what is here called Horsehead Butte. The position of the foundation coincides with the location of the Thompson House. By late 1881 the railroad had arrived replacing the east-west stage road. The north-south road, however, remained an important link to the Silver Creek and White Mountain areas.

The Thompson House was probably abandoned when the railroad arrived. The presence of the railroad after 1881 was not conducive to the use of the structure as either a ranch house or a stage stop for the White Mountain road which passed on the opposite side of the tracks. Most of the artifacts found at the site, however, especially those from the large artifact scatters, date after the presumed abandonment of the house and may be related to crews involved in the construction of the Atlantic and Pacific Railroad. The evidence of post-abandonment use of the house (Feature 2) may also be related to crew use. The large amount of bone found in and around Feature 2 is unexpected for a typical domestic group and it would not be dumped into a house unless it were no longer occupied. The only artifact clearly dating prior to 1880 was the dime and that could have been in circulation in the 1880s.

A third component is represented by the old Santa Fe Railroad bed south of the foundation. Various sources of information indicate that this was in

use from the 1910s to the 1930s and is not associated with either the foundation or the artifact scatter. Fish's account, however, indicates that the original Atlantic and Pacific Railroad passed around this same point and its remains may lie buried beneath this old railbed.

Perkins Addition

Approximately 50 standing structures located in the floodplain on the south side of the Little Colorado River in the town of Holbrook. Investigation of this area involved assessment of the National Register eligibility of these structures. Archival research carried out prior to the field investigation included a check of the National Register of Historic Places to determine if any structures in the area were already on the register or had been nominated, a records search at the Holbrook County Museum, and informant interviews for background historical information. Finally a document search was performed at the Navajo and Apache Counties Recorder's and Assessor's offices to determine the ownership and construction history of properties and buildings. Structures which appeared to have been built prior to 1940 and, therefore, would meet the age criteria of the National Register were identified for detailed field study.

The field study was carried out by Robert G. Graham of Don W. Ryden, AIA/Architects, Inc. with the assistance of the author. The following is an edited version of Graham's report.

Procedures

A field reconnaissance was performed, examining all properties within the project area. Maps of the Perkins Addition were obtained from the Navajo County Recorder. Each parcel of property in the Perkins Addition was assigned the number issued by the county Recorder. Those parcels with structures previously identified from Assessor's records as meeting age criteria were examined closely. All other structures were examined in a cursory manner to confirm whether the Assessor's information about the age of the buildings appeared to be correct. Any buildings which appeared, despite Assessor's information, to be old enough to meet National Register age criteria were evaluated to determine their integrity and architectural significance.

An "Arizona State Historic Property Inventory Form" was prepared for all properties which both appeared to meet age criteria and which appeared to have some measure of integrity and/or significance. Existing documentation reports of the project area were reviewed and overall historic contexts were identified.

Results

The project area encompasses approximately 50 residences, five commercial buildings, and a number of small accessory buildings. The first homes were built in the area during the late 1880s and early 1890s when most of the area

was still used as pasturage. One of these was the Burbage residence. Mrs. Burbage cared for C.F. Perkins' mother when he brought her back from Connecticut (C.F. Perkins, Jr., personal communication 1988). No evidence remains of these early structures. By 1910 the area was known as a Mexican town although it still technically belonged to Perkins. Permanent houses were probably not constructed by most of the Mexican residents until after they purchased the land from Perkins in the period between 1912 and 1924. The structures standing today all date after the turn of the century, with most post-dating 1920.

The Perkins Addition area has always retained its Mexican town atmosphere. Throughout its long history this neighborhood has been considered the wrong side of the tracks (Stone 1987:23) and has often been neglected by the rest of Holbrook. The area has also been subjected to flooding throughout the present century. As a result, few substantial structures were ever built. Most structures were informal in construction, often exhibiting opportunistic use of available building materials such as railroad ties. Many structures were never formally recorded by the County Recorder and since 1940, new building has been prohibited in the area (the newest structures are mobile homes). As a result, land values have become depressed and many of the existing buildings were either abandoned or deteriorated to such an extent that occupants decided to leave (Stone 1987:23). Most of the remaining structures have suffered extensive and irretrievable loss of integrity through deterioration, demolition, alterations, and additions.

Ten properties retained either sufficient integrity or significance to warrant documentation; inventory sheets were prepared for these. Two of the ten properties appear to be individually eligible to the National Register: the Armijo Homestead and the Thunderbird Tavern.

The Armijo Homestead

The Armijo homestead occupies the top of a small knoll at the southern edge of the Little Colorado River floodplain and includes two significant resources: a residence and a water tower. The home was built prior to 1919 by the Armijo family who purchased the land on which it stands from C.F. Perkins in 1914. The family, however, already may have been residing on the property for some time. The water tower, possibly dating as early as the 1870s, may be associated with this earlier occupation by the Armijos. The Armijos sold the property in the 1940s and it soon fell into the hands of another old Holbrook family, the Ortegas, who still own it but no longer reside there. Because of their long association with the house, it is often referred to as the Ortega House (Stone 1987).

The home appears to be eligible to the National Register under Criterion B for its association with the pioneering Armijo and Ortega families of Holbrook. The water tower is eligible under criterion C as an unusual example of the Second Empire style applied to a utilitarian accessory structure. Although now abandoned, both structures retain sufficient integrity to convey their historic character.

A previous study (Stone 1987) identified the style of the Armijo house as an example of the Queen Anne/Territorial style and credited its present

appearance to later alterations. However, Graham feels that the style has been misidentified, and that the structure is actually a vernacular example of a Neoclassical style residence which retains its original character.

Thunderbird Tavern

This commercial building was originally constructed in the early 1920s and the facade added less than 10 years later. It is an outstanding example of the use of local indigenous materials adapted to a nationally-popular architectural style. The use of petrified wood to imitate both "log cabin" type corners and wood vigas, as well as the stone (jasper) mosaic set into the stuccoed Mission style parapet are particularly significant. Although the petrified wood was added in the early 1930s, this alteration has acquired its own significance. The use of these materials was an early attempt to capture the attention of passing motorists for commercial purposes, a practice which continues today. The Tavern, however, represents the most elaborate use of petrified wood in the buildings remaining in Holbrook. The building also retains its original wood storefront and red sandstone exterior structural walls.

The structure retains a high degree of integrity on the exterior; the interior is nondescript. The location and setting of this building at the outskirts of town along the historic route to the Petrified National Park and the White Mountains is of primary importance to its integrity. The location of the building is what tells the story of its original tourist-trade function.

The Thunderbird Tavern, then, appears eligible to the National Register under Criterion C as an example of an unusual use of local petrified wood on a Mission Revival style structure, as well as Criterion A for its relationship to the early development of the tourist trade in Holbrook.

CHAPTER FOUR PREHISTORIC CERAMICS

Archer Site

Prehistoric ceramics were recovered only from the Archer site. The ceramic collection from this site comprised 222 sherds consisting of at least 18 identifiable types representing 7 different wares. (Table 4.1). The majority of recognizable vessel forms were from jars (Table 4.2). More specific vessel forms could not be distinguished because of the fragmentary nature of the collection. Almost 77 percent of the ceramics were recovered from surface contexts and the majority of the subsurface sherds were recovered from Test Pit 1 in Feature 3.

Ceramic Wares and Types

Gray Ware

This utility ware was represented by two types: Kana'a Gray and a Little Colorado Grey Ware (Table 4.1). Kana'a Gray is constructed by coiling with the coils left flattened but not obliterated (Colton 1955). It is fired in a reducing atmosphere usually resulting in a light gray surface color. The surface finish is very rough and crudely scraped. Temper consists of abundant medium fine to coarse quartz sand that is usually conspicuous on both surfaces. Vessel forms are usually jars. Kana'a Gray is a typical utility ware of the Kayenta Branch of the Anasazi in the Pueblo I period but is rare in the little Colorado area (Stewart 1980:198).

A single example of the rare Little Colorado Corrugated was found. This is identical to the more widespread Tusayan Corrugated except it is sherd-tempered rather than sand-tempered (Stewart 1980:198). Tusayan Corrugated was not found in the assemblage and is rare in the nearby Petrified Forest area. These two types also do not have obliterated coils but are distinguished from Kana'a Gray by coils indented (pinched) into a distinctive pattern. Both types occurred in the Pueblo II and III periods.

Mogollon Brown Ware

This ware was the most common ware at the Archer site and was represented by four types. The most common type was Woodruff Brown which was most abundant in the region between Basketmaker III and Pueblo I. This is a coiled and scraped pottery type with a relatively smooth (sometimes lightly polished) surface. Color ranges from light tan to reddish brown. Temper is a moderately fine to coarse sand and crushed rock temper which is often visible on both surfaces. Forms included jars and bowls.

Showlow Smudged and Show Low Corrugated are very thin sand-tempered bowls with interiors that are highly polished and often smudged to a glassy black lustre (Stewart 1980:195). Exteriors are also often well polished and slipped a reddish-brown color. The corrugated type is distinguished by an

Table 4.1. Ceramic Types and Wares at the Archer Site.

TYPE/WARE	FREQUENCY	PERCENT
Gray Ware	12	5.41
Kana'a	11	4.95
Little Colorado	1	0.45
Mogollon Brown Ware	61	27.48
Woodruff	42	18.92
Showlow Corrugated	2	0.90
Showlow Smudged	16	7.21
McDonald Corrugated	1	0.45
Other Brown Ware	52	23.42
Holbrook Corrugated	10	4.50
Sherd-tempered Smooth	32	14.41
Sand-tempered Corrug.	1	0.45
Sherd-tempered Coiled	9	4.05
Tusayan White Ware	42	18.92
Lino White	24	10.81
Kana'a B/W	6	2.70
Black Mesa B/W	1	0.45
Sosi B/W	2	0.90
Dogoszhi B/W	3	1.35
Unidentifiable	6	2.70
Cibola White Ware	13	5.86
Kiatuthlanna B/W	2	0.90
Snowflake B/W	2	0.90
Reserve B/W	3	1.35
Unidentifiable	6	2.70
Little Colorado White Ware	26	11.71
Dead River B/W	2	0.90
Holbrook A B/W	1	0.45
Holbrook B B/W	5	2.25
Unidentifiable	18	8.11
Hohokam Buffware	2	0.90
Unknown	14	6.31
Plainware	12	5.41
Whiteware	1	0.45
Polychrome	1	0.45
Total	222	100.00

Table 4.2. Frequencies and Row Percents of Ceramic Wares and Forms at the Archer Site.

CERAMIC WARE	FORM			Total
	Bowl	Jar	Unkn	
Gray Ware	1* 8.33**	11 91.67	0	12
Mogollon Brown	17 27.87	27 44.26	17 27.87	61
Other Brown	11 21.15	32 61.53	9 17.03	52
Tusayan White	18 42.86	15 35.71	9 21.43	42
Cibola White	6 46.15	6 46.15	1 7.69	13
Little Colorado White	4 15.38	19 73.08	3 11.54	26
Hohokam Buff	0	1 100.0	0	1
Unidentifiable	1 7.14	4 28.57	9 64.29	14
Total	58 26.13	116 52.25	48 21.62	222 100.00

* Frequency

** Row percent

indented corrugated exterior exterior. These types date to the Pueblo II and III periods.

The fourth type, McDonald Corrugated, was represented by a single sherd. This type is similar to Show Low Corrugated but replaces the red exterior slip with broad-lined designs painted in white. McDonald Corrugated dates to the Pueblo III period.

Other Brownware

This group of brown utility wares consists of one identifiable type, Holbrook Corrugated, and three unnamed types. Holbrook Corrugated is an indented corrugated type contemporaneous with Tusayan and Little Colorado

corrugated (Pueblo II and III). It exhibits an identical surface treatment to these two types but differs in terms of temper and firing atmosphere (producing different colors). Holbrook corrugated is sherd-tempered and fired in an oxidizing atmosphere resulting in a brown surface and paste color.

Also common were a number of smoothed surface brownwares similar to Woodruff Brown, but with sherd rather than sand or rock temper. Less common was a sherd-tempered brownware with a coiled surface similar to Kana'a Gray. Most of these had a dark gray exterior making it difficult to distinguish them from the latter type. However, they had a definite brown paste and the sand temper that was conspicuous in the Kana'a Gray was absent from this type. Both these unknown types may represent local variants of Woodruff Brown and Kana'a Gray, respectively.

The final brownware type was represented by a single small sand tempered sherd with an indented corrugated surface. The combination of sand temper and a brown paste distinguish this sherd from all the other indented corrugated types (see Little Colorado, Tusayan, Show Low, and Holbrook corrugated). It is possible that it is a Show Low Corrugated sherd with an eroded slip or a more rare import.

Tusayan White Ware

This common Kayenta Branch ware was represented by at least five types. The most abundant was Lino White, the local form of the more widespread Lino Gray (Stewart 1980:198). These types have relatively coarse and rough surfaces and are tempered with medium to coarse quartz sand. No coils are evident. Lino White is distinguished by notably white, but unslipped surfaces. Lino Gray dates to Basketmaker III; Lino White may be contemporaneous.

The other representatives of this ware are white-slipped decorated types. The slip occurs on the painted surface; the interior of bowls and exterior of jars. Tusayan White ware types are distinguished from other whitewares by the combination of coarse quartz sand temper and carbon-painted designs. Kana'a Black-on-white is the Pueblo I type of Tusayan White ware and is distinguished by a narrow lined design with a banded layout, solid elements, and line elaboration (Figure 1.4). Sosi, Dogoszhi, and Black Mesa black-on-white are roughly contemporaneous PII types distinguished by their designs. Sosi design style utilizes broad lined geometric designs of lines and triangles without any line elaboration. Black Mesa style is essentially an elaboration of Sosi style, generally with dots or similar elements pendant to the lines. Dogoszhi style consists largely of geometric designs which are outlined and hatched with fine to medium width lines. The unidentifiable types are white-slipped Tusayan White ware sherds lacking diagnostic design elements.

Cibola White Ware

This decorated ware has long been associated with the White Mountain, upper Little Colorado, and the Puerco areas. It is distinguished from other contemporaneous whitewares by a combination of crushed rock temper and mineral

(mostly iron) painted designs. Finish is generally better and smoother than for Tusayan White ware and the paste is often much darker. As a result, the white-slipped surface is usually more distinct. The mineral paint also preserves much better than the carbon paint.

Design styles for contemporaneous whitewares of northern Arizona were often shared among wares; particular types represented the execution of a particular style using the materials and techniques that define each ware. Kiatuthlanna Black-on-white, for example, is similar (although it lacks solid elements and line width is slightly broader) to Kana'a Black-on-white (Figure 1.4), except it utilizes mineral paint and rock temper. Snowflake Black-on-white is distinguished by a Sosi style design executed with mineral paint on a rock-tempered, dark gray paste.

Reserve Black-on-white represents a later Pueblo III style of Cibola White ware. This style involves a geometric design incorporating a balance of both solid and hatched elements.

Little Colorado White Ware

This indigenous ware of the central Little Colorado Valley first appeared in the Holbrook phase of Pueblo II. A Dead River Black-on-white has been identified as a Kana'a style type with sherd temper and distinctive Little Colorado White ware slip (Stewart 1980:199). Sullivan (1984:80), however, describes Dead River as a Cibola White ware (see Figure 1.4). Little Colorado White ware is distinguished by sherd temper, grey paste, carbon paint, and a fugitive slip. Execution of the design is good as in the Cibola White ware, but the carbon paint and fugitive slip usually result in poorer preservation.

The most common type of this ware is Holbrook Black-on-white. Two variants are distinguished: Holbrook A exhibits a Black Mesa style design and Holbrook B exhibits a Sosi design style. Because of the poor preservation of the painted design, most representatives of this ware could not be identified as to type.

Hohokam Buff Ware

Two examples of this distinctive form of pottery from the desert regions of central Arizona were found at the Archer site. Both sherds occurred in the vicinity of Feature 3; one on the surface and one in the third level of Test Pit 1. Neither sherd was identifiable as to type but Hohokam pottery was a common trade ware into northern Arizona prior to Pueblo III.

This ware is produced by the paddle-and-anvil technique and exhibits a smoothed surface with a pinkish paste. It is sand tempered with distinctive fine gold mica inclusions. Both examples were from jars; one exhibited traces of the red paint used as decoration in this ware.

Unknown

The remainder of the ceramic assemblage consisted of sherds that were unidentifiable as to either ware or type. Most of these were sherds that were burned beyond recognition or too fragmentary. One was a smoothed brownware with a bright orange surface and paste and very fine sand temper. The polychrome was sherd-tempered with traces of red pigment on the exterior and a light grey interior.

Functional Considerations

Vessel forms provide a clue to functional differences in vessel use. The majority of vessel forms were jars, however, this pattern did not hold over all ceramic wares (Table 4.2). A higher percentage of Tusayan White ware sherds were bowl forms and Cibola White ware sherds were evenly split. This distribution may reflect a temporal trend since Tusayan White ware include the earliest decorated types and the Little Colorado White ware include the latest. Thus, the use of decorated bowls may have diminished through time.

There is also an indication of spatial variation in vessel form. If the site is divided into two areas, each corresponding with the ceramic peaks in surface distribution (Figure 3.2a), a lower proportion of bowl sherds are noted in association with the pit houses at the center of the site (Area A, Table 4.3). This difference is accentuated when unidentifiable forms are excluded; a ratio of 2.2 jars/bowls is calculated for Area A and 1.7 jars/bowls for Area B. It is not known whether this difference is functionally meaningful or if it is a product of the higher recovery of pottery from features in Area A. Higher frequencies of jars, however, are expected in storage areas which are, in turn, indicative of more permanent habitation. Thus, it would be useful to further explore this variation in future investigations at the site.

Another clue to function is the distribution of different wares; especially utility (plain and corrugated) versus decorated wares. Table 4.4 indicates that higher proportions of utility wares occur in Area A, where the houses were found, and higher proportions of decorated whitewares occur in Area B, where no habitations were found. Again, it can not be determined at present whether this pattern actually reflects functional differences between the two areas or different levels of testing. If remains of a house area can be found in Area B, these ceramic differences may disappear.

Spatial and Temporal Distribution of Ceramics

The spatial distribution of types and wares provide clues to temporal variability at the site. The various types described span an occupational range from Basketmaker III to Puelbo III. The question can be asked whether different temporal components can be identified. Too few ceramics were recovered to distinguish the period of occupation of individual features, however, gross spatial distinctions can be addressed.

Table 4.3. Frequencies and Percents of Ceramic Form by Area.

CERAMIC FORM	AREA		Total
	A	B	
Bowl	38* 23.75**	20 32.20	58
Jar	82 51.20	34 54.50	116
Unidentifiable	40 25.00	8 12.90	48
Total	160 72.07***	62 27.93	222

* Frequency

** Column Percent

***Row Percent

Table 4.4. Frequencies and Row Percents of Ceramic Wares by Area.

WARE	AREA A		AREA B		TOTAL	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Gray Ware	11*	6.88**	1	1.61	12	5.41
Mogollon Brown	49	30.63	12	19.35	61	27.48
Other Brown	39	24.38	13	20.97	52	23.42
Tusayan White	25	15.63	17	27.42	42	18.92
Cibola White	5	3.13	8	12.90	13	5.86
Little Colorado White	16	10.00	10	16.13	26	11.71
Hohokam Buff	2	1.26	0	.00	1	.90
Unidentifiable	13	8.13	1	1.61	14	6.31
TOTAL	160	100.00	62	100.00	222	100.00

* Frequency, ** Row percent

The various ceramic types can be divided into two broad temporal groups (Table 4.5). Slight differences in age are apparent between areas A and B. The earlier Basketmaker III-Pueblo I types are more common in Area A and the later Pueblo II-III types are more common in Area B. For example, Kana'a Gray, Woodruff Brown, and the analogous sherd-tempered coiled and plain types are more common in Area A (Table 4.6). Since most of these are jars, this pattern also may account for the higher frequency of jars in Area A.

In contrast to this early group, higher proportions of the later Cibola and Little Colorado whitewares and the associated indented corrugated types are in Area B. Most of the Tusayan White ware and the Hohokam Buff ware are, as expected, proportionately more abundant in Area A. The most glaring inconsistency is the relatively high proportion of Lino White, one of the early types, in Area B.

The presence of two temporal components is more clearly illustrated in Figure 4.1. The various ceramic types are divided into early (Basketmaker III-Pueblo I) and late (PII-PIII) groups based on Table 4.5 and ratios are determined for each collection unit using the following formulae:

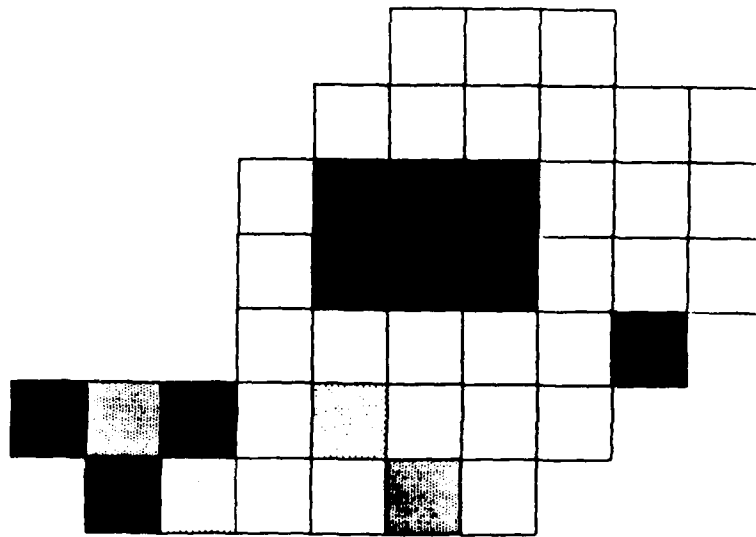
$$\text{early } r = n \text{ of early} / \text{total } n$$

$$\text{late } r = n \text{ of late} / \text{total } n$$

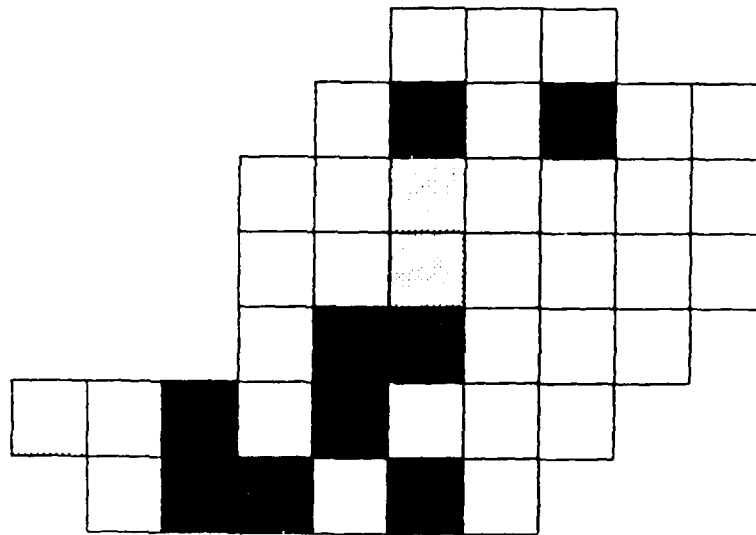
The total includes all unidentifiable types and wares whose age could not be determined.

High ratios of early sherds occur in two locations: one at the center of the site near the pit houses and another in the far southwest corner of the site. In contrast, high ratios of late sherds occur at the southcentral area of the site just north of the two slab-lined features, Feature 4a and 4b, eroding along the edge of the site. Late sherds also occur immediately north of the site center although the number is extremely small. These data suggest the presence of distinct temporal components associated with different groups of features. Most of the pit houses apparently date to the Basketmaker III-Pueblo I periods and most of the southern area dates to the Pueblo II-III periods. Considerable overlap in occupation is also indicated. Feature 3, for example, is stratigraphically higher than the other two pit houses and may be the source of later ceramics in this area.

Examination of the vertical distribution of ceramics adds little to this reconstruction. Most of the ceramics were recovered from surface contexts (Table 4.7). All types are represented in the surface assemblage in rough proportion to their total numbers. If vertical differences were present, the earlier types would be expected to occur in the lower levels. Instead, Pueblo II-III types are slightly more common in lower levels. The extremely low frequencies of subsurface sherds suggest this reversed stratigraphy is probably the product of sampling error.



BMIII - PI



PII - PIII



Figure 4.1. Distribution of early and late ceramic groups at the Archer Site.

Table 4.5. Diagnostic Ceramic Wares and Types by
Period in the Holbrook Area.**

PERIOD	PHASE	WARE	TYPE
BMII	-	Alameda Brown	Adamana Brown*
BMIII	-	Tusayan White Cibola White Grayware Mogollon Brown	Lino White, Lino B/G* White Mound B/W* Lino Gray* Woodruff Brown, Red*
PI	-	Tusayan White Cibola White Grayware Mogollon Brown	Lino White, Kana'a B/W Kiatuthlanna B/W Lino Gray,* Kana'a Gray Woodruff Brown, Red*
PII	-	Tusayan	Black Mesa B/W
	Holbrook	Tusayan White Little Colorado Cibola Grayware Mogollon Brown Brown	Black Mesa, Sosi, Dogoszhi B/W Holbrook, Padre B/W* Snowflake B/W Tusayan,* Little Colorado Corr. Showlow Corrugated, Smudged Holbrook Corrugated
PIII	McDonald	Little Colorado Tusayan White Cibola White Grayware Mogollon Brown Brown	Walnut,* Holbrook, Padre B/W* Flagstaff B/W* Reserve B/W Tusayan,* Little Colorado Corr. Showlow Corrugated, Smudged, McDonald Corrugated Holbrook Corrugated
PIV		Tsegi Orange	Jeddito B/Y,* Sikyatki Poly*

* Not found

** Derived from Gumerman (1968), Stewart (1980), Wendorf (1953).

Table 4.6. Frequencies and Column Percents of Ceramic Types by Area at the Archer Site.

CERAMIC TYPE	AREA		Total
	A	B	
Kana'a Gray	11* 6.9**	0	11
Little Colorado Corrugated	0	1 1.6	1
Woodruff Brown	36 22.5	6 9.7	42
Show Low Corrugated	1 0.6	1 1.6	2
Show Low Smudged	12 7.5	4 6.4	16
McDonald Corrugated	0	1 1.6	1
Holbrook Corrugated	5 3.1	5 8.1	5
Sherd-Tempered Plain	26 16.3	6 9.7	32
Sand-Tempered Plain	0	1 1.6	1
Sherd-Tempered Coiled	8 5.0	1 1.6	9

Table 4.6. Frequencies and Column Percents of Ceramic Types by Area at the Archer Site (cont.).

CERAMIC TYPE	AREA		Total
	A	B	
Lino White	12 7.5	12 19.4	24
Kana'a B/W	4 2.5	2 3.2	6
Black Mesa B/W	1 0.6	0	1
Sosi B/W	0	2 3.2	2
Dogoszhi B/W	2 1.2	1 1.6	3
Unidentifiable Tusayan White	6 3.8	0	6
Kiatuthlanna B/W	1 0.6	1 1.6	2
Snowflake B/W	0 3.2	2	2
Reserve B/W	0 4.8	3	3
Unidentifiable Cibola White	4 2.5	2 3.2	6
Dead River B/W	2 1.2	0	2
Holbrook A & B B/W	1 0.6	5 8.1	6
Unid. Little Colorado White	13 8.1	5 8.1	18
Hohokam Buff	2 1.2	0	2
Total	147	61	208

* Frequency

** Column percent

Table 4.7. Frequencies and Row Percents of Ceramic Type by Level. N=208.

TYPE	LEVEL (cm below surface)						
	0	1-10	11-20	21-30	31-40	41-50	51-60
Kana'a Gray	9 81.8	0	2 18.2	0	0	0	0
Little Colorado Corrugated	1 100.0	0	0	0	0	0	0
Woodruff Brown	28 66.7	1 2.4	9 21.4	0	2 4.8	0	2 4.8
Show Low Corrugated	2 100.0	0	0	0	0	0	0
Show Low Smudged	13 81.2	0	0	0	0	0	3 18.8
McDonald Corrugated	1 100.0	0	0	0	0	0	0
Holbrook Corrugated	5 50.0	3 30.0	0	1 10.0	1 10.0	0	0
Sherd-Tempered Plain	26 81.2	2 6.2	1 3.1	0	2 6.2	0	1 3.1
Sand-Tempered Plain	1 100.0	0	0	0	0	0	0
Sherd-Tempered Coiled	3 33.3	0	0	0	0	1 11.1	5 55.6

Table 4.7. Frequencies and Row Percents of Ceramic Type
by Level. N=208. (cont.).

TYPE	LEVEL (cm below surface)						
	0	1-10	11-20	21-30	31-40	41-50	51-60
Lino White	21 87.5	1 4.2	1 4.2	0	0	0	1 4.2
Kana'a B/W	6 100.0	0	0	0	0	0	0
Black Mesa B/W	1 100.0	0	0	0	0	0	0
Sosi B/W	2 100.0	0	0	0	0	0	0
Dogoszhi B/W	2 66.7	0	0	0	1 33.3	0	0
Unidentifiable Tusayan White	4 66.7	1 16.7	1 16.7	0	0	0	0
Kiatuthlanna B/W	1 50.0	1 50.0	0	0	0	0	0
Snowflake B/W	2 100.0	0	0	0	0	0	0
Reserve B/W	3 100.0	0	0	0	0	0	0
Unidentifiable Cibola White	5 83.3	0	0	0	0	0	1 16.7
Dead River B/W	2 100.0	0	0	0	0	0	0
Holbrook A & B B/W	5 83.3	0	0	0	1 16.7	0	0
Unid. Little Colorado White	17 94.4	0	1 5.6	0	0	0	0
Hohokam Buff	1 50.0	0	0	1 50.0	0	0	0
Total	160 76.9	9 4.3	15 7.2	3 1.4	7 3.4	1 0.5	13 6.2

CHAPTER FIVE PREHISTORIC LITHICS

Archer Site

Almost 2000 flaked and ground stone artifacts were recovered from the Archer site. This collection consisted of 1915 flaked and 25 ground stone artifacts from systematic surface collections and test excavations. Two projectile points were also found. One was point provenienced and the other was collected prior to the establishment of the site datum and collection grid; neither is included in the flaked stone tool counts. Over 93 percent of the flaked stone artifacts and 80 percent of the ground stone were recovered from surface contexts.

Groundstone

Hammerstones

Hammerstones were the most common type of groundstone encountered, consisting of small pebble to cobble-sized tools exhibiting various degrees of surface battering resulting from use. Thirteen were made of quartzite and one was made of basalt. All were recovered from surface collections and were evenly distributed over the entire site (Figure 3.1) in contrast to most of the other surface lithics.

Manos

Two types of manos were found. One slab mano was found in Backhoe Trench 1 near the concentration of houses at the center of the site. This was oval in shape, made of sandstone, had two large grinding surfaces, and was burned. Manos of this type are generally associated with slab metates although none of the latter were found.

Three small quartzite cobble manos were also found. Two whole manos were found in collection units 7 and 14, directly east of the site center. A broken example was found in Test Pit 1. This type of mano is made from unshaped cobbles and pebbles with a single ground surface or facet and are generally used with basin-type metates.

Pecking-Polishing Stone

One small elongate sandstone pebble was apparently a multifunctional tool. One surface exhibited a polished facet and the tip and two sides exhibited extensive pecking. This specimen was recovered from the surface.

Ground Slabs

No formal metates were found, but fragments of five ground slabs were found; three in Test Pit 1 and the other two on the surface at the eastern end of the site. All five slabs were made of sandstone. Two were very thin shaped slabs with a broad flat surface which suggested a palette-like function. Two were thicker unshaped slabs with one slightly concave surface indicative of a basin metate form. The fifth slab was a burned fragment that had been pecked to shape - this was probably an architectural component rather than a tool.

Flaked Stone

The large flaked stone assemblage allows for more in-depth analyses than the other artifact classes. Inspection of the assemblage indicates that an analysis focused on aspects of technological variability and its implications for site function would be most productive since very few tools are present. Three problem domains are generally considered in studies of flaked stone technological variability: reduction stage, reduction technique, and raw material use. All the lithic material at the Archer site appears to have been involved in hard-hammer reduction, thus the reduction technique need not be considered.

The theoretical and methodological background of technological studies of Southwestern flaked stone has been discussed in considerable detail (see Bradley 1975; Dosh, Ciolek-Torrello, and Taylor 1987; Jones 1983; Rozen 1979:212-219, 1981; Sullivan 1980) and need not be repeated here. Suffice to say, two kinds of reduction, primary and secondary, are usually distinguished in lithic collections based on byproducts of these activities.

The reduction of unaltered pieces of raw material into cores is termed primary reduction. The cores may be used directly as core tools, such as hammerstones, choppers, and scrapers, or they may be further reduced until they are too small for further reduction. Byproducts of primary reduction are tested cobbles, which are discarded as unsuitable for further reduction, flakes, and various sized fragments (shatter and chunks) which do not exhibit the formal characteristics of a flake, such as a bulb of percussion or striking platform. Flakes produced in this process also may be used directly (utilized flakes), discarded, or further modified in the process of secondary reduction into retouched tools. Small flakes, flake fragments and shatter are the usual byproducts of secondary reduction. Secondary reduction also involves the re-sharpening, modification, or breakage of existing tools.

These types of products and byproducts (debitage) can be used as indicators of the particular stage of reduction. Other indicators are the size ofdebitage and the amount of cortex found on the exterior surface of thedebitage. Size is an important clue sincedebitage becomes increasingly smaller as the reduction process proceeds. Similarly, as cores are created from cobbles and flakes removed from cores, less of the original weathered surface or cortex of the cobble is found on thedebitage. For example, cortex usually covers the entire dorsal surface of flakes produced during the initial shaping of core, while flakes produced from a well-used core should have no

cortex on their dorsal surface. In some cases the initial flakes are directly used as tools and the amount of cortex is a key to this selective process.

Material selection is also an important consideration. All lithic materials are not of equal quality for tool production or use. Similarly, all lithic materials are not equally accessible. The decisions made by prehistoric populations in regard to which materials were collected and how they were used are important behavioral considerations.

Lithic Material Use

The assemblage exhibits virtually no variability in material use. Almost the entire assemblage is derived from materials found in the gravels exposed at the site. The bulk of debitage was made from cobble chert with an even greater preference for this material in cores and tools (Table 5.1). Although petrified wood, jasper, and especially chalcedony have excellent flaking capabilities and are locally available, there is little indication that these materials were specifically sought out. A higher than average percentage of core tools were from jasper and chalcedony and a higher percentage of multiple retouched tools were made of jasper, but the overall frequencies of these materials were very low. Quartzite appears to have been the least favored material. Although it is the second most abundant category of material, a higher than average percentage of quartzite cobbles were tested and discarded.

There is also little variability in the relationship between material type and the presence of cortex. In other words, there is slight evidence for the selection of any particular material type for more intensive reduction. As might be expected, a higher percentage of chalcedony and jasper (the finer materials) exhibits less cortex than the assemblage as a whole and a slightly higher percentage of quartzite and basalt exhibit more but these differences are not great (Table 5.2).

From this evidence it can be concluded that the lithic industry at the Archer site was an informal and expedient one in which local materials were used for the most part on the basis of their availability. There is a slight tendency for more intensive manipulation of materials such as jasper and chalcedony, but the very low frequency of these materials indicates that they were not highly selected. The poorer materials such as quartzite and basalt were also used but were less intensively worked and discarded more often during the initial stages of reduction.

Lithic Reduction

The bulk of the assemblage appears to represent primary reduction activities with almost 60 percent consisting of tested cobbles, cores, shatter, and chunks (see Table 5.1). Chunks were very rare while shatter was the single most abundant category. This suggests that the size of cobbles was quite small, which is consistent with the size of the cores and tested cobbles in the collection, as well as the unmodified cobbles found in the old river gravels exposed at the site. This conclusion is supported by Table 5.3 which shows that the average size of cobbles, cores and shatter is quite small.

Table 5.1. Frequencies and Row Percents of Lithic Types and Raw Materials from the Archer Site.

LITHIC TYPE	MATERIAL								
		Quartzite	Chert	Pet.Wood	Jasper	Chalcdny	Basalt	Quartz	Total
Flake	N	58	23'	7	5	7	8	0	322
	%	18.01	73.60	2.17	1.55	2.17	2.48		*16.81
Flake	N	44	264	28	7	8	3	2	356
Frag	%	12.36	74.16	7.87	1.97	2.25	0.84	0.56	*18.59
Shatter	N	91	637	47	19	11	13	10	828
	%	10.99	76.93	5.68	2.29	1.33	1.57	1.21	*43.24
Chunk	N	0	2	0	0	0	0	0	2
	%		100.00						* 0.10
Cobble	N	41	152	0	1	0	2	0	196
	%	20.92	77.55		0.51		1.02		*10.23
Core	N	0	80	2	1	0	0	0	83
	%		96.39	2.41	1.20				* 4.33
Core Tool	N	0	14	1	1	1	0	0	17
	%		82.35	5.88	5.88	5.88			* 0.89
Utilized	N	4	76	5	0	0	1	0	86
Debitage	%	4.65	88.37	5.81			1.16		* 4.49
Retouched	N	1	12	0	0	0	0	0	13
Piece	%	7.69	92.31						* 0.68
Multiple	N	0	11	0	1	0	0	0	12
Retouch	%		91.67		8.33				* 0.63
TOTAL	N	239	1485	90	35	27	27	12	1915
	%	12.48	77.55	4.70	1.83	1.41	1.41	0.63	100.00

* Column Percent

Table 5.2. Frequencies and Row Percents of Material Types and Presence of Cortex.

LITHIC TYPE	NA*	PRESENCE OF CORTEX ON ARTIFACT SURFACE (%)					Total
		0	1-10	11-50	51-90	90-100	
Quartzite	N 133 % 55.65	40 16.74	3 1.26	2 .84	18 7.53	43 17.99	239 100.0
Chert	N 948 % 63.84	225 15.15	22 1.48	44 2.96	55 3.70	191 12.86	1485 100.0
Petrified Wood	N 59 % 65.56	19 21.11	0	1 1.11	1 1.11	10 11.11	90 100.0
Jasper	N 22 % 62.86	12 34.29	0	0	0 2.86	1	35 100.0
Chalcedony	N 12 % 44.44	11 40.74	2 7.41	0	0	2 7.41	27 100.0
Basalt/ Volcanic	N 15 % 55.56	2 7.41	2 7.41	0	2 7.41	6 22.22	27 100.0
Quartz	N 10 % 83.33	0	0	0	0	2 16.67	12 100.0
Total	N 1199 % 62.61	309 16.14	29 1.51	47 2.45	76 3.97	255 13.32	1915 100.0

* Not applicable or too modified to determine

Table 5.3. Weight of different lithic types at the Archer Site.

LITHIC TYPE	WEIGHT STATISTICS (gms)				
	Cases	Minimum	Maximum	Mean	Stand Dev
Flakes	321	0.30	18.90	1.73	2.92
Flake Fragments	357	0.15	24.90	1.38	2.88
Shatter	828	0.12	8.73	0.53	1.01
Chunks	2	28.00	41.20	34.60	9.33
Tested Cobbles	196	1.39	262.30	10.12	26.71
Cores	83	4.96	96.70	19.36	19.55
Core Tools	17	9.02	81.20	19.62	18.24
Utilized Flakes	86	1.24	94.60	6.77	11.50
Retouched Flakes	13	5.20	81.50	29.01	23.78
Multiple Retouch	12	5.80	142.10	40.58	36.34

Together, these data reinforce the field observation that the prehistoric users of the site were quarrying the gravel beds at the site rather than importing lithic materials from other areas.

Flakes, which can result from both primary and secondary retouch, were common but occurred in much lower frequencies than shatter. Flake fragments were the only lithic types representing secondary reduction which were abundant and even some of these could be produced in the course of primary reduction. Utilized debitage was common but not abundant; all retouched tools, including core tools, were extremely rare, together comprising less than 2 percent of the assemblage.

The few retouched tools were almost all informal types consisting of unshaped cutting and scraping tools exhibiting only edge retouch. Only two formal tools were found; the two projectile points. One is a leaf-shaped point, made of petrified wood, with corner notches and a straight to slightly convex base. It is 5.8 cm long and 2.2 cm wide and was found on the surface of Collection Unit 13 near the pit houses. This point exhibits considerable edge-damage suggesting use as a knife. It is almost identical to one illustrated by Wendorf (1953:Fig. 36a) from the Flattop site which he dates to Basketmaker II. The only difference is that the latter is longer and the tip more pointed than the example from the Archer site.

The second point, made of banded chert, is leaf-shaped but the basal portion is missing. It exhibits two large step-fractures near the tip on one edge and macroscopic edge-damage on the opposing edge. This pattern of edge wear is consistent with its use as a drill. This tool was also found near the center of the site.

The presence of cortex on the dorsal surface of the different lithic types is consistent with the conclusion that primary reduction was the major activity involving lithics that occurred at the site. (Only types derived from flakes with definable dorsal surfaces are included in this calculation). Almost 90-100 percent of the surface of almost half the flakes and almost a third of the flake fragments were covered with cortex (Table 5.4); indicating that they were removed during the initial stage of core reduction. Small numbers of tools also exhibited extensive amounts of cortex, but the frequencies were too low to determine if there was a selection of this characteristic for certain tool types.

Although cortex was unusually common throughout the lithic assemblage, the bulk of flake fragments and tools exhibited little or no cortex. Thus, a significant secondary reduction component is present at the site. The following section will explore whether these two activity components exhibit spatial or temporal variability; that is, can the two components be separated in time or space at the site.

Temporal and Spatial Variability

Figures 5.1 through 5.3 illustrate the spatial distribution of different classes of flaked lithics in collection units. The shading in each unit represents a ratio of the frequency of each class standardized by the highest frequency for that artifact class. Figure 5.1a is a plot of all flaked lithic types combined and is presented for comparative purposes. This plot reflects the same distribution as the fish net map of lithics (see Figure 3.2b). Three concentrations of lithics are noted each corresponding with a peak illustrated in the fish net map. The large concentration in the northeast corner of the site corresponds with the high ridge in Figure 3.2b and the central concentration corresponds with the central peak where the pit houses were found. The smaller southern concentration corresponds with the two low truncated peaks.

Spatial diversity is noted when different lithic classes are plotted. Lithics associated with primary reduction (e.g., tested cobbles, cores, shatter, and flakes) occur in two areas: the northeast area and to a lesser extent in the southern area. In contrast, retouched tools, utilized flakes (Figure 5.3) and secondary reduction debitage (Figure 5.2a and 5.2b) are concentrated in the site center and to a lesser degree in the southern area. Flakes, which are associated with all stages of lithic reduction and use are abundant in all areas where lithics are abundant. Flake fragments are a better indicator of secondary retouch and are concentrated in a single area at the center of the site.

If these data are combined with the distribution of ceramics and features, three different types of activity areas can be defined at the site (Figure 5.4). The northeast corner of the site is a specialized activity area

largely devoted to primary lithic reduction with extremely high frequencies of tested cobbles, cores, shatter, and flakes. This occurrence is not unexpected since lithic gravels, which could be quarried, are abundant in this area. The exposure of bedrock and gravels at the surface also make it a poor area for construction. A small number of informal retouched tools and hammerstones also occurred in this area. Few ceramics were associated and the age is indeterminate as a result. Overall, this lithic assemblage is very similar to that described for Tolchaco sites and may not be associated with the other activity areas at the site.

Table 5.4. Frequencies and Row Percentages of Lithic Types and Values for Cortex Presence.

LITHIC TYPE	NA*	PRESENCE OF CORTEX ON ARTIFACT SURFACE (%)					Total
		0	1-10	11-50	51-90	90-100	
Flake	N 0	102	10	23	39	148	322
	%	31.68	3.11	7.14	12.11	45.96	100.0
Flake	N 12	177	17	20	30	100	356
Frag.	% 3.37	49.72	4.78	5.62	8.43	28.09	100.0
Shatter	N 820	6	0	0	0	2	828
	% 99.03	.72				.24	100.0
Chunk	N 2	0	0	0	0	0	2
	% 100.0						100.0
Cobble	N 196	0	0	0	0	0	196
	% 100.0						100.0
Core	N 83	0	0	0	0	0	83
	% 100.0						100.0
Core Tool	N 17	0	0	0	0	0	17
	% 100.0						100.0
Utilized	N 56	20	0	3	4	3	86
Debitage	% 65.12	23.26		3.49	4.65	3.49	100.0
Retouched	N 8	1	1	1	1	1	13
Piece	% 61.54	7.69	7.69	7.69	7.69	7.69	100.0
Multiple	N 5	3	1	0	2	1	12
Retouch	% 41.67	25.00	8.33		16.67	8.33	100.0
Total	N 1199	309	29	47	76	255	1915
	% 62.61	16.14	1.51	2.45	3.97	13.32	100.0

* Not applicable or too modified to determine

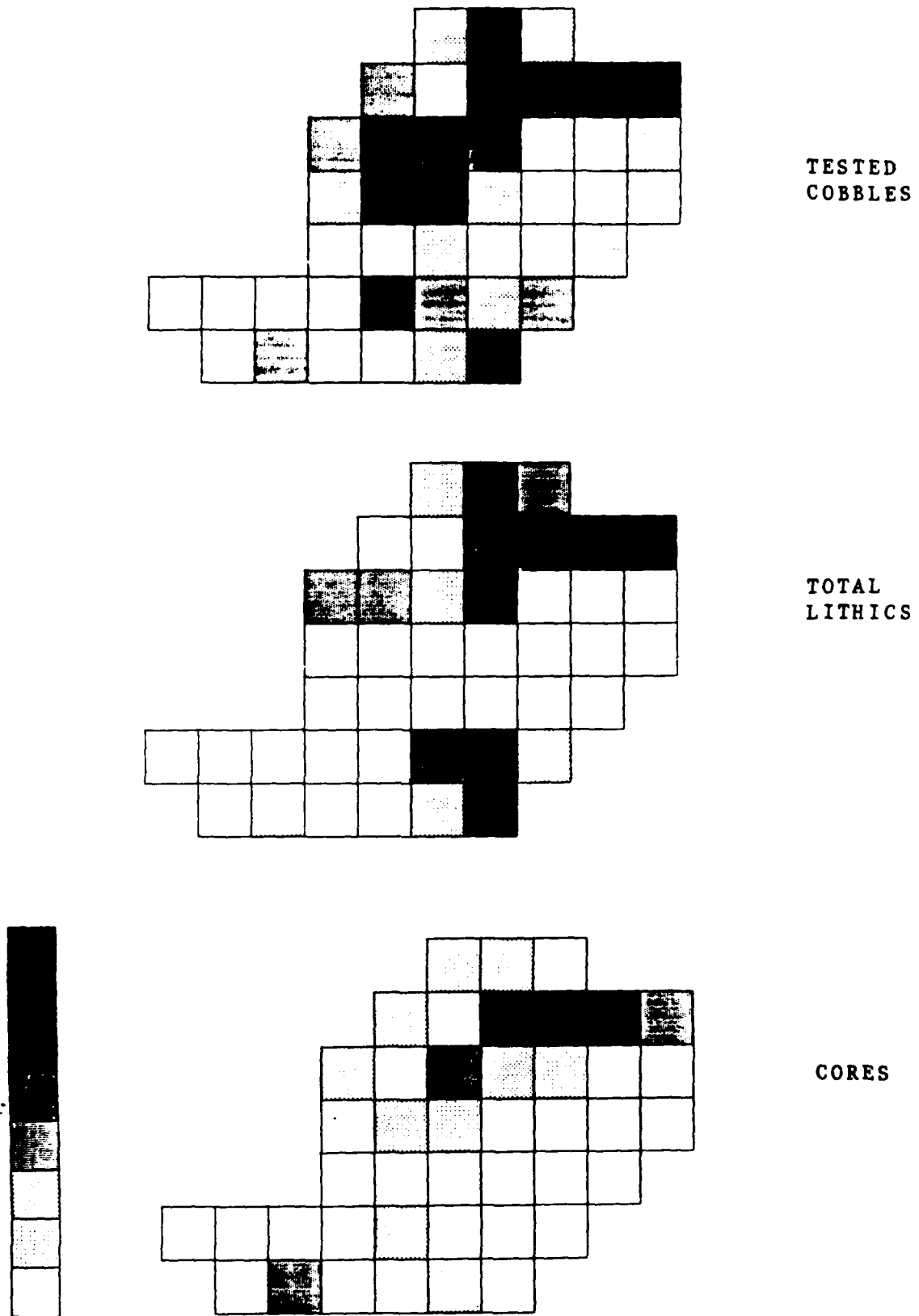
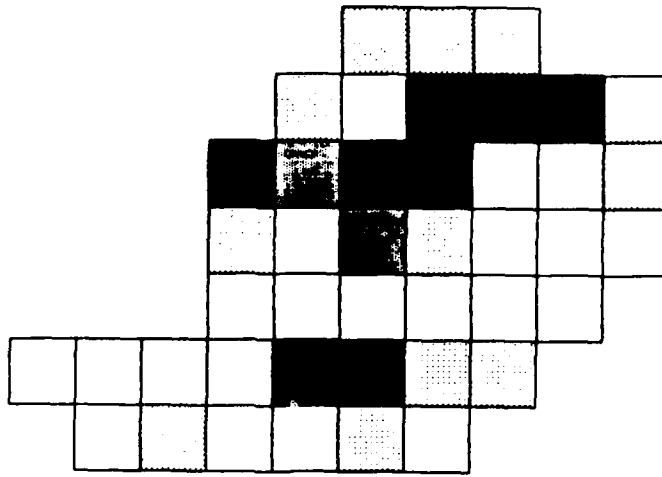
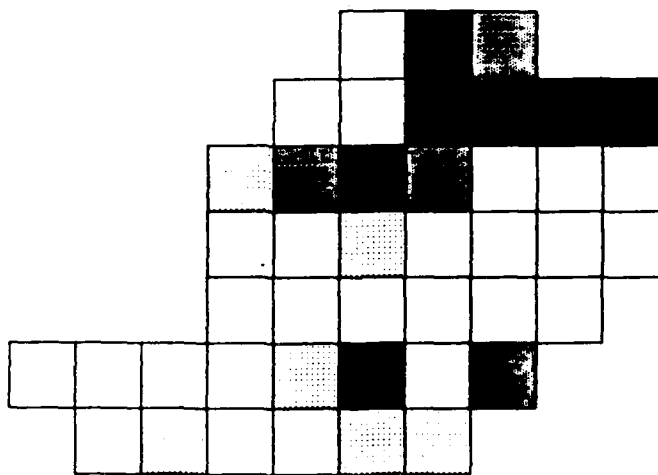
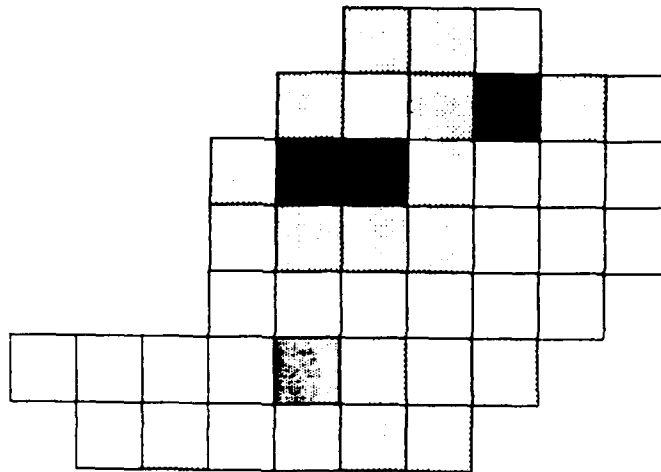


Figure 5.1. Distribution of total lithics, tested cobbles and cores at the Archer site.

WHOLE
FLAKES

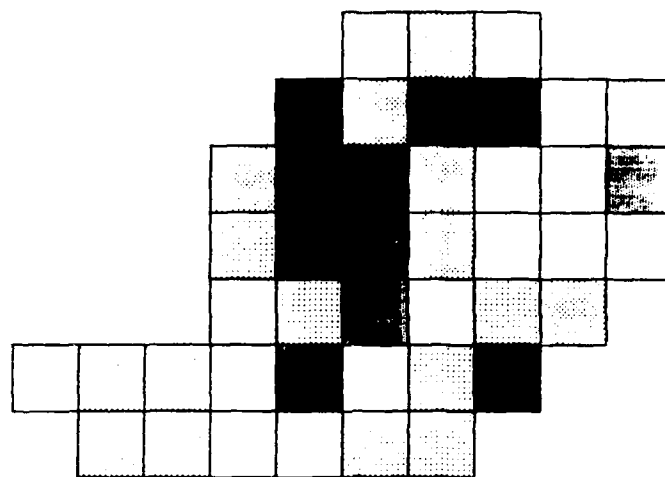


FLAKE
FRAGMENTS

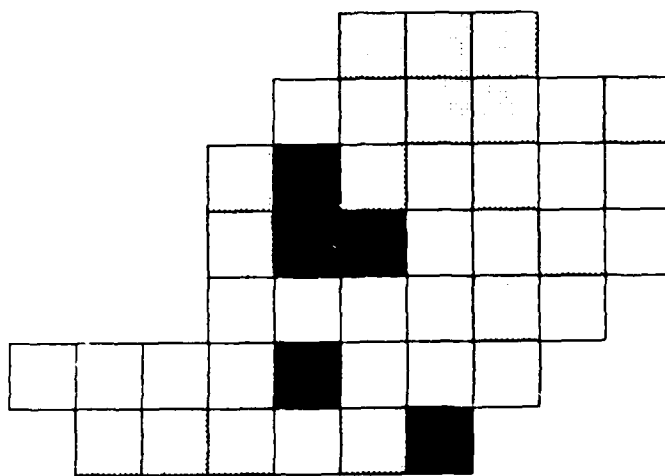


SHATTER

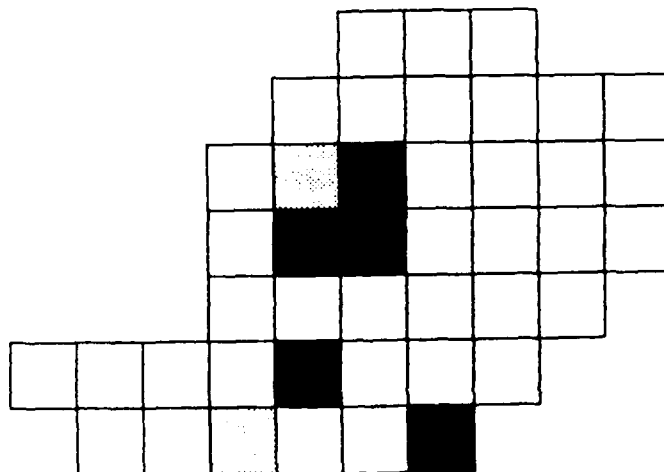
Figure 5.2. Distribution of whole flakes, flake fragments and shatter at the the Archer site.



UTILIZED
FLAKES



CORE
TOOLS



RETOUCHED
FLAKES

Figure 5.3. Distribution of utilized flakes and retouched and core tools at the Archer site.

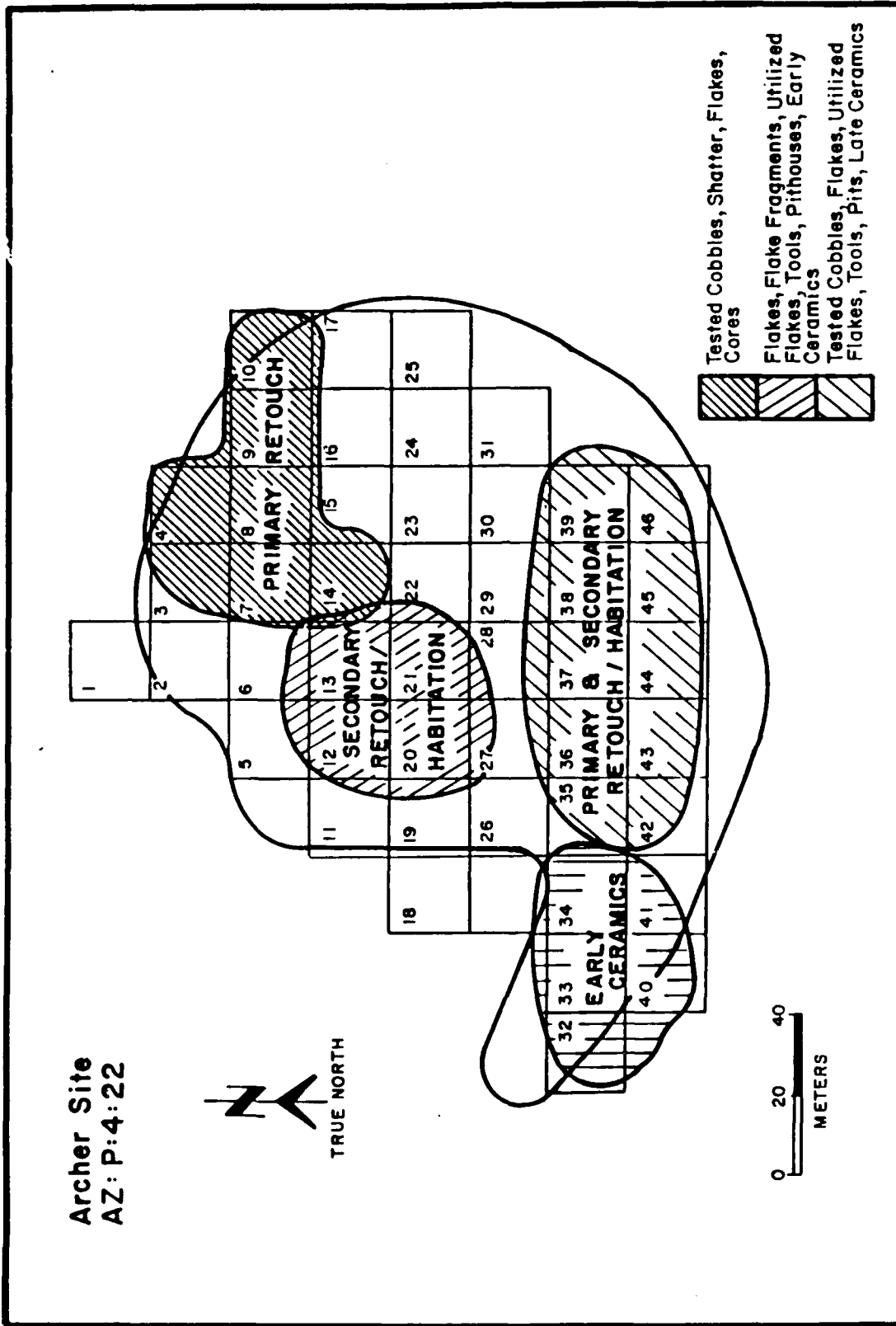


Figure 5.4. Distribution of major prehistoric artifact classes and activity areas at the Archer site.

A second activity area occurs at the center of the site and overlaps the primary reduction area. This activity area appears to have been a locus for secondary reduction and tool use with high frequencies of flakes and flake fragments, utilized flakes, and retouched tools. The presence of pit houses and other features, as well as ground slabs and manos, in this area is not accidental and the secondary reduction and tool use activities were probably associated with the features. This area appears to date primarily to the Basketmaker III-Pueblo I period with a smaller Pueblo II-III occupation. This dating is indicated by the ceramics (see Chapter 4) supported by the presence of a Basketmaker type point in this area.

The third area contains distinct early and late ceramic concentrations. The late concentration is associated with two extramural slab-lined pits. All stages of lithic reduction are represented in this area as well as most of the hammerstones and a variety of flaked stone tools. The presence of primary reduction activity is significant because lithic sources are not exposed in this area. Thus, cobbles were transported to this area for reduction in contrast to the northeastern area of the site where they occurred naturally. Although frequencies of debitage are much lower in this area, their occurrence and great diversity are significant.

The exact nature of activities in this third area is not clear. It could represent another habitation area which has been partially destroyed by bank erosion. Alternatively, it could represent an extramural activity area associated with the habitation area at the center of the site. If this latter interpretation were correct, however, we would expect that the two areas were contemporaneous. The existing data do not support this interpretation. Thus based on these data, it can be tentatively concluded that the southeastern portion of the site represents a later type of occupation involving a different range of activities than occurred in the earlier occupation at the center of the site.

CHAPTER SIX HISTORIC ARTIFACTS

A large number of historic artifacts were found and collected at both the Archer and Thompson House sites. In the laboratory the historic artifacts were divided into standard material categories such as glass, metal, china, and bone. Each of these categories was divided, when possible, into functional categories. To avoid repetition, the description of artifacts is combined for both sites although the data are divided by site and listed by Field No. in the tables (Tables 6.1-6.6). The glass was analyzed by James E. Ayres, who also examined the other historic artifacts and provided many useful comments. Bruce Jones of Statistical Research analyzed the faunal remains and Jay Van Orden of the Arizona Historical Society, Tucson provided information about the ammunition.

Metal

Ammunition

A wide variety of ammunition, some of which was used as early as the Civil War, was found in both sites. Both cartridges and bullets were recovered ranging in caliber from .22 to .58.

Cartridges

A .22 caliber short rimfire (RF) was found in the west half of Collection Unit A at the Thompson House. This artifact was stamped with a "U" representing the Union Metallic Cartridge Co. of Bridgeport, Conn. and its successors, Remington-UMC (Hogg 1982). The 22 short RF is the oldest American commercial, self-contained, metallic cartridge and has been in use since 1857 (Barnes 1965). A .38 caliber centerfire cartridge was also recovered from the east half of this same unit. This cartridge was unusual cartridge (Figure 6.1c); its length of .87 inches was longer than the .38 S&W but shorter than the standard .38 Long Colt. No headstamp is present to aid in identification, although Hogg (1982:17) lists an outside lubricated .38 Long Colt cartridge with similar dimensions. The specimen has the identical dimensions to the .38 Long RF cartridge (Barnes 1965:283; Hogg 1982:17). It was not possible to determine the exact date of manufacture; Van Orden (personal communication, 1988) tentatively suggested this specimen was used between 1880 and 1915. The standard .38 Long Colt (an inside lubricated version) had a similar history and was introduced in 1875. It became the official military revolver cartridge in 1887, but was dropped in favor of the .45 cal. automatic in 1911 (Barnes 1965:162). The .38 Long RF was an even older round used from the Civil War until the end of WW I (Barnes 1965:278).

A possible .44 short RF was also found 20-30 cm below the surface in Test Pit 2 inside the historic foundation. This specimen was completely flattened so exact dimensions could not be obtained (Figure 6.1a). The .44 Short was a popular pistol and revolver cartridge introduced at the end of the Civil War

Table 6.1. Historic Ceramics from the Archer Site, AZ P:4:22.

FIELD NO.	PROVE-NIENCE	OBJECT	NO.	MIN. NO.	REMARKS
27	CU 25	Small plate rim*	13	1	Green decal design "Vernon" in crest
		Unknown base*	2		
		Small plate base*	8		
		Small bowl	1	1	Large rose decal
		Unknown rim	1	1	Floral decal design
67	CU 45	Unknown	1	1	Undecorated
178	NW	Cup	1	1	Floral decal design - same as FN 27, but different vessels
		Plate	2	1	
		Porcelain cup	1	1	Traces of cobalt design
		Unknown Porcelain figure	4	3	Undecorated Very small fragment
192	CU 44	Small plate	5		Green decal design as in FN 27
		Unknown rim	1	1	Undecorated
194	CU 46	Bowl	17	2	Unpainted rim pattern

and was obsolete since the 1920s (Barnes 1965:279). It had a copper case 11/16 in long and 0.438 in. in diameter (Logan 1959:68). This specimen fits these characteristics best.

Two rifle cartridges were found on the surface of the Archer site. One was a 30-40 Krag case with a REM-UMC headstamp (Figure 6.1d). The 30-40 was adopted in 1892 as the first small bore military cartridge. It was replaced in military service by the .30-03 in 1903, but rifles continued to be manufactured commercially for this round until 1936 (Barnes 1965:40). It is still popular today and the round is still manufactured. The headstamp post-dates 1911 when Remington Arms and the Union Metallic Cartridge Co. merged (Hogg 1982:137).

The final cartridge case is a .50-70 Govt. (Figure 6.1b) found on the surface in the southwest end of the site. This cartridge is a center fire without any headstamp. The .50-70 was the standard American military cartridge from 1866 to 1873 and was the first centerfire cartridge in general use by the military. It was used in the single shot Springfield rifle until replaced by the .45-70 in 1873. This specimen has the early Benet type of inside primer used in the original cartridge (Barnes 1965:115). External Boxer type of outside primers officially replaced the Benet type in 1882 in

Table 6.2. Historic Metal Artifacts from the Archer Site, AZ P:4:22.

FIELD NO.	PROVE-NIENCE	OBJECT	NO.	DATE	REMARKS
Ammunition					
92	CU 36	.30-40 Krag case	1	1911-	REM-UMC 30 USA
109	CU 34	.50-70 Govt case	1	1866-	Center fire, Benet primer
	CU 26	.52 Sharps bullet	5	1859-	Ringtail cantilouvre type
		.58 cal. bullet	2	cal900	
		.36 cal.? bullet	1	cal900	
Auto Parts					
173	NW	Battery parts	2		
		Grommet	1		
	General	Leaf spring	1		
Kitchen					
36	CU 16	Can	1		
174	N110,E70	Sardine Can	1		Soldered top
	General	Numerous crimped cans			
		Mason jar lid			
Hardware					
	General	Hacksaw blade			
		Paint brush clasp			
		Wire nails			
		Wire			
Miscellaneous					
181	CU 16	Tobacco Can lid	1	1921-?	"United States Tobacco Co."
185	CU 22	Aluminum lid	1		"De Meridorr's Greaseless Coldcream"
196	CU 46	Sewing machine	4		Fragments
	NW	Sewing machine	3		Large cast metal pieces
	General	Tobacco can	2		

Table 6.3. Historic Glass Artifacts from the Archer Site, AZ P:4:22.

FIELD NO.	PROVE- NIENCE	OBJECT	COLOR	NO.	MIN. NO.	DATE	REMARKS
41	CU 9	? bottle	Emerald	1	1		Rectangular form, Mark "...L" on side
67	CU 45	Small jar	Milk	1	1		Screw finish neck of coldcream jar FN 193 & lid FN 185? Machine made
		? bottle	Brown	1	1		
		? bottle	SCA	5	1	1880-1919	
		? bottle	Pale grn	1	1		
70	CU 44	Small jar	Milk	1			Same as in FN 67, machine made
		? bottle	SCA	1	1	1880-1919	
		Cosmetic bottle	SCA	1	1	1880-1919	Mark "...orr" near top
71	CU 45	Tumbler	SCA	1	1	1880-1919	
96	CU 36	? bottle	Lt green	10	1		Base mark "6" or "9", Heel "800", quart size
156	TP 9	Champagne bottle	Dk green	6	1		0-10 cm B.D., hand finish
159	TP 9	Champagne	Dk green	1			20-30 cm B.D., same bottle as FN 156?
175	NW	Small jar	Milk	1	1		
		Jar	SCA	32	1	1883-1919	Horlick's Malted Milk, machine made
		Milk bttle	Clear	3	1		Pint size, machine made
		Proprtry medicine	Cobalt	5	1		Vicks or similar prod., machine made
		Footed bowl	SCA	2	1	1883-1919	Carnival glass,
		Tumbler	Lt Green	2	1	Post-1906	patent dates: Dec. 23, 1903, July 17, 1906
		Unknown	SCA	1	1	1880-1919	
		Lg bottle or jar	SCA	1	1	1880-1919	Unidentifiable
		Fruit jar	Lt Green	7	1	1915 pat.?	"Kerr Sand Springs" on base, machine made

Table 6.3. Historic Glass Artifacts from the Archer Site,
AZ P:4:22 (cont.).

FIELD NO.	PROVE- NIENCE	OBJECT	COLOR	NO.	MIN. NO.	DATE	REMARKS
FN 175(cont.)		Tumbler	Clear	3	1		
		Unknown	Clear	13	1		Unidentifiable mark
		Unknown	Aqua	1	1		
		Mirror	Straw	10	1		Plate glass w/ beveled edges
184	NW	Proprtry medicine	Cobalt	1			Same as FN 175?
		Beer bttle	Brown	1	1		
188	NE	Proprtry medicine	Clear	1	1	1938 or 1948	Whole Listerine bottle, Base: Owens-Illinois mark w/ "8" date, machine made
191	CU 44	Proprtry medicine	Cobalt	1	1		Unidentifiable mark
		Unknown	Cobalt	1	1		Different from above
		Prescrptn bottle	SCA	1	1	1880-1919	
		Prescrptn ? bottle	Clear SCA	1 1	1 1	1880-1919	Base mark: "PE...L..."
193	CU 46	Cosmetic jar	Milk	2	1		Base mark: "...dorr's/..." coldcream jar base for Fn 67 and lid FN 185, ? machine made
195	CU 46	Wine or champagne	Dk green	3	1		Hand made
		? bottle	Brown	3	1		Oval shape
		Beer bttle	Lt green	1	1		Machine
		Beer bttle	Aqua	11	1		
		Whiskey	SCA	1	1	1880-1919	Oval pint bottle
		Medicine	Clear	1	1		Rectangular, paneled
		? bottle	SCA	4	1	1880-1919	For food?,
		Unknown	SCA	7	1	1880-1919	Unidentifiable mark,
214	CU 24	Beer bttle	Brown	8	1		
		Window glass	Aqua	23	1		

Table 6.4. Historic Ceramics from the Thompson House, AZ P:4:23.

FIELD NO.	PROVE- NIENCE	OBJECT	NO.	MIN. NO.	DATE	REMARKS
12	TP2 L3	Button	1	1		
18	TP3 L2	Small saucer	2	1		
27	CU A west	Unknown	2	2		
30	Feat. 1	Unknown	1	1		Surface outside foundation
35	Feat. 1	Clay pipe bowl	1	1		Fragment on surface
36	SFRR east	Large plate	5	1	1924	Poppy decal design w/ SFRR mark
		Small bowl	4	1	1923	Poppy design w/ SFRR mark
		Coffee cup	5	1	1914	Poppy design w/ SFRR mark
		Medium plate	1	1		Poppy design
		Unknown	7	5		Poppy design
		Soup bowl	1	1		Griffen decal design
		Relish dish	1	1		Undecorated
		Cup handles/ attachment	3	1		Undecorated
		Unknown	79	5		Undecorated
41	CU B	Deep saucer	5	1		Undecorated; "Crown Hotel China"
		Tea cup	3	1		Floral decal design
		Coffee cup	1	1		Undecorated
		Lid	2	2		Undecorated
		Unknown	20	3		2 pieces of possible tea cup have chain design
46	SFRR west	Unknown	5	5		2 cups or small saucers; 3 w/ poppy design (1 rim matches rim from FN 36); 1 w/ other floral decal

Table 6.5. Historic Metal and Miscellaneous Artifacts from the
Thompson House, AZ P:4:23.

FIELD NO.	PROVE- NIENCE	OBJECT	NO.	DATE	REMARKS
Ammunition					
13	TP2 L3	.44 Short? RF	1	1864-65 -cal920	Cartridge case
25	CU A east	.38 Long Colt	1	1880- 1915	Cartridge, outside lubed?
22	CU A west	.22 Short RF	1	1857-	Cartridge, "U"
Apparel					
12	TP2 L3	Copper rivet	1		
		Pearl button	1		
42	CU B	Shoe	1		Leather sole
Coinage					
32	TP2 L3	U.S. Dire	1	1854	Liberty Seated type
Kitchen					
17	TP3 L1	Spoon handle	1		
25	CU A east	Cans	4		Soldered
39	CU B	Cans	2		Crimped
Hardware					
1	TP1 L1	Nails	4		Square
3	TP2 L1	Nails	1		Square
4	TP2 L2	Spike	1		
5	TP2 L2	Nails	10		Square
7	TP2 L2	Spike	1		
9	TP2 L3	Nails	30		Square
		Hinges	2		
		Hasp	1		
		Grommet	1		
17	TP3 L1	Nails	6		Square
19	TP3 L2	Nails	5		Square
22	TP4 L1	Nails	3		Square
25	CU A east	Nails	4		Square
		Chain link	2		
31	Feat. 1	Nails	3		Square nails on surface
44	TP5 L4	Handle	1		

Table 6.6. Historic Glass Artifacts from the Thompson House,
AZ P:4:23.

FIELD NO.	PROVE- NIENCE	OBJECT	COLOR	NO.	MIN. NO.	DATE	REMARKS
6	TP2 L2	Button	Black milk	1	1		Decorated, trace of metal from shank?
13	TP2 L3	Window glass	Lt Green Lt Aqua Dk Aqua	2 1 1	1 1 1		
18	TP3 L2	Jar or bottle	Clear	2	1		
24	CU A	Beer bottles*	Aqua Brown Brown Aqua	10 11 1 1	1 1 1 1	1876-1883 1872-1895 1872-1895	"C. Conrad & Co." (monogram) "I.G. Co. L." "I.G. ..."
28	CU A	Bottle* Medicine bottle Proprtry medicine Proprtry medicine Food bottle Food bottle Tumbler Unknown	Lt Green Lt Green Brown Aqua SCA SCA SCA SCA	1 1 16 6 1 26 1 1	1 1 1 1 1 1 1 1		Unidentifiable mark Brandy finish, qt. size Rectangular shape 1868-cal920 Dr. S. Pitcher's, Castoria, hand finish Machine made? 1880-1919 1880-1919 1880-1919 Unidentifiable mark
29		Window glass Medicine bottle ? Bottle	Aqua Aqua Brown	8 1 5	1 1 1		

* Hand finished

Table 6.6. Historic Glass Artifacts from the Thompson House,
AZ P:4:23 (cont.).

FIELD NO.	PROVE-NIENCE	OBJECT	COLOR	NO.	MIN. NO.	DATE	REMARKS
36	SFRR east	Food jar	SCA	1	1	1880-1919	Unidentifiable mark, machine made
		Food jar	Straw	1	1	1920-1964	Hazel-Atlas, machine made
		Beer bottle*	Brown	1	1	ca1879-1896	"...S.G.Co."
		Beer bottle	Lt Green	4	1		
		Whiskey? bottle	Pink	1	1		Machine made
		Whiskey bottle*	SCA	1	1	1880-1919	Pumpkin seed shape
		Unknown	SCA	1	1	1880-1919	Unidentifiable mark
		Unknown	SCA	1	1	1880-1919	
		Jar	Clear	1	1	ca1918-1938	"Capistan Glass Co.", machine made
		Insulator	Dk Green	1	1		"Hemingray"
38	CU B	Beer	Brown	1	1	modern	"Budweiser ...," machine made
		Ink bottle	Clear	1	1		"Carter's/1/No.2", machine made
		Food jar or bottle	Straw	1	1		"Packed /by/...k Corp.", machine made
		Tumbler	Pink	3	1		5.6 in tall
		? Bottle	Emerald	1	1		Base:"C/3",heel:"8"
		? Bottle	Aqua	1	1		
		? Bottle	SCA	1	1	1880-1919	Round
		? Bottle	SCA	1	1	1880-1919	Hand finish
45		Propetry medicine	Aqua	1	1		

* Hand finished

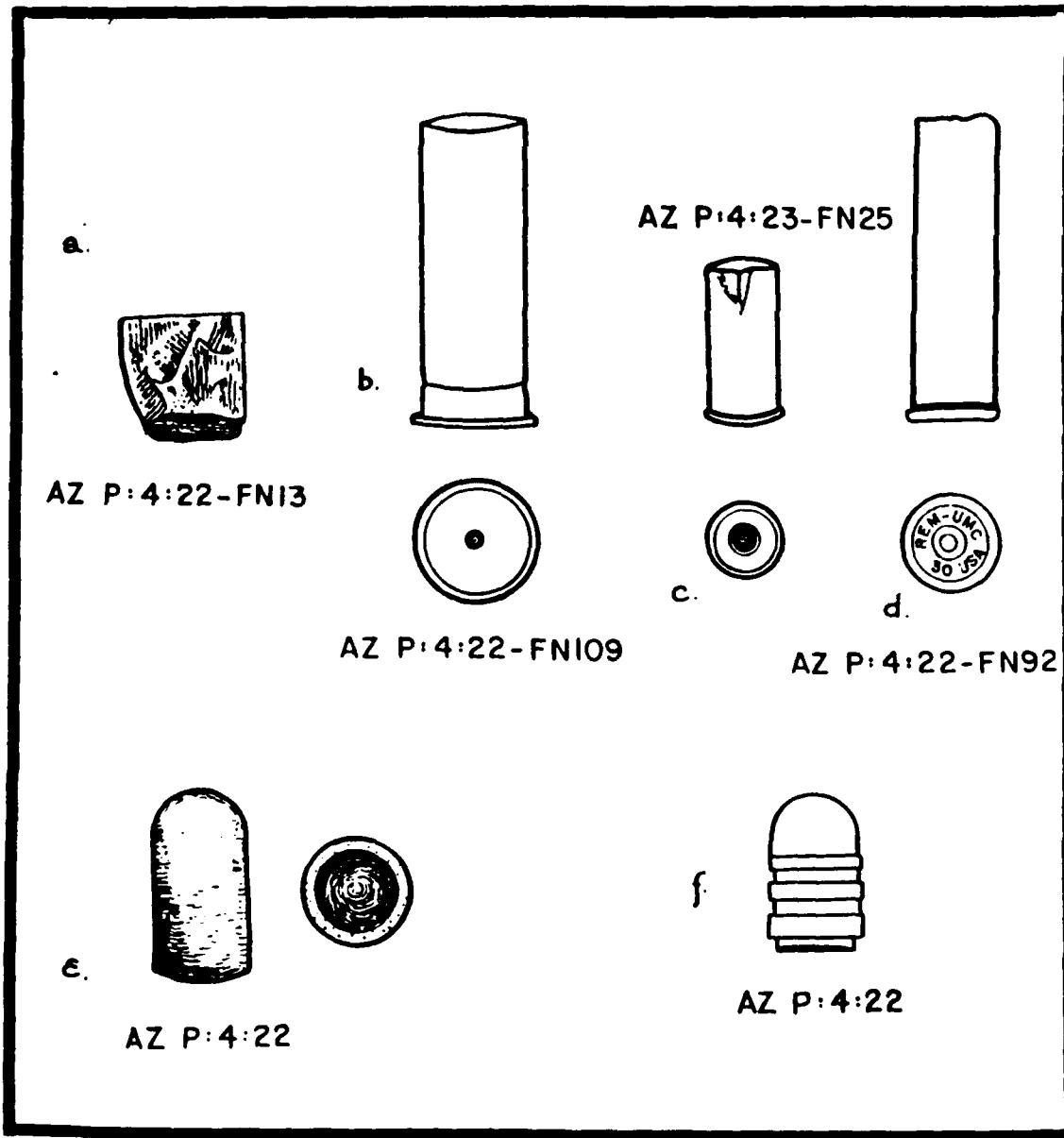


Figure 6.1. Metallic cartridges and bullets from the Archer and Thompson House sites.

the .45-70 cartridge although the Boxer type appeared earlier (Herskovitz 1978:50). Although dropped by the military, the .50-70 continued to enjoy popularity among buffalo and other big-game hunters through the 1880s. It has been obsolete since the turn of the century, but one company was still advertising rifles and ammunition in the 1930s (Barnes 1965:115).

Bullets

Eight bullets representing three different calibers were found at the Archer site. They were eroding from the surface of a small hill at the base of the ridge in Collection Unit 27. It appeared from their arrangement that they had been fired from the bench in the southwest corner of the site at a target placed on the side of the ridge. The .50-70 cartridge was found on top of the bench when this area was checked. Originally it was believed that the cartridge and several bullets were related as the calibers were similar. It was later learned, however, that they were of different calibers. A variety of weapons were fired at this target and the possibility remains that the cartridge was dropped from a fourth type of weapon fired on this occasion.

Most of the bullets are well preserved and exhibit little distortion from impact, although they do have variable amounts of corrosion. Five of the bullets are either from .52 or .54 caliber combustible cartridges (Van Orden personal communication 1988). These bullets have cantilouvered grease grooves and a basal "ring-tail" for attaching the combustible cartridge (Figure 6.1f). Logan (1959) describes several bullets of this type. The 32 Bore Sharps Paper cartridge is a .52 caliber round with a similar cantilouver pattern and ringtail. This was used in the Model 1859 Sharps B.L. (Breech Loading) percussion military rifles and carbines (Logan 1959:14)(see also Herskovitz 1978:52, Figure 15g). The shape of the bullet, however, is more similar to the squat-shaped 52 Sharps Linen or 54 Starr Linen.

The Sharps Linen is one of the most famous of all the combustible types and was used in the Sharps Sporting and Military Arms before and during the Civil War and continued in use as late as 1897. The 54 Starr Linen was a slightly larger caliber cartridge developed for the Starr percussion carbine and large numbers were used in the Civil War (Logan 1959:27-28).

It is possible that these rounds were also used with a metallic cartridge. Lewis (1956:135) lists a .52 caliber round for the Sharps & Hankins' Carbine. This cartridge was a metallic rim fire .54 in diameter, 1.0 in long, and 456 grains in weight. The five specimens range in weight from 441 to 454 grains [similar to the size of the .52 Sharps illustrated by Herskovitz (1978:46,52)] and otherwise fit the dimensions of this round. This round was designed for use in the Sharps Linen Rifle which was altered in the 1860s to employ a metallic rim fire cartridge (Datig 58:155).

Two specimens of a .58 caliber bullet were also found in this concentration. No examples of this type could be found in the literature. One is in almost perfect condition and the other is badly deformed. The former is cylindrical with a round tip (Figure 6.1e); both have a deep conical hollow base and lack either grease grooves or cantilouvers. These are large rounds weighing in between 560 and 568 grains. This probably represents an early combustible cartridge type that was not in general use after the Civil

War.

The final specimen is from a much smaller caliber weapon and is completely flattened. This specimen weighs in at 135 grains similar to the 0.36 caliber bullet illustrated by Herskovitz (1978:46,52). This type probably was used with the .36 cal. Navy revolver which was used by the California Volunteers as the companion piece to the Sharps rifle. Their commander, General Carleton, demanded that his troops be armed with this nonstandard type (Van Orden personal communication, 1988). It was this military unit which was stationed at Camp Supply in the vicinity of the Archer site.

Apparel

The Thompson House had several fragments of apparel. These included a small copper rivet which was found in Test Pit 2 within the foundation. A pearl button (Figure 6.2c) (as well as a ceramic and glass button [Figure 6.2d and 6.2e, respectively]) was found in the same level. The leather sole of a shoe was also found on the surface in Collection Unit B. No items of apparel were found at the Archer site.

Auto Parts

A few auto parts were recovered from both sites. Some metal plates from a battery were found in the large disturbed area in the northeast of the Archer site. The plates were associated with a grommet that may have been used in attaching canvas or leather covers. A leaf spring from an automobile or wagon spring was also found. Several similar leaf springs were found in a cluster in CU B at the Thompson House (not included in the tables).

Coinage

The only coin found was an 1854 Seated Liberty type dime. The dime was corroded and well worn with the date barely readable. It is the type with the stars on the obverse which was produced between 1838 and 1860 (Yeoman 1981:45). This coin was found in the third level of Test Pit 2 in the foundation along with a large number of other artifacts. The condition of the coin suggests that it had been circulated for some time before being lost or discarded in the foundation.

Kitchen

Large amounts of scrap sheet metal was found in the northwest corner of the Archer site as well as the east and southeast portions of the artifact scatter. Many were probably parts of cans, but most were unrecognizable as to form or function and were not collected. A few whole or nearly whole cans were also found. A large sardine type can with the top edges soldered was found west of the collection grid.

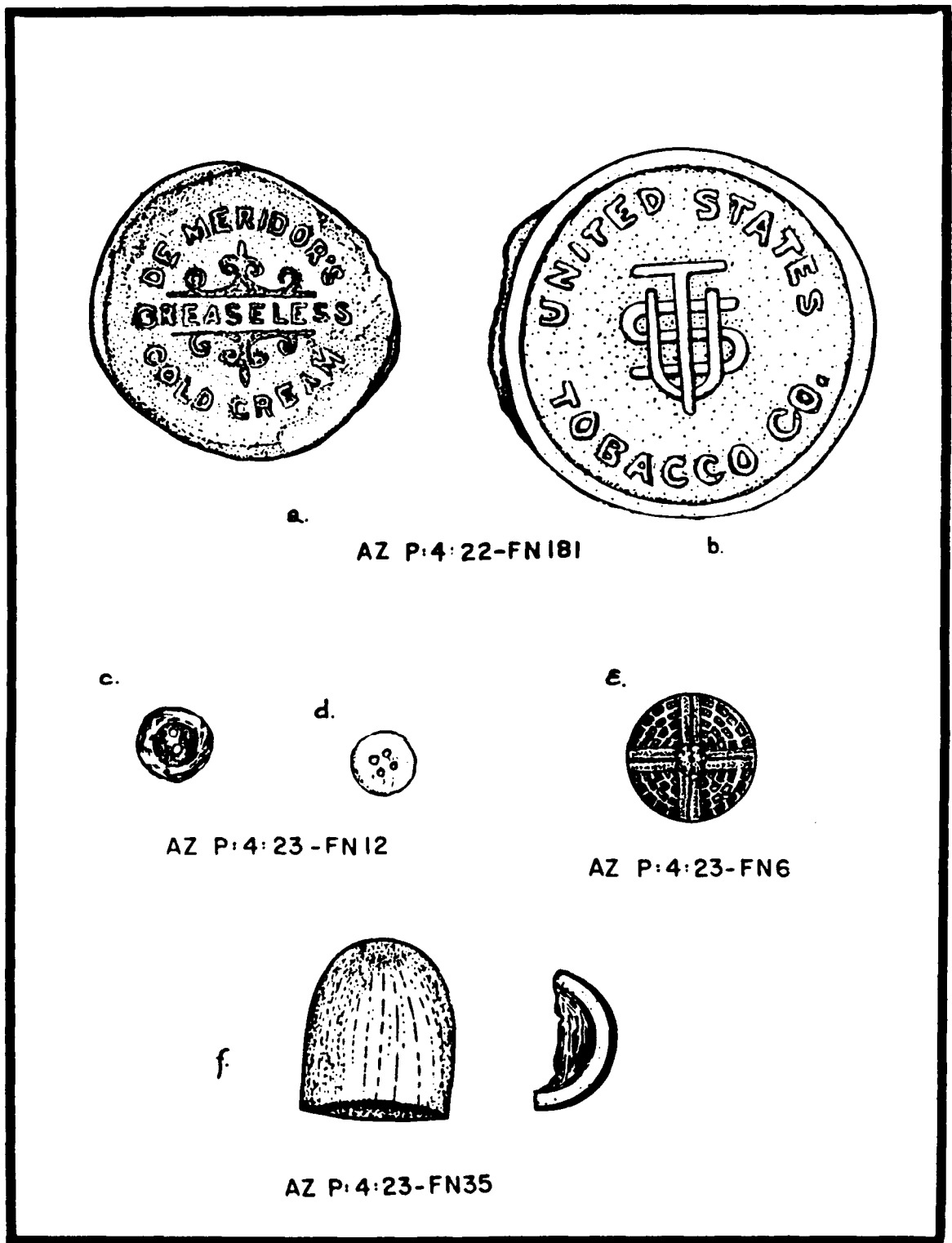


Figure 6.2. Miscellaneous historic artifacts from the Archer and Thompson House sites.

A badly corroded end of a spoon handle was recovered from a test pit inside the foundation at the Thompson House. Both crimped and soldered cans were found in the collection areas west of the foundation.

Hardware

The majority of metal found at both sites was hardware. Little of the hardware at the Archer site was diagnostic or of great age. This situation contrasted with the Thompson House where large numbers of square nails and other hardware was found in the test pits in the structure as well as on the surface. Much of the material found in the test pits was very badly corroded and often no longer recognizable. Yet, cabinet hinges and a door lock hasp were recovered, primarily from Test Pit 2. The number and diversity of remains in this test unit suggest that the house was dismantled and some of remains and household refuse were collected and burned in the corner of the foundation.

Miscellaneous

Several unusual items were found at the Archer site. Portions of the base and arm of a heavy cast metal sewing machine were found in two widely dispersed locations. One was near the disturbed area at the eastern end of the site and the other was in a small gully on the west side of the ridge. Other pieces found in the former area were an aluminum lid of a coldcream jar (Figure 6.2a) and a round tobacco can lid (Figure 6.2b). Fragments of this jar were apparently scattered all over the eastern portion of the site. The tobacco can lid is dated since 1921 (Periodicals Publishers Assoc. 1934:87). At least two of the thin rectangular type of tobacco can were also found.

Ceramics

A relatively small number of historic ceramic artifacts were recovered from both sites. At the Archer site the majority were found in two small pot breaks at the eastern end of the site. The collection from Unit 25 was labeled Feature 1 and included a variety of historic material covering an approximately 4x5 m area. Except for two small porcelain fragments, the Archer ceramics were all hard paste white earthenwares. Most were decorated although only a few designs were represented. One small plate with a green transfer design probably contributed most of the ceramics to the site. The trademark "Vernon" was found in two sherds in the concentration and may be part of the small plate. This mark is dated between 1928-1948 (Lehner 1980:156).

The ceramics at the Thompson House were also hard paste white earthenwares. The majority of the ceramics were found along the old Santa Fe Railroad bed east and west of the house foundation. These sherds were probably all from china made for the Railroad. Many were from three vessels labeled "Made Expressly for Santa Fe Dining Car Service." One of the latter, a coffee cup, was also labeled "New York-Chicago Bauscher Weiden(Germany)

1914" (Figure 6.3b). The others, a small bowl and large plate were stamped with the Bauscher China trademark from Weiden and Bavaria and imported by Arthur Schiller and Sons of Chicago. The bowl was additionally stamped with a date of 1923 (Figure 6.3c) and the plate had a date of 1924. The dining car service china was also distinguished by a particular floral transfer design, consisting of a large yellow poppy pattern placed generally near the rim. One example of a black transfer design incorporating a griffen was also found along the old rail bed (Figure 6.3d).

Dining car service ceramics were not found in the foundation or in the collection units west of the foundation. A wider variety of pottery occurred in these areas. Designs were not common and were too fragmentary to characterize. Fragments of one saucer collected from the surface was marked with the label "Crown Hotel China" surrounded by a circle in green (Figure 6.3a). Also located on the surface near the foundation was a bowl fragment of a clay pipe (Figure 6.2f).

Glass

Glass artifacts were more varied and informative at both sites. The type of glass artifacts were particularly varied at the Archer site. Bottles and food jars and other dining or kitchen related items were the most common. Champagne and beer bottles were common and many of the medicines may have been used for their alcohol content (Ayres personal communication, 1988). Examples of bottle necks from both sites are illustrated in Figure 6.4. Also present were cosmetic bottles, medicine bottles, a footed bowl, a beveled plate, and a mirror.

Less variety was found in the Thompson House assemblage. The majority of glass artifacts were from beer, wine, and other liquor bottles whose numbers were augmented by medicine bottles. Smaller numbers of food related bottles and jars were found here than in the Archer site. Other glass artifacts found were a Carter's ink bottle from Collection Unit B and window glass associated with the adobe wall in the house foundation. A telephone insulator found in Collection Unit A may have been associated with the old railroad; a conclusion supported by the remains of a transmission line found along the entire north side of the old railroad bed. An ornate black milk glass button was also found in the foundation (Figure 6.2e).

Faunal Remains

by Bruce A. Jones

All the faunal remains were recovered from test pits within the historic foundation at the Thompson House site. All but a few specimens were recovered from the dense artifact concentration in Test Pit 2 (Table 6.7). The analysis of the faunal material is preliminary in the sense that the small sample recovered from the site may provide a rough estimation of species abundance and proportionate animal use by the site's occupants but no firm conclusions. The analysis, therefore, has concentrated on basic levels of inquiry, such as calculation of the Number of Identified Specimens (NISIP), Minimum Number of

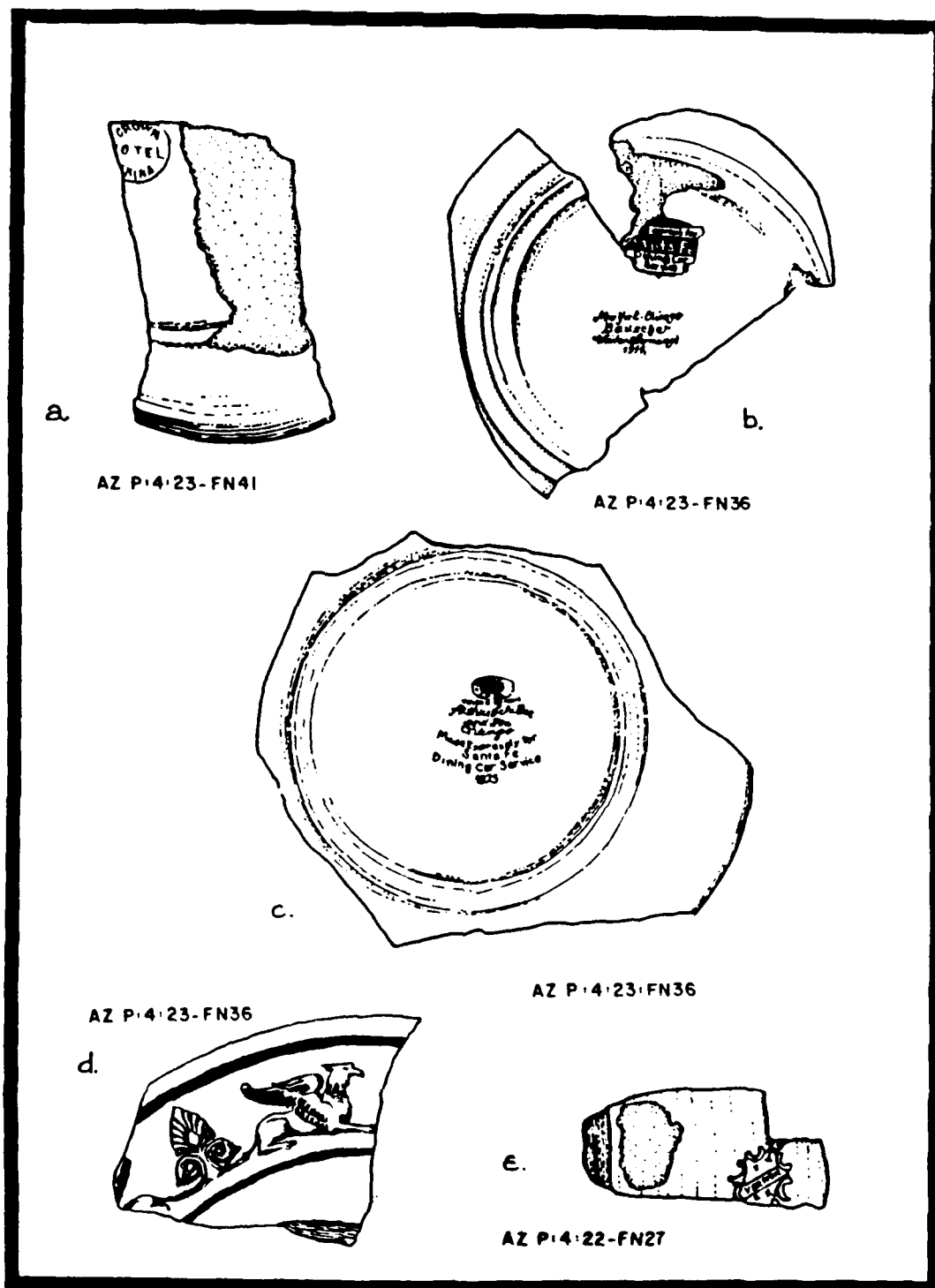


Figure 6.3. Trademarks and designs of white earthenware at the Archer and Thompson House sites.

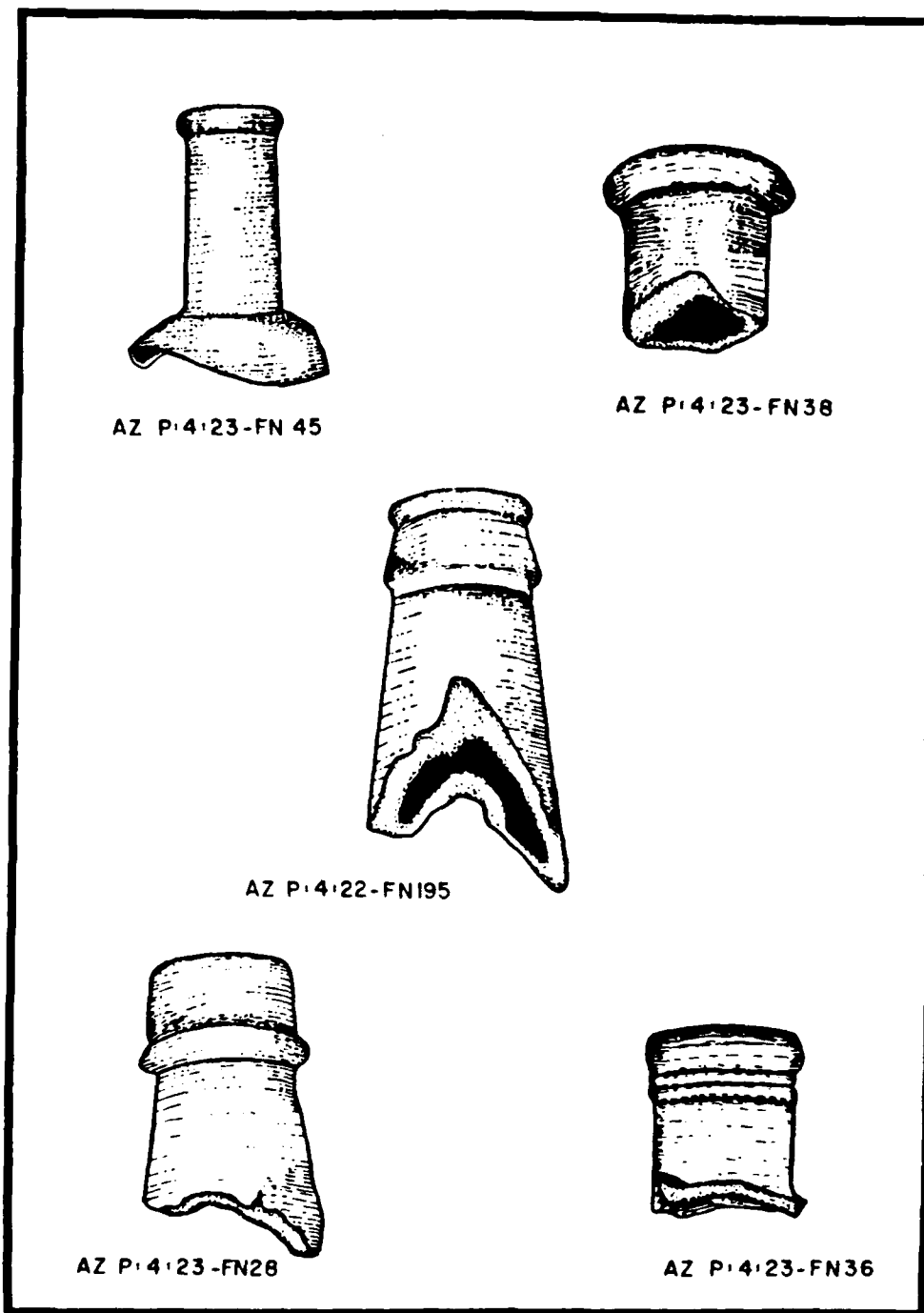


Figure 6.4. Examples of glass bottle necks from the Archer and Thompson House sites.

Individuals (MNI), and macroscopic evaluation of bone modifications resulting from cultural use.

Table 6.7. Distribution of Historic Faunal Remains at the Thompson House, AZ P:4:23.

TEST PIT	LEVEL	NUMBER OF BONES
1	1	5
2	2	27
2	3	56
2	5	10
2	?	4
3	1	2
3	2	2
Total		106

Number of Identified Specimens

The Number of Identified Specimens (NISP) is the total number of identified bones that can be attributed to taxa. This method allows the analyst to calculate the quantity of bones, while the sample is being studied and additional bones may be added as necessary to the count. The NISP value is highly influenced by bone fragmentation and the frequencies of one taxon may be highly skewed depending on the relative degree of breakage of bones for the taxon.

The NISP count for the Thompson House fauna (Table 6.8) does not account for those elements typed as species "indeterminate" or the "nonbovine" category. Sheep or goats were numerically predominant (15%) within the bone assemblage and horse (less than 1%) was least frequent.

Minimum Number of Individuals

The MNI is a determination of the minimum number of individuals of each taxon necessary to account for all identified bones. Species of indeterminate status, as before, were not included in the calculation of the MNI (Table 6.9). There is an inverse relationship between the NISP and the MNI while NISP capitalizes on sheer numbers. The MNI controls for the degree of

Table 6.8. Number of Identified Faunal Specimens (NISP)
at the Thompson House, AZ P:4:23.

TAXON	NISP	%
1. Bovidae	21	20
2. Ovis/Capra	16	15
3. Odocoileus	12	11
4. Lagomorph	9	8
5. Bos/Bison	5	5
6. Antilocapra	4	4
7. Aves (Gallus?)	4	4
8. Canis	3	3
9. Cervus	2	2
10. Equus	1	<1
11. Non-Bovid*	4*	4*
12. Indeterminate*	25*	24*
TOTAL (NISP)	77	

* These specimens were not considered in the NISP count.

Table 6.9. Minimum Number of Individuals (MNI) in the Faunal
Assemblage at the Thompson House, AZ P:4:23.

TAXON	MNI	%
1. Lagomorph	3	18.75
2. Bovidae	2	12.50
3. Ovis/Capra	2	12.50
4. Odocoileus	2	12.50
5. Antilocapra	1	6.25
6. Aves	1	6.25
7. Bos/Bison	1	6.25
8. Canis	1	6.25
9. Cervus	1	6.25
10. Equus	1	6.25
11. Non-Bovid*	1	6.25
TOTAL (MNI)	16	

* Possible Equus or Suidae.

fragmentation of different faunas. The MNI is most useful when employed in conjunction with the NISP for comparison of assemblages and as an indicator of fragmentation processes. The calculations of right and left limbs and skull fragments produced an MNI of 16 mammalian and avifauna individuals for the Thompson House sample (Table 6.9) in contrast to the 77 specimens calculated for the NISP value.

Bone Modification

Estimates of economic use of bone were considered in the analysis through the examination of indicators of butchering practices and other bone modification processes (Table 6.10). The high incidence of bone breakage in the Thompson House assemblage is not consistent with Euro-American butchering techniques. Chopmarks are rare, as might be expected, but saw marks are not abundant. It may be possible that the breakage is attributable to postdepositional and nonhuman factors, although supporting evidence in the form of spiral fractures is weak. It is possible that the bone was fractured in the process of or after discarding into the corner of the house. The discard of large pieces of iron and architectural debris easily could have contributed to the breakage.

No microfauna was found in the present collection and small mammals were represented by a few Lagomorph remains, probably jackrabbits. Although the absence of these smaller mammals may be attributable to intensive bone exploitation processes, it is more likely a product of Euro-American selective exploitation of large game and domestic animals.

The strongest indicators of subsistence utilization from the Thompson House faunal sample appears to be a grouping of two or more of the bone modification traits on a particular element. These combinations occur almost exclusively on ovid and indeterminate bovid bones. Sawing is most pronounced on the scapula, pelvis and upper (proximal) limbs of bovid carcasses in the assemblage. The sawed portions of scapula and proximal limb elements indicate that cuts were being selected from chuck, loin and round sections of cow and sheep carcasses. A preference for mutton over younger sheep is implied by the fact that all but one of the ovid bones were fused. The antelope and elk appear to have been juveniles, however.

Summary and Conclusions

The faunal remains from the Thompson House represent eight to ten genera and about 15 mammalian species, one bird genus, (*Gallus* sp., domestic chicken) and several unidentified bones. Bovids were the most abundant class of mammals represented in the assemblage both in terms of the NISP and MNI. The indeterminate bovids are probably sheep or goat, but a definite assignment could not be made. In general, the most commonly exploited species were sheep or goats. Large game animals, particularly deer, were also exploited. The class of bone elements typed as nonbovid are almost certainly horse or swine, probably the former. Significantly, the definite horse specimen showed obvious signs of butchering including saw cuts. Although lagomorphs are the most common (in terms of MNI) identifiable class, it takes three Lagomorphs to

Table 6.10. Bone Modification and Butchering Intensity Rank.

BONE MODIFICATION INDEX			
CODE	OBSERVATIONS	%	RANK
0 = No Alterations	40	32.2	2
1 = Cutmarks	15	12.0	3
2 = Chopmarks	4	3.2	6
3 = Sawed Bone	13	10.5	4
4 = Breaks	44	35.5	1
5 = Burned	8	6.5	5
Total	124		

TAXA MODIFICATION INDEX	
TAXA	RANK
Indet. Bovidae	1
Ovis/Capra	2
Odocoileus	3
Equus	3
Bos/Bison	3
Antilocarpa	3

No bone modifications were noted on other taxa.

obtain the same amount of useable meat as that available from a single large mammal.

The bones from the Thompson House do not equate well with what one would expect from a late 19th century Euro-American site. While there are few indications of preindustrial butchering practices (cut-marks, chop marks and burning resulting from direct cooking over fire), the incidence of breakage is too high in the sample to easily reconcile with our expectations for a Euro-American site. The NISP-MNI ratio for the Thompson House assemblage is also quite high. A high degree of fragmentation would be expected in an assemblage from a prehistoric or aboriginal site where bone was intensively exploited for marrow or only primitive tools were available for butchering, but not from butchering practices using metal implements.

The occupants of the site were primarily dependent upon domestic animals such as sheep, goats, cattle, and chickens for food with deer, elk, and pronghorn antelope serving as a major addition to the diet. This dependence

on domestic animals and big-game is expected at a Euro-American site, but the exploitation of horse and the relative dependence on sheep versus cattle is surprising. Either the occupants of the site were not typical Euro-Americans or cattle were not as abundant as they were in the late 1880s and 1890s. One possible explanation for these contradictory results is that the assemblage was produced by Navajo Indians with access to domestic animals but lacking European tools.

It cannot be determined whether the faunal assemblage found in the historic foundation is associated with the use of the structure or with the later construction of the Atlantic and Pacific Railroad. The large number of large mammal bones and the diversity of species found primarily in a single 1x1 m test unit is not what one might expect from the kitchen of a single household. The assemblage could have resulted from feeding a large construction crew or from a stage stop along the Prescott-Fort Wingate road. It is also important to recognize that most of the bone were discarded in a corner of the structure along with large quantities of hardware and household debris. It probably represents secondary refuse gathered from other areas and discarded in what appears to have been a conscious effort to dismantle the house and dispose of its remains in an out-of-the-way corner. Much of the bone breakage is probably due to postdepositional forces that came into play during this process.

Functional and Temporal Interpretations

Archer Site

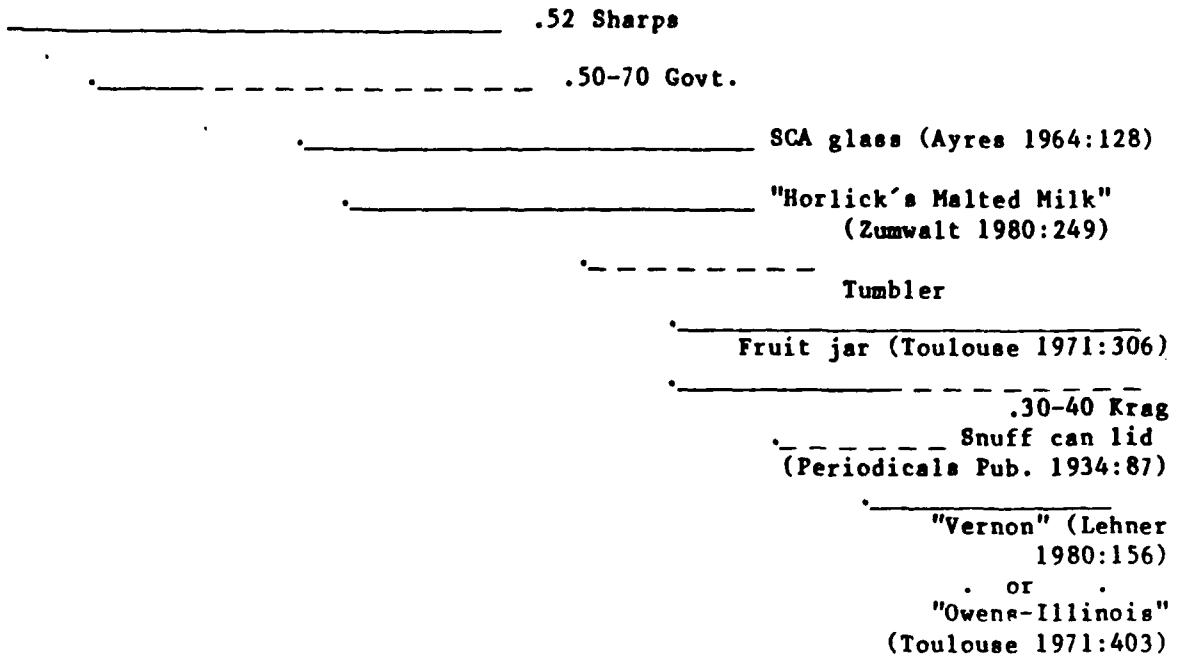
Historic artifacts at the Archer site were functionally diverse ranging from cosmetics and china to beer bottles and old auto parts. These appear to represent general household trash without any distinctive articles that might suggest a specialized function (Ayres personal communication, 1988). Dates from the collected artifacts span the period from the 1860s to 1950 but tend to cluster in the early 20th century (Figure 6.5). With a few exceptions, all the artifacts can be accounted for within a range of 1912-1921. The SCA colored glass provides the bulk of the dated material (Ayres 1984:128). The post-1906 dated tumbler was manufactured for several years after 1906 and fits well within this narrow range.

The exceptions include the piece of ceramic tableware marked "Vernon" that dates 1928-1948 (Lehner 1980:156) and an Owens-Illinois made bottle dated 1938 or 1948. Ayres (personal communication 1988) believes these artifacts clearly postdate the use of the site.

Also exceptions are the .50-70 Govt. cartridge and the bullets found at the site. Although both this cartridge and the .52 Sharps continued in use to the end of the century, their association together and with other early types of ammunition suggests a time period when all these types were commonly available. It is highly improbable that around the turn of the century one or more individuals collected four different Civil War and early-postCivil War weapons at this site. It is more likely that they were used in the period just after the Civil War -- after the .50-70 round became widely available. This would be in the mid 1870s in the time of Barado and other early settlers and prior to the founding of Holbrook. This interpretation precludes the

ARCHER SITE (AZ:P:4:23)

1860 1870 1880 1890 1900 1910 1920 1930 1940 1950



THOMPSON HOUSE (AZ P:4:23)

1860 1870 1880 1890 1900 1910 1920 1930 1940 1950

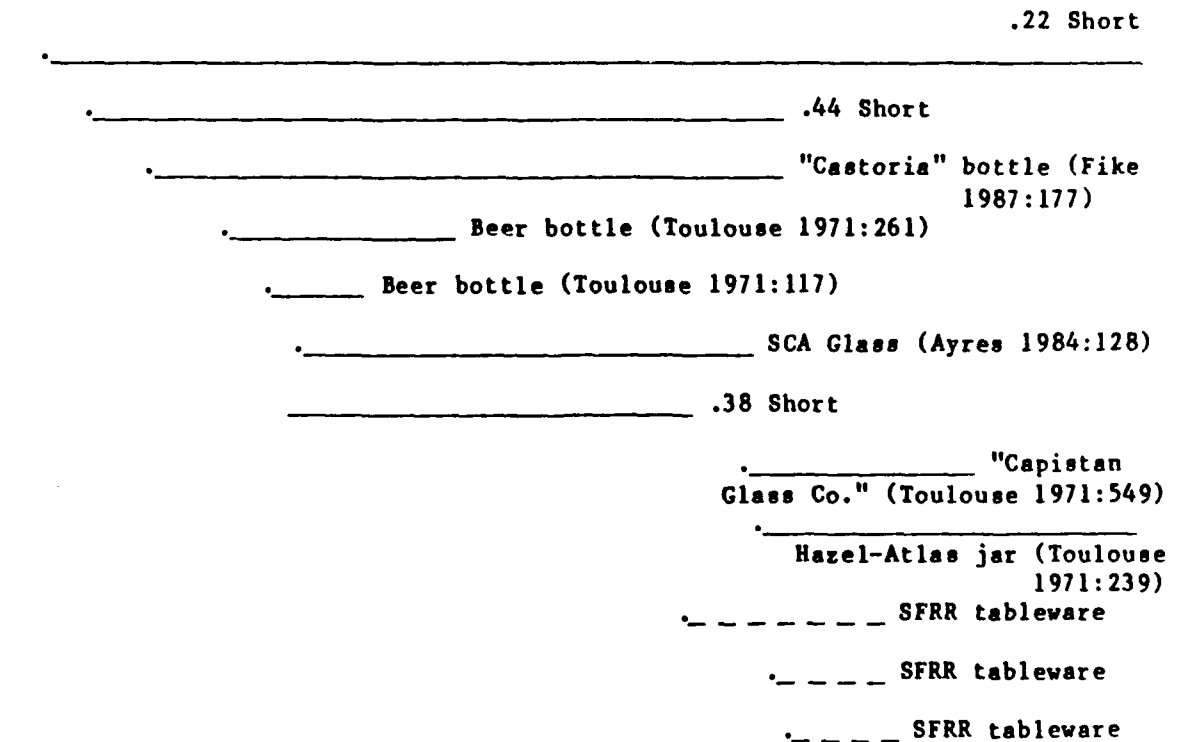


Figure 6.5. Time chart of temporally diagnostic historic artifacts.

possibility that these weapons were fired by the California Volunteers from Camp Supply, as this unit was in the area in 1863. Although found in the vicinity of these rounds, the .30-40 Krag represents a much later type which is contemporaneous with main site occupation.

Thompson House

The historic assemblage from this site appears to be much more specialized. At least two distinct components, possibly three, can be recognized. One component is clearly associated with the old Santa Fe Railroad bed and represents materials discarded from trains traveling the area in the 1920s. Most of this material was found on or adjacent to the railbed. Several items date to this period: the Hazel-Atlas food and Capistan Glass Co. jars (Toulouse 1971:239,549) and the three pieces of dining car service. These were found on the surface north of the bed and west of the house foundation and along the old railbed.

Most of the remaining artifacts can be accounted for within the range of 1880-1888 (Ayres personal communication, 1988). The bulk of these are again the SCA glass. Also within this time period is the .38 Long cartridge and the D.S.G.Co. beer bottle. Both were found on the surface of Collection Unit A.

An earlier component ranging from the 1860s to 1880 is associated with the house foundation. This is indicated by the dime and the .44 Short cartridge. The Castoria medicine bottle and several beer bottles could date either to this component or the later one. The coin and cartridge, however, came from the house excavation while the bottles came from the surface of Collection Unit A indicating that the latter are probably related to the later component.

The large number of alcohol containing bottles and the lack of female related items set the surface material in Collection Unit A apart from other collection areas, although the small amount of material collected makes firm conclusions impossible. The assemblage could have been derived from a construction camp possibly related to the construction of the Atlantic and Pacific Railroad. The location and age of this material makes it a good candidate for the original site of the Holbrook depot. The lack of features is not a drawback as no permanent structures were built.

The earlier material recovered in the foundation is consistent with the date of the Thompson House and suggests that it was abandoned and possibly destroyed when the railroad arrived in 1881. The function of the house foundation could not be determined from the testing program. However, a much more diverse assemblage was found in the house including items of apparel, considerable household hardware, and leisure items such as the pipe bowl fragment. Although the small sample of bone does not provide statistically significant data on faunal exploitation, the extremely high density of bone found in a single 1x1 m test pit does indicate the consumption of large quantities of meat. Whether this meat was consumed by the travelers at a stage stop or the railroad construction crew cannot be determined at present. It would be reasonable to hypothesize, however, that neither a household nor an inn would discard so much bone within or near their home. It is more likely that the construction crew discarded the bone in the house ruins,

mixing it with earlier domestic refuse. The butchering indicators exhibited by the bone suggests the possibility that the faunal assemblage was produced by Navajos. This interpretation is not inconsistent with the above conclusion as Navajo laborers may have been employed in the construction of the railroad.

CHAPTER SEVEN CONCLUSIONS AND RECOMMENDATIONS

Archer Site

Prehistoric Components

As many as three distinct prehistoric components may be present at the Archer site. One component may represent a Tolchaco occupation and the others represent Anasazi components. The Tolchaco component consists largely of an area of primary lithic reduction activity involving the quarrying of ancient Little Colorado River gravel exposed in this portion of the site. Like other Tolchaco sites, this component contains extremely large quantities of small tested cobbles, shatter, flakes and a few simple retouched tools. Temporally or functionally diagnostic tools or ceramics are extremely rare and no subsurface component is indicated. A possible alternative hypothesis is that the gravels were quarried during a later occupation

Given this type of assemblage, there appears to be little likelihood that investigation of this component would resolve the Tolchaco issue - the age and function of this type of site commonly found along the Little Colorado. However, few Tolchaco sites have been studied in detail in the past, the range of variability in cultural materials is not well documented. The association of a Tolchaco-type assemblage with later Anasazi material, however, does provide a unique opportunity for comparing and contrasting lithic assemblages from the same local area.

The testing program clearly demonstrated that different lithic related activities occurred between the various components. The question remains, however, whether they were temporally related activities. The collection of an adequate sized sample from Anasazi features and detailed comparison with the Tolchaco assemblage should indicate whether the lithics used in the Anasazi features could have been derived from the nearby lithic gravel. This would indicate that the Tolchaco material merely represents a specialized work area used by the occupants of the adjacent houses. If the two assemblages appear unrelated, then it would suggest that the Tolchaco material may represent an earlier Archaic occupation.

Testing revealed the potential presence of two Anasazi components. The largest component appears to be a Basketmaker III-Pueblo I farmstead centered on the highest point of the low ridge that dominates the site. At least two pit houses are probably associated with this component. One appears to have been disturbed at an earlier date by vandals, but the other appears to be intact. The structures appear to have been burned indicating a high potential for preservation of perishable material that would be useful for dating and archaeobotanical studies. Additional structures and extramural features may be associated with this component. Contemporaneous material was also found at the eastern end of the bench along the edge of the terrace but no subsurface features were found in this area except for two shallow fire pits.

The Basketmaker III-Pueblo I period is one of the most poorly documented in the region. Thus, the presence of well-preserved pit houses dating to this

period is highly significant. The type of remains found indicate a high potential for addressing the research questions outlined in Chapter Two regarding chronology, environmental reconstruction, subsistence, and site and feature function and certain elements of settlement patterns. The small size of the component, however, indicates little potential for contributing to the understanding of community or domestic organization, most aspects of settlement systems, ceremonial activities or trade relationships.

The final prehistoric component is a Pueblo II-III farmstead. This represents one of the most common types of sites in the Central Little Colorado Valley. Although sites of this type and age are better documented than both earlier and later sites, they are not well understood. Absolute dates and subsistence data are sadly lacking.

This component is represented by a single pit house superimposed on the earlier component on top of the ridge and slab-lined pits found on the bench at the terrace edge. The structure appears to have been badly disturbed. Intact floor features, however, and large amounts of carbonized material were found indicating that sufficient intact material remains to merit further investigation. The integrity of the remains on the bench at the edge of the terrace is problematic. Portions of two slab-lined pits were found eroding along the cut-bank formed at the terrace edge but no subsurface features were found in backhoe trenches within the area. It is possible that additional features are located on the bench, including pit houses, but the density would be low or they would be confined to a very small area. It is more likely that most of the features in this area were destroyed by bank erosion.

The three prehistoric components are spatially discrete although there is some overlap between the two Anasazi components. Most of the Basketmaker II-Pueblo I component is on ridge top and most of the Pueblo II-III component is on top of the bench. This layout should reduce the amount of mixture of assemblages and facilitate the identification of distinct cultural phenomena for each time period represented. As a result, comparison of the different assemblages should prove useful. As indicated above, it is important to compare the lithic assemblages from the Tolchaco-type component and the Anasazi components.

It is equally important to compare the two Anasazi components. If an adequate sample of later materials can be found on the bench top, then the opportunity for examining processual changes is enhanced. Clearly, the same site was occupied during both time periods. The question remains, however, if the two occupations were of the same type and magnitude and if changes in subsistence can be documented. The acquisition of relevant data or the actual resolution of such questions would make a considerable contribution to our understanding of regional prehistory.

Thus, it can be concluded on several grounds that the prehistoric components at the Archer site are eligible for nomination to the Historic Register. Each component contains significant scientific information either alone or in combination with the other components.

Historic Components

Although of historic age, the historic material at the Archer site lacks sufficient integrity to merit nomination to the National Register. The early 20th Century material could be significant in terms of the pioneer history of Holbrook. However, no evidence of historic features were found and the artifactual material was largely a widely dispersed surface scatter. The two disturbed areas associated with historic material indicate that significant features may have existed at the site, but have been destroyed.

The early ammunition at the site represents an earlier component that is potentially significant in regards to the earliest Anglo activities in the area and prior to the actual founding of Holbrook. The possibility that they are related to the even earlier Camp Supply is intriguing but speculative. Regardless of which activity it might represent, this early component also lacks integrity. It appears to reflect a very brief and isolated incident. Its greatest significance may lie in awakening interest in locating Camp Supply or spurring interest in studying the earliest settlers of the area.

Thompson House

The Thompson house also consists of three largely spatially discrete components. The most important of these is the house foundation which apparently dates to the late 1870s and prior to the founding of the town of Holbrook. The precise function of the house is not known. No other contemporaneous features were found and the sample of artifacts collected in test excavations is not sufficiently diagnostic. Archival research, however, suggests that it served as an early ranch house or inn along an important transcontinental road predating the construction of the Atlantic and Pacific Railroad. Nothing could be learned of the owner of the house, but it was apparently abandoned when the railroad arrived.

The second component consists of a primarily surface artifact scatter dating to the 1880s or 1890s. The specialized nature of the assemblage and its location near the bend of the old Atlantic and Pacific Railroad tracks suggests that it may be associated with construction crews residing at the original site of the Holbrook depot.

The third and final component is the old railbed of the Santa Fe Railroad. This apparently dates from the late 1910s until the 1930s when the existing alignment of the tracks was constructed and the old bend around Horsehead Butte was reduced. The old railbed probably follows the same route as the original Atlantic and Pacific Railroad, but no evidence of the latter was found.

This site is potentially significant in terms of two different historic themes. The foundation is significant in terms of the earliest settlement in the Horsehead Crossing-Berado area prior to the founding of Holbrook. The site clearly has integrity in this respect as it contains intact features and associated subsurface material. It has a high potential for contributing significant information to understanding the earliest phase of historic settlement in the area. The site is eligible for nomination to the National

Register on the basis of this feature alone. Eligibility lies in terms of Criterion D since the site is significant primarily for its information about early historic occupation in the area. It does not appear to be associated with any of the better known early settlers nor is any significant architecture preserved.

The eligibility of the second component is not as clear. It apparently relates to the construction of the Atlantic and Pacific Railroad, one of the most important historic themes in the region, and may contribute to determining the location of the original Holbrook depot, an important bone of contention in the local history. It appears to be primarily a surface scatter with only minimal subsurface remains. This component appears to be undisturbed, and, as the historic occupation associated with the early railroad depot was small and temporary, major features were never present. The scatter is also discrete, a fact which enhances its information value since it is not mixed with the earlier remains from the Thompson House. There also appears to be little indication of later post-occupational deposition.

This component, therefore, is also potentially eligible for nomination to the National Register. Again, eligibility is indicated in terms of Criterion D. This component has a high potential for contributing significant scientific information regarding the founding of Holbrook. It does not qualify under the other criteria since its association with the early Holbrook depot is suggested rather than established and no significant features are likely to have been preserved.

The third component does not appear to be eligible for nomination to the Register. Little significant historic material is preserved along the tracks in the vicinity of the house foundation. The highest densities of artifacts and best preserved portions of the railbed (as well as related features such as bridges) occur well east of the affected project area. The evident remains associated with the railbed also clearly postdate the historic foundation and and the original Atlantic and Pacific Railroad by 40 to 50 years.

Perkins Addition

A total of ten historic properties in the flood prone zone of Holbrook retained either sufficient integrity or significance to warrant documentation. Only two of the ten properties appear to be individually eligible to the National Register of Historic Places: the Armijo Homestead and the Thunderbird Tavern.

The Armihjo Homestead includes two significant resources: a residence and a water tower. The home is eligible to the National Register under Criterion B for its association with the pioneering Armijo and Ortega families of Holbrook. The water tower is also eligible under Criterion C as an unusual example of the Second Empire style applied to a utilitarian accessory structure. Although now abandoned, both structures retain sufficient integrity to convey their historic character.

The Thunderbird Tavern appears eligible to the National Register under Criterion C as an example of an unusual use of local petrified wood on a Mission Revival style structure, as well as Criterion A for its relationship

to the early development of the tourist trade in Holbrook.

Recommendations

Proposed levee construction in the vicinity of Holbrook will impact four properties eligible for nomination to the National Register of Historic Places. These are the prehistoric components at the Archer site (AZ P:4:22), the historic components at the Thompson House (AZ P:4:23), and the Armijo Homestead and Thunderbird Tavern in the Perkins Addition.

Because the significance of the Archer and Thompson House sites lies in their scientific information, proposed impacts at these two sites can be mitigated through an archaeological data recovery program combined with additional archival research. Specific recommendations are provided below.

Archer Site

The following tasks should be undertaken in mitigating this site:

1. An approximately 20 x 20 m area surrounding the pit houses (Features 3, 5, and 6) should be stripped by hand to outline the houses and locate any other associated features.
2. These three features and all the others located in this area should be completely excavated. As many as two or three more houses and a half dozen extramural pits may be present in this area in addition to the three known houses.
3. All features should be intensively sampled for archaeobotanical remains and dendrochronological samples should be sought in the houses. Materials suitable for radiocarbon and archaeomagnetic analysis are known to be present and should be taken when appropriate.
4. The bench area at the edge of the terrace should also be subjected to further testing to determine if other features are preserved. Most attention should be focused on the area adjacent to the edge where the heaviest artifact concentrations were found along with the two extramural pits. Mechanical excavation is not recommended in this area due to the instability of the terrace edge. Again, hand stripping is recommended in this area.
5. If additional features are found in this area, they should also be excavated and sampled in a comparable manner to those at the center of the site.
6. Additional backhoe trenches and test pits should be excavated in other areas of the site where high artifact concentrations were not found to test the relationship between surface artifacts and subsurface conditions and to gather relevant geomorphic data.

7. Lithic raw materials should be gathered in controlled random collections from the exposed riverine gravel at the site for comparison with the lithic artifacts collected during the testing program. This should be accomplished to determine if the prehistoric users of the site selected any particular material types or cobble sizes for testing and reduction.

Only limited mechanical excavation is recommended for mitigation at the Archer site. The test excavations have revealed that the majority of features begin within 20 to 40 cm of the surface and the base of the deepest feature extends a little more than 1 m below the surface. In addition, the features appear to be concentrated in two very small loci. Under these circumstances, further mechanical excavation would not only be unduly destructive but also unnecessary, as hand stripping could be as efficient.

Complete excavation of all features located is also recommended because a sample excavation is not expected to generate sufficient data to address relevant research question given the small number that are expected. Furthermore, the fact that several of the features have probably been vandalized redoubles the need to excavate as many features as possible. Significant functional and chronological data still can be retrieved even in the case of severely vandalized houses.

Thompson House

The following tasks are recommended for mitigation of the historic site:

1. The historic foundation should be completely exposed and the interior excavated to the floor in controlled excavations (e.g., 2 x 2 m excavation units). Additional test pits should be excavated along the exterior of the walls particularly the north wall where most of the refuse was found. Most of these excavation units would range from 20 to 50 cm in depth before sterile soils were encountered.
2. The area surrounding the structure should be more closely examined in order to locate possible privy areas, which should also be tested when found. No such locations were observed in the immediate vicinity of the structure although much of this area is covered by colluvium and aeolian sand.
3. Additional test pits should be excavated in the artifact concentrations north west of the foundation (Collection Unit A and B) and additional surface collections made.
4. A few backhoe trenches should also be excavated in the vicinity of the foundation and artifact concentrations to aid in the location of privies and other possible subsurface historic features. One or two trenches or mechanical stripping units should also be excavated across the old Santa Fe railroad to determine if any evidence of the original

Atlantic and Pacific railbed can be found.

5. These various excavations should be coupled with additional archival studies aimed at elucidating the use history of the Thompson House and other pioneer sites in the Holbrook area. Additional archival work should focus on contemporary newspaper accounts, court files, courthouse records, and census records. The Navajo and Apache county records were checked during the testing program but important material relevant to the earliest occupation of area may be found in Yavapai County as many of the historic events in question occurred prior to the founding of Apache and Navajo counties. The files of the Santa Fe Railroad should also be examined to determine when different construction events occurred in the area and what changes were made to the existing tracks.
6. Finally, excavations and archival studies should be complemented with an on-the-ground inspection of the area from the Padilla Ranch to the present townsite with particular attention to the historic sites and landmarks revealed by archival studies.

Perkins Addition

Every effort should be made to protect to the two Register eligible properties on the south side of the Little Colorado River. One possibility would be to move them higher on the terrace away from the floodplain. This procedure would not necessarily adversely impact their locational integrity adversely because their relationship to historic areas could be retained. For example, the Thunderbird Tavern could be removed farther south along the highway and closer to the junction of the highway to St Johns and the Petrified Forest without destroying its relationship to early tourism. This procedure, however, may not be possible for structural reasons, as the tavern is built of stone and it might be necessary to dismantle it, thereby damaging its structural integrity.

One alternative is to carry out additional historic research on the structures with a detailed program of photography and architectural recording of each structure before they are destroyed. This work might be coupled with archaeological testing of each property for subsurface historic remains associated with their use. Such mitigation efforts, however, should only be considered as a last resort. Both structures represent unique and highly significant local historic resources.

A second alternative might be to carry out the detailed recording of the structures and to leave them in place. Both properties are relatively removed from the edge of the floodplain and the Armijo house, for one, has stood since the 1910s, surviving some of the most destructive floods recorded in Holbrook's history. The danger of flooding makes these inappropriate habitation areas, but there is nothing to prevent these two historic properties from being preserved and maintained into the indefinite future.

Phillips (1985:30) makes a similar argument for historic flood-prone properties in Clifton. Phillips maintains that from the cultural resource

management viewpoint, preservation is always preferable to the destruction of the resources. Simply abandoning structures, however, will not result in their preservation. Phillips makes a clear case for Clifton that is appropriate in this context. The historic resources have survived this long because past occupants have maintained and repaired them. Abandoning the structures would bring a halt to maintenance activities and expose them to vandalism, inevitably leading to their rapid deterioration.

Phillips recommends that if the COE becomes responsible for the disposition of historic properties in Clifton, that it institute a program to ensure adequate curation of those properties. Although not appropriate for residential use, such structures could be maintained for historical display purposes or leased back as commercial facilities.

Similar recommendations could be made for the two properties in Holbrook. The tavern is already a commercial establishment so this recommendation would result in little change to this structure. The Armijo property, however, is an unoccupied residence. This attractive property could be used for historical display. The Navajo County Historical Society, housed in the old county courthouse, would be the obvious curating agency although the city or county may be alternatives. Both properties could be incorporated into the Historical Society's holdings and become important local tourist attractions.

The evaluation of historic properties in the Perkins Addition did not involve the location and identification of subsurface archaeological (historic or prehistoric) remains. Archival studies, however, reveal that historic occupation of the area began long before the existing structures were built and significant remains of these early occupations may be preserved in a buried state. This issue should not be a cause of concern as long as the COE's plans for the area do not involve massive earth removal. If such plans become likely, however, subsurface archaeological testing should be undertaken.

Again we can draw from Phillip's (1985:31) earlier study of historic properties in Clifton. Like the Clifton study, the Perkins Addition evaluation is an initial, baseline study of the existing resources of the area and does not represent an exhaustive study of the area's history and cultural resources. Like Phillips, we recommend that this evaluation be followed up with additional and more intensive studies of the area and its relationship to Holbrook's history.

We have identified a number of structures whose historic significance could not be determined from the sources investigated. These structures do not appear to be architecturally distinct and most lack structural integrity. However, they may be significant if associated with persons or events important to local history. Although generally regarded as the "wrong side of the tracks," the present study has revealed that the Perkins' Addition was associated with some of the earliest pioneers and some of the most important persons in the history of Holbrook. Subsequent studies should make extensive use of both informant and documentary sources to identify whether any of the buildings other than the Armijo house were associated with any important inhabitants or significant events in the history of Holbrook.

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